A Study of Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF

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ABSTRACT

With South Africa's democracy came the introduction of developmental local government, however, shortfalls of democracy in public engagement do exist despite the role of civil society (as advocated by the South African Constitution) being vital to check on the exercise of state power. Many municipal and metropolitan municipalities in South Africa lack the institutional capacity to carry out effective environmental planning. Various cases in the history of South Africa display attempts by government to extend the grid of formalised or regulated development over areas termed 'informal.' These cases pay testament to the biased nature of planning toward urban communities. In instances where these informal sector groups are able to put across their views, those of the urban elites are often prioritized. In South Africa the consultative process often takes the "decide and defend" approach rather than an open and participatory one. The extent thereof forms the motivation for this study, particularly with regard to the prevalent dismissal of the knowledge of the rural communities in the consultative process. The study focuses on the gap in the public consultation process in South African environmental planning through the case study of the iLembe Environmental Management Framework (EMF), located in KwaZulu-Natal. The aim of the research is to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study. The objectives of the research were to examine the mechanisms of public consultation of the EMF using the iLembe EMF case study; to analyse to what extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge, to examine to which extent community needs and concerns are reflected in the EMF, to interpret local awareness and views of environmental planning with a specific focus on the EMF tool and to forward recommendations for improved public participation in rural areas in relation to the EMF. The study undertakes a case study approach of the EMF for the iLembe District Municipality (IDM), with a focus on the processes for creating awareness and public participation in a community within the Ndwedwe Local Municipality (NLM). The case study communities were selected as being a representative of rural communities of the iLembe district. Household questionnaires were completed by 400 respondents. KIIs were conducted with relevant stakeholders such as the officials in the iLembe district, interested and affected parties who partook in the EMF process and the team of professionals involved in the roll out of the EMF, with the objective of ascertaining the strategic process followed in public consultation and the methods commonly used. Both quantitative and qualitative methods were used in data collection for this study. The key finding of the research is that the level of public consultation as reflected in that of the iLembe EMF is insufficient for environmental planning through the application of the EMF tool in South Africa. It is difficult to state whether modernist planning approaches leads to sustainability from the outcomes of this study, but it is evident that despite the modernist planning approaches aiming to move from technocratic stance to a more inclusive and consultative one, the theory does not seem to meet practice. This study recommends tasks to be undertaken to overcome language barriers, to overcome the barrier posed by use of jargon, to increase transparency and information sharing, to rectify the absence of key personnel at meetings, to rectify poor attendance at public meetings and to undertake a strategic approach to public participation. While this research explains the mechanisms for public consultation employed in the EMF, it would be interesting to determine the exact cause for decreased effectiveness in the methods of public participation with a focus placed on how and why there is a disjuncture between South Africa's sound legislation and what takes place in practice.

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A good head and good heart are always a formidable combination. But when you add to that a literate tongue or pen, then you have something very special.

Nelson Mandela

The most influential people of our time, and before, advocate for the power of knowledge, education and the willingness to learn throughout one's lifetime. I consider myself a fortunate student to have had the opportunity to pursue a postgraduate qualification and to have been supported in my completion of my MSc, and would therefore like to take the opportunity to express thanks and appreciation to the following people and organisations:

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As with every step I take in my life, my family have been my motivation and source of strength. To my Mother, thank you for each and every prayer you utter for me, for my

DECLARATION

I declare that this dissertation is my own work, and that all sources utilised or quoted have been appropriately acknowledged and referenced. This dissertation is submitted for the Degree of Master of Science: Environmental Science at the University of KwaZulu-Natal, and has not been submitted for a degree or examination at any other university.

Novashni Moodley

Signed _____

Dr Fathima Ahmed: Supervisor

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LIST OF ABBREVIATIONS

BA	Basic Assessment
BID	Background Information Document
CBA	Cost-Benefit Analysis
CBD	Central Business District
CDW	Community Development Worker
CEA	Cumulative Effects Assessment
DAEARD	Department of Agriculture, Environmental Affairs and Rural Development
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
DLA	Department of Land Affairs
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System
EMZ	Environmental Management Zone
FEPA	Freshwater Ecosystem Protection Area
I&AP	Interested and Affected Party
ICM	Integrated Coastal Management
IDM	iLembe District Municipality
IDP	Integrated Development Plan
IDS	Institute for Development Studies
IEM	Integrated Environmental Management
IEP	Integrated Environmental Plan
IRSDP	Integrated Regional Spatial Development Plan
ISD	Institutional and Social Development
ITB	Ingonyama Trust Board
LAP	Local Area Plan
LCA	Life Cycle Assessment
NEMA	National Environmental Management Act
NEPA	National Environmental Protection Act
NGO	Non-Governmental Organisation
NHT	National Heritage Trust

NIMBY	Not in My Back Yard
NLM	Ndwedwe Local Municipality
PAJA	Public Administration Justice Act
PoD	Public Open Day
PP	Public Participation
PPP	Public Participation Process
SDF	Spatial development Framework
SEA	Strategic Environmental Assessment
SEI	Socio-ecological idealism
SEMP	Strategic Environmental Management Plan
SMME	Small, micro and medium enterprises
SoE	State of Environment
SPSS	Statistical Package for Social Sciences
SWOT	Strengths, Weaknesses, Opportunities and Threats
UNCED	United Nations Conference on Environment and Development
USA	United States of America
VIP	Pit toilet with ventilation

CHAPTER ONE: INTRODUCTION

1.1 Preamble

Provided in this chapter is a background of and motivation for undertaking this study. This chapter explores the South African stance in spatial and environmental planning, presenting a historical and current status of environmental planning in the country, which provides the realm within which public consultation has been examined for the purposes of this study. This chapter further presents the motivation for the study with particular reference to the study area, the aim and the objectives of the study. Finally, the chapter outlines the structure of the thesis through a chapter sequence.

1.2 Background

Decision-making systems in many countries tend to separate economic, social and environmental factors at the policy, planning and management levels and often fail to accommodate informality (Todes, 2010: 415; United Nations Conference on Environment and Development-UNCED, 1992: 2). The Apartheid era saw spatial planning in South African cities take the form of master planning while the post-apartheid era tends toward emphasising strategic spatial planning (Todes, 2010: 416). Land use and physical planning were at the forefront of master planning, with little attention given to integrated planning that considered the triple bottom line (Todes, 2010: 415). Such an approach to planning was critiqued on the grounds of being anti-urban and exclusive, and in response to this, new planning approaches have emerged which see principles focus on sustainability, integration, participatory planning and inclusive planning, amongst others (Todes, 2010: 415). However, a gap exists in the implementation of such theory and therefore this often does not translate into practice (Reed, 2008: 2417; Retief, 2010: 385; Todes, 2010: 416). Furthermore, Todes (2010: 415) emphasises that master planning is critiqued for being repressive toward informal dwelling and trading. Todes (2010:415) explains that master planning was unable to regulate urban growth which resulted in informality or rural areas and was therefore not accommodating of rural dwellings nor could planning be enforced in rural areas through regulations.

The urban bias in planning when compared with rural planning is most evident in coastal urban areas as compared with inland areas, where the natural assets of coastal areas result in increased development therefore requiring greater planning (Ahmed, 2008: 46). However, such consideration to development is not witnessed in rural areas (Todes, 2010: 415), reinforcing their peripheral relation to urban investment.

With South Africa's democracy came the introduction of developmental local government, however, shortfalls of democracy in public engagement still exist despite the role of civil society being vital to check on the exercise of state power (Buccus and Hicks, 2008: 103; Marais, 2010: 72; Reddy and Sikhakane, 2008: 681). These shortfalls are further discussed in chapter two. Following thereafter in 2000 and in terms of regulations linked to the Municipal Systems Act of 2000 and the 2001 White Paper on Spatial Planning and Land Use Management, spatial frameworks and environmental responsibilities became a statutory requirement through integrated development plans (IDPs), for the district and local municipalities. IDPs are strategic plans intended to guide the work of municipalities (Mafunisa and Xaba, 2008: 453; Maphunye and Mafunisa, 2008: 461). The environmental responsibilities referred to here, represent strategic planning and protection of the environment with the use of tools such as the environmental management framework (EMF) (Marais, 2010: 2).

Strategic environmental assessments are described by Todes (2010: 417) as "mostly concerned with environmental assessment, management and the potential impacts of development on the natural environment." Todes (2010: 417) states that while spatial frameworks are intended to give effect to the principles and priorities of the IDP and to manage urban growth; little attention has been given to the rural areas. Furthermore, Ahmed (2008: 47) states that the improper implementation of planning policies result in inefficient environmental management and subsequently the demise of the biophysical environment. Economic, social and historical factors in South Africa limit rural communities' ability to participate fully in sustainable development practices. Given the interrelationship between the natural environment and the socio-economic well-being of rural communities, it is imperative that efforts be made for sustainable development to recognise, accommodate, promote and strengthen the role of rural communities (UNCED, 1992: 4) in planning and environmental planning. The definition of rural varies greatly relevant to context and place and there is no universally applicable definition which suits all policy purposes (Coburn *et al*., 2007: 1). Methods for defining rural are, according to Coburn *et al.* (2007:1) mostly based on geographic units that are sometimes combined with population or provider characteristics. For the purpose of this study the Rural Development Task Team and the Department of Land Affairs – DLA (1997:1) definition is used, which reflects the uniquely South African situation:

> *The sparsely populated areas in which people farm or depend on natural resources, including the villages and small towns that are dispersed through these areas. In addition, they include the large settlements in the former homelands, created by the apartheid removals, which depend for their survival on migratory labour and remittances.*

The Constitution of the Republic of South Africa obligates municipalities to satisfy basic needs and to promote the social, environmental and economic development of local communities. These needs refer to basic resources for sustenance provided by government through service delivery (van Rooyen and Naidoo, 2008: 737). However, despite sound legislation in South Africa, Merritt and Stubbs (2012: 280) and The Institute for Development Studies (IDS) (2003: 22) state that the issues underlying community development include institutional challenges within local government, such as policy incoherency, isolated environmental decision-making processes, and low levels of community participation. These refer to decisions being made by government with a lack of public involvement and engagement in the actual decision making process and plans becoming more of a document than an implementable plan. South Africa is considered to have a vast history in environmental assessment and well established systems pertaining to the environment (Buccus and Hicks, 2008: 101; Retief, 2010: 385) yet challenges pertaining to design of participation processes (Reed, 2008: 2417), capacity (Retief, 2010: 385) and resource gaps (Masango, 2009: 127; Murombo, 2008: 1728) exist. Municipalities use strategic planning approaches to obtain a broad view of inherent needs and develop holistic plans in order to cater to basic needs (Gerber, 2009: 39), using tools in the environmental planning process such as the EMF. The EMF is an important link between environmental assessment processes and planning strategies such as the Spatial Development Framework (SDF) and furthermore has a legal mandate which ensures their implementation (Marais, 2010: 2).

The EMF maps environmental sensitivity and geographically determines where certain types of development may be suitable or unsuitable (Marais, 2010: 2). It promotes sustainability, environmental protection and cooperative environmental governance (Government Notice-GN 547, 2010: 191), and is defined as:

> A *study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land*.

(GN 547, 2010: 190)

The EMF Regulations (GN 547, 2010: 191) stipulate the mandatory public consultation in the EMF process and includes subjecting the draft EMF to a public participation process whereby interested and affected parties are to be invited by way of advertisements and other appropriate methods to submit comment upon inspection of the draft framework (GN 547, 2010: 191). Furthermore, it is required that

reasonable alternative methods are employed to avail the opportunity to comment to civilians with disabilities such as illiteracy and immobility (GN 547, 2010: 191).

1.3 Motivation for the study

Authoritarian governments around the world continue to be criticized for excluding masses from partaking in the public policy making process (Mohammed, 2013: 118). However, Azadarmaki *et al.* (2012: 37) posit that in a democratic system as in the case of South Africa, it becomes imperative that there is sufficient quality in decision making to facilitate the implementation of democracy, and without this, democracy is not worth much (or a democratic deficit exists, where there is a shortfall in fulfilling the principles of democracy in practice). Azadarmaki *et al.* (2012: 37) go on to explain that voluntary participation yields a social capital by which social interactions are based on people's trust in others. Voluntary participation creates "binding cement" which in turn facilitates the establishment of a collaboration upon which the democracy is founded and builds a ground that fosters shared opinions and input (Azadarmaki *et al.,* 2012: 37; Gaventa, 2011: 3). Ackerman (2008: 602) further states that while officials may have ultimate authority to develop policies there still exists the need to make these choices in a transparent manner after listening to those who show an interest. Of particular relevance in this regard are indigenous peoples. Indigenous people can be broadly described as tribal peoples in independent countries who's social, cultural, and economic conditions distinguish them from other sections of the national community (Dove, 2006: 191) and are further discussed in chapter four. These are people who have a historical relationship with their land and are in most, if not all, cases descendants of the original inhabitants of such lands (Buccus and Hicks, 2008: 99; UNCED, 1992: 4), their knowledge therefore, is paramount to sustainable planning.

While the Constitution of South Africa does not directly refer to indigenous peoples, it does advocate rights for all citizens of South Africa with regard to land and furthermore in chapter 12 promotes traditional leadership (The Constitution of South Africa Act, Act 108 of 1996), which is meant to represent the voice of the local people. In South Africa government is often confronted by rural communities who claim ancestral ownership of land and contest state control on the land (Saruchera, 2004: 108). The communities and their traditional leaders, in some cases, want to retain traditional power over land and want to get the social, political and economic benefits (Saruchera, 2004: 108). In this regard, traditional leaders want to promote tutorial systems, secure electorate for traditional leaders and assume part control of rent (Saruchera, 2004: 108). Cousins and Claasens (2004 cited in Saruchera,

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2004: 139) state that most land tenure systems in Africa are 'communal' in character, which refers to a degree of community control over who is allowed into the group, thereby qualifying for an allocation of land for residence and cropping, as well as rights of access to the common property resources used by the group. Communal tenure is shown to have two sides. One revealing advantages for ruling elites, including traditional authorities, and one revealing key strengths for the rural poor (Saruchera, 2004: 139).

The complexities in the South African case as described above indicate that environmental planning and decision-making in South Africa still needs to be restructured in order to accommodate these local complexities (Buccus and Hicks, 2008: 94). Piper (2011: 35) and Masango (2009: 123) state that the relative newness of democracy in South Africa explains the lack of innovation with regard to public participation. Furthermore, it is noted that Environmental Impact Assessments (EIAs) have failed to benefit from planning theory (Lawrence, 2000: 607). In his study into the extent to which public participation has taken place in a province in South Africa, Napier (2008: 163) states that in the local government context very little published comparative work has been done on public participation, which he defines as "a two-way exchange of information between the citizens and decision makers." Government officials and community leaders have long recognized the value of public participation for a variety of purposes, processes, and decisions (Booysen, 2009: 2; Bryson *et al.*, 2012: 23; Napier, 2008: 164) and the hope that South Africa's democracy would usher in a more inclusive decision making process is a reasonable one given that democracy primarily represents the mediation of differing values and contributions (Mohammed, 2013: 118). Yet Buccus and Hicks (2008: 96) identify a shortfall in linking the public with state processes and the lack of approaches which strengthen democracy and equality. This shortfall is the failure to establish participatory platforms which link the public with institutional processes of the state. Ultimately this results in less accountability and hence distrust in the government system. Consequently with increased distrust comes decreasing participation (Buccus and Hicks, 2008: 96; Mzimakwe, 2010: 501; Piper, 2011: 31). Being responsive to public values, resolving conflict, and building trust are, however, some of the most important and challenging aspects of participation (Beierle and Konisky, 2000: 590; Gaventa, 2011: 3).

Public participation is crucial for good governance because it enhances transparency, accountability and responsiveness to the needs of the local community. With regard to the needs of poorer communities, oftentimes this refers to basic needs such food and shelter (Masango, 2009: 123; Reddy and Sikhakane,

2008: 681). Participation is a popular buzzword in contemporary urban studies (Silver *et al.*, 2012: 453) yet literature on the rural representation in environmental planning renders very little information when compared with the urban, coastal or ecosystem contexts. Often strategic planning is focused on coastal areas or endangered ecosystems (Gangerdine, 2011: 35), where development and planning itself has seen recent years interests embedded in urban planning rather than in rural planning (Todes, 2010: 415). Likewise, citizen participation is often reduced to participation by the elite, non-government organisations (NGO), businesses and to those with access to resources (Buccus and Hicks, 2008: 97; du Plessis, 2008: 23; Piper, 2011: 33). The anticipation is that the implementation of strategic plans such as the EMF overcomes this; however, the gaps in this process are discussed in the next paragraph.

While EMF's are becoming well established in South Africa there exist significant gaps in the public consultation process (Marais, 2010: 3). A study into the quality of EMF's in South Africa found that public participation was the weakest component of the process and oftentimes the process takes on a cosmetic nature (Marais, 2010: 60). This study examines the extent to which the level of trust is existent in the process of rural community engagement, and investigates whether the process followed in the EMF public consultation leads to neglect of the rural voice in the study area. For the purpose of this study 'voice' refers to the "agency and feeling of power and effectiveness, with real opportunities to have a say" (Buccus and Hicks, 2008: 98). The study therefore attempts to determine the reasons why there still exist gaps in the public consultation process (Kilian *et al.*, 2009: 20), as this poses an ultimate challenge to sustainable development. Particularly since South Africa has sound environmental legislation. Sustainability itself is not isolated, but rather dependent on a myriad of influences and has implications for the way all citizens conserve resources (Gangerdine, 2011: 34).

In South Africa the consultative process often takes the "decide and defend" approach rather than an open and participatory one (Selman, 2001: 13) and while communities are often treated as having unanimous views on development, this is not always the case (Ncapai, 2005:1). The extent thereof forms the motivation for this study, particularly with regard to the prevalent dismissal of the knowledge of the rural communities in the consultative process. The study therefore focuses on the gap in the public consultation process in South African environmental planning through the case study of the iLembe EMF. The study area, the Ndwedwe Local Municipality (NLM) provides for a good case study within which to achieve the objectives of the study due to various aspects of its nature and social fabric. For example, it demonstrates the stark contrast of underdevelopment when compared with its neighbouring

coastal urban local municipalities. Furthermore the area is predominantly rural and indigent and not well represented by NGOs. This provides the key study area for determining the level to which stakeholder engagement is facilitated and the voice of the rural communities are heard.

1.4 Aim

The aim of the research is to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study.

1.5 Objectives

The objectives of the research are:

- to examine the mechanisms of public consultation of the EMF using the iLembe EMF case study.

- to analyse to what extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge.

- to examine to which extent community needs and concerns are reflected in the EMF.

- to interpret local awareness and views of environmental planning with a specific focus on the EMF tool.

- to forward recommendations for improved public participation in rural areas in relation to the EMF.

1.6 Chapter sequence of study

This thesis consists of six chapters. The first chapter herein provides, as detailed in the preamble, an introduction to the study providing a background and motivation for the study. Chapter two presents the conceptual and theoretical review, giving a detailed exploration into the planning theory, sustainability science and the stakeholder theory. This lays the foundation for chapter two to furthermore provide the literature review of public consultation within environmental planning, and its tools such as the EMF, focusing on the rural voice. Chapter three describes the study area of the local community in NLM, within the iLembe District Municipality (IDM). Thereafter chapter four provides an explanation on the methodologies used to conduct the study. Chapter five provides a detailed analysis of the results and

analysis of the findings. Lastly chapter six summarises the study in a conclusion and provides recommendations going forward.

1.7 Conclusion

Despite sound legislation and policies in South Africa, there still exists a significant gap in the implementation of such and the integration of the outcomes of public consultation. The specific outcomes of public participation in environmental assessment in South Africa are for the views of a wide range of potentially affected parties to be explored thereby increasing the likelihood of marginalised communities voicing their concerns. Arguments are rife on whether, South Africa as a young democracy has managed to successfully bridge the gap between policy development and implementation and whether consultation does take place. It can be noted that this is more prevalent in the urban areas than the rural. Tools such as the EMF provide the premise of heavily relying on public involvement but studies have shown that this may not be the case. Decision making systems are still to a certain extent flawed and divided in the consideration of the triple bottom line. Nonetheless, it is a long accepted notion that public participation is crucial for good governance because it enhances transparency, accountability and responsiveness to the needs of the local community.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The idea of planning as a profession came under particular attack from the 1960s onward because the planning discipline claimed to act in the public interest and to do so with a unique body of knowledge (Vigar, 2012: 362). The analysis of modernist planning raises key issues for how stakeholder knowledge should be conceptualized within the planning process and how institutional arrangements should be put into place for handling knowledge within that process (Campbell, 2012: 135, Rydin, 2007: 53). When considering modernist planning, it should translate to environmental planning in that sustainability and the triple bottom line are planned for (Todes, 2010: 416). However, there has been little, if any, interaction between environmental impact assessment and planning theory (Lawrence, 2000: 607). Suggestions for improvement on this are offered in the conclusion and recommendations of this study.

This chapter provides a review of literature pertinent to the study. The theoretical framework and the literature review is combined in this chapter because the literature review supplements the theoretical framework. Planning theory is explored in greater detail and the concept of sustainability science is discussed. Within the concept of sustainability science, environmental justice and the livelihoods approach is explained. Furthermore, indigenous people and indigenous knowledge as well as climate change and development needs are elucidated. Thereafter the stakeholder theory is explored where public participation in planning and environmental assessment is discussed and thereafter, rural voice and vulnerable groups are discussed. The chapter thereafter explains EMFs and the interactions between environmental assessment and strategic assessment.

2.2 Planning theory

The notion of 'transactive planning', currently referred to as 'communicative planning', is in many ways a forerunner of the communicative strand of planning theory (Chettiparamb *et al.*, 2013: 102). Planning theory plays a significant role in the objective of this study as it is necessary to understand the imperatives of planning in order to understand its application and thereafter its impact, whether beneficial or not, to the public. The reality of fundamentally different worldviews and different value systems is still often treated as superficial in planning theory (Watson, 2003: 396). A trend exists within planning theory, according to Rydin (2007: 54) and Watson (2012: 81) with the theory evolving over the last half century and across the globe from being an essentially modernist conception of planning to a more fragmented theoretical field. Alexander (2010: 99) and Rydin (2007: 54) state that within this

current theoretical fragmentation there are signs of a new accepted belief emerging which revolves around the idea that the core of planning should be an engagement with a range of stakeholders, giving them voice and seeking to achieve a planning consensus. This consensus should be achieved through negotiation and mediation between interests.

To elaborate on the evolution in planning theory, in response to critiques, Todes (2010: 415) states that new approaches to planning have emerged. New forms of planning are encapsulated in the Global Planner's Network document on 'Reinventing Planning', which defines principles for planning (Todes, 2010: 415):

- A focus on sustainability;
- Integration between sectors and with budgets;
- Participatory planning, bringing in a wide range of stakeholders;
- Understanding markets and producing credible plans, backed by public investment where appropriate;
- Recognition of the reality of informal settlements and slums;
- Development of contextually appropriate, affordable, strategic and effective norms of planning and land use management; and
- Pro-poor and inclusive planning, recognising diversity.

In a review of the revered planner who is identified for his contributions to the evolution of planning in the 20th century, John Friedman's, literature Chettiparamb *et al.* (2013: 102) state that he laid the foundation for defending and elaborating the idea of a 'Good Society.' This refers to a normative concept advocating for the potential for change through knowledge, dialogue, action and learning by 'society in small scale' (Chettiparamb *et al.*, 2013: 102). Furthermore, Chettiparamb *et al.* (2013: 102) state that this moved on to detail great depths of radical planning, which can be seen as an alternate means of planning practice which holds the potential of realizing the 'Good Society.'

Planning theory is not without various challenges or difficulties, and these are described by Chettiparamb *et al.* (2013: 102) in the points below:

- Defining the boundaries of the profession, making the object of theory open and contested;
- Difficulties in formulating universal propositions, leading to a myriad of context specific theories;
- Difficulties in defining a single expectation and therefore role for planning theory; and
- Differences in ways in which planning theories engage with power.

Various cases in the history of South Africa display attempts by government to extend the grid of formalised or regulated development over areas termed 'informal' or 'unruly' (Watson, 2003: 395).

These cases pay testament to the biased nature of planning toward urban communities. The notions of knowledge, expertise and judgment are often explored to revisit the core concerns about planning's claims to professionalism, whether it matters and what planning might be concerned with in the future (Vigar, 2012: 362). Knowledge is gained in action within communities, which may be small task-oriented work groups as in the original idea of communities of practice or in larger networks of practice (Vigar, 2012: 365). Systematic-scientific knowledge includes substantive and procedural theories, and systematic methods and skills (Alexander, 2008: 210). In discussions on the role of knowledge in planning theory, Alexander (2008: 210) outlines in a shortened summary three basic kinds of knowledge applicable to planning typology:

- Performative knowledge (judgment and good sense, shown in communicative interaction and personal competencies);
- Appreciative knowledge (normative knowledge embracing understanding of values, needs and problems), and
- Substantive empirical knowledge (based on personal experience, anecdotal observation and appreciative judgment).

However, Vigar (2012: 366) posits the following five areas of knowledge:

- Procedures: knowing and working the institutional apparatus of the planning system;
- Design: assessing design from different points of view;
- Politics and institutions: what plays well and badly in the formal political machinery;
- People: relating to diverse peoples, empathy;
- Norms: expectations of behaviour, boundaries.

In exploring rural voice in the iLembe EMF, Planning theory and the role of knowledge forms much of the basis of this study, from a two way perspective. Firstly in consideration of the voice of the affected community and secondly from the perspective of those implementing environmental management tools such as EMFs.

2.2.1 The modernist approach to planning

While planning theory does affect planning practice, there exists the "theory-practice gap" referring to the expectations of stakeholders and planning practitioners not being met (Alexander, 2010: 99; Campbell, 2012: 135). Recent years has seen emphasis placed on the need for planning to expand its boundaries from both its conceptual and practice-based perspectives (Ferreira *et al.*, 2009: 30) which raises a need for planning to promote integrated, inclusive and participatory development, in contrast to

past technocratic and narrowly physical planning approaches (Rydin, 2007: 53; Todes, 2011: 415). This is particularly relevant to the revival of strategic spatial planning in the 1990s and 2000s which has seen a renewed emphasis on the strategic and spatial dimensions of planning arising from the need to ensure sustainable development (Ferreira *et al.*, 2009: 30; Todes, 2011: 415). Advocates of participatory planning have argued that from modernist reliance on state-directed futures and top-down processes, there is a need to move to more community-based planning, from the ground up, geared to community empowerment (Aitken, 2010: 249; Lane, 2003: 360). In review of international trends, Aitken (2010:249) states that policy dictates that "everyone must have real opportunities to take part in the planning and decision-making that will influence their future." This can be seen to reflect a broader shift towards greater commitments to public participation within a wide range of environmental or science-related policies (Irwin, 2006 cited in Aitken, 2010: 249). The underlying belief appears to be that greater public participation in decision-making processes will lead to more socially acceptable and hence sustainable outcomes (Aitken, 2010: 249). However, projects or decision-making processes which make claims to being participatory do not necessarily accurately reflect public interests and participants do not necessarily play influential roles (Aitken, 2010: 249). What Aitken (2010: 249) is alluding to here, is that supposedly 'participatory' approaches can conceal undemocratic or unjust processes (Aitken, 2010: 249).

Many municipal and metropolitan municipalities in South Africa lack the institutional capacity to carry out effective environmental planning (Van Rooyen and Naidoo, 2008: 747). It is Todes' (2010: 414) opinion that there has not been enough discussion and debate regarding alternative approaches to spatial planning for developing countries and while environmental planning may still subscribe to the top-down approach, Lane and MacDonald (2005: 722) argue that environmental governance is far more complex and dynamic than the top-down or bottom-up dichotomy. Retief (2010: 376) states that in the fields of environmental assessment, planning, decision-making and politics there has been progress in theory building within the South African context, however, there has been a significant lack of reflection on the past in order to determine the evolution of development thus far. In instances where informal sector groups are able to put across their views, those of the urban elites are often prioritized (Mohammed, 2013: 143). Gaventa (2011: 72) states that oftentimes community-based development efforts, are large-scale, and top-down based on a form of participation mediated by local elites. Furthermore, decentralisation may or may not be participatory as it all depends on the enabling policies and legal frameworks that are in place, and whether they include participation as a legal right, or simply as an

invitation for consultation which can be dismissed or ignored (Gaventa, 2011: 2). Furthermore, Merritt and Stubbs (2012: 280) find that in some cases, participatory projects tend to empower the middle classes because poorer groups simply lack the means to participate. Planners and public participation specialists in South Africa have highlighted the need to actively and consciously include the marginalised stakeholder groups such as the elderly, women and child-headed households on matters such as resource allocation and distribution (Todes, 2010: 419). Aitken (2010: 249) suggests that, although planning processes are described as open and participatory, members of the public's influence is highly restricted. Such shortfalls in the planning practice in South Africa raise reasons to explore the theories of sustainability science, environmental justice, indigenous knowledge and rural voice. These are discussed in the sections to follow.

2.2.2 Strategic Environmental Assessments versus EIA

For the purpose of comparative discussions on strategic environmental assessment and EIA, Integrated Environmental Management (IEM) and its suite of tools are discussed. Despite this study being on public participation in environmental planning, there is a very close relationship between the tools of IEM and its implementation strategic environmental planning. The concept of IEM has been promoted in South Africa since the late 1980s (Department of Environmental Affairs and Tourism- DEAT, 2004:4). IEM provides a suite of principles and tools to guide South Africa on a path to sustainable development (DEAT, 2004: 6). IEM is defined by DEAT (2004:6) as:

> *IEM provides a holistic framework that can be embraced by all sectors of society for the assessment and management of environmental impacts and aspects associated with an activity for each stage of the activity life cycle, taking into consideration a broad definition of environment and with the overall aim of promoting sustainable development.*

DEAT (2004:6).

Table 2.1 summarises the IEM tools, however, for the purpose of this study, discussions are based on strategic assessment tools such as the Strategic Environmental Assessment (SEA) and the EMF compared with EIA and the interrelationships. This is done to ascertain the relationship between spatial planning and environmental planning.

Table 2.1: The Suite of tools in IEM (DEAT, 2004: 11).

IEM Tool	Brief Description
Screening	Screening determines whether or not a development proposal requires environmental assessment, as well as the type and level of assessment.
Environmental Impact Assessment	EIA aims to predict both positive and negative environmental impacts of a proposed project and find ways to reduce adverse impacts and present the predictions and options to decision-makers. This tool is designed to be project specific and site-specific, and not to be focused on strategic issues and it retrospective in the context of planning.
Stakeholder Engagement	This occurs during the planning, assessment, implementation and/or management of proposals or activities.
Life Cycle Assessment (LCA)	LCA is a tool for the systematic analysis and evaluation of the environmental aspects of a product or service through all stages of its life cycle.
Environmental Auditing	Environmental auditing is a process whereby an organisation's environmental performance is tested against numerous requirements.
Environmental Accounting	This is a tool used to identify, quantify and allocate the direct and indirect environmental costs and benefits of on-going operations.
Technology Assessment	Technology Assessment systematically examines the effects on society that may occur when a technology is introduced, extended or modified. It emphasizes those consequences that are unintended, indirect or delayed.
Cumulative Effects Assessment (CEA)	Cumulative effects assessment requires a systematic procedure for identifying and evaluating the significance of effects from multiple actions representing potential causes of impacts.
Cost-Benefit Analysis	Cost-Benefit Analysis (CBA) is a tool used by decision makers to rank projects to facilitate acceptance or rejection of them. The ranking or decision is based on expected economic costs and benefits.
Environmental Economics	Environmental economics assists to identify the costs and benefits (negative and positive environmental impacts) not taken into account by economic agents.
Ecological and Environmental Footprinting	Ecological Footprinting provides a measure of how much bio-productive area (i.e. land, water or air) a population would require to sustainably produce all the resources it consumes and to absorb the waste it generates, using available technology.
Risk Assessment	Risk assessment includes as a minimum the definition of the probability and severity of an undesired effect, expressed in the context of associated uncertainties. This can be integrated into EIA processes.
State of the Environment Reporting	State of the Environment (SOE) reporting is used to highlight changes in the environment, the causes of those changes, and identify appropriate responses.
Indicators	Indicators evaluate and monitor the amount and direction of change occurring in the environment and whether developments or actions are

IEM Tool	Brief Description
	operating at a sustainable level.
Sustainability Analysis	Sustainability analysis is an emerging tool. It aims to evaluate the extent to which an activity/business is aligned with the principles of sustainable development.
SEA	SEA is, according to DEAT (2004: 11) becoming an accepted and widely used tool for determining the environmental implications of decisions made at a policy, plan or programme level. SEA compliments and provides a framework for project-level EIA. Another distinction that has been identified between EIA and SEA is that EIA is used to evaluate the impacts of development on the environment, whereas SEA aims to evaluate the opportunities and constraints that the environment places on development.
Eco-labelling	This refers to the description of an officially sanctioned scheme in which a product may be awarded an ecological label based on an acceptable level of environmental impact and responsible management.
Scenario Analysis	Scenario analysis assesses the future implications of current environmental problems or the future emergence of new problems.
Sustainability Reporting	Sustainability Reporting is an organisation's public account of economic, environmental and social performance in relation to its operations, products and services such as the triple bottom line.
Environmental Management Systems (EMS)	Environmental Management Systems (EMS) provides guidance on how to manage the environmental impacts of activities, products, and services.
Environmental Policy	Within an EMS, the environmental policy details an organisation's aims and principles of action with respect to the environment including compliance with all relevant regulatory requirements.
Environmental Management Plan (EMP)	EMPs most commonly form part of an EMS and specify how an activity is to be managed to minimise potential impacts on the environment and enhance benefits, throughout the life cycle of the activity.

Figure 2.1 illustrates the relationship between some of these tools, most specifically SEA and EIA against stages in the development cycle. The figure depicts that SEA is at a high level of planning and decision making represented by plans and programmes with minor detail. Project EIAs typically take place at project design stage and have a greater level of detail than SEAs. EMPs are the most detailed and at the same time has the lowest level of feedback to decision making authorities.

SEA

Project EIAs

EMPs

Components of IEM

Plans and Programmes

Project Design

Project Implementation and Monitoring

Stages in Development Cycle

Level of detail

Feedback to higher levels of planning and decision making
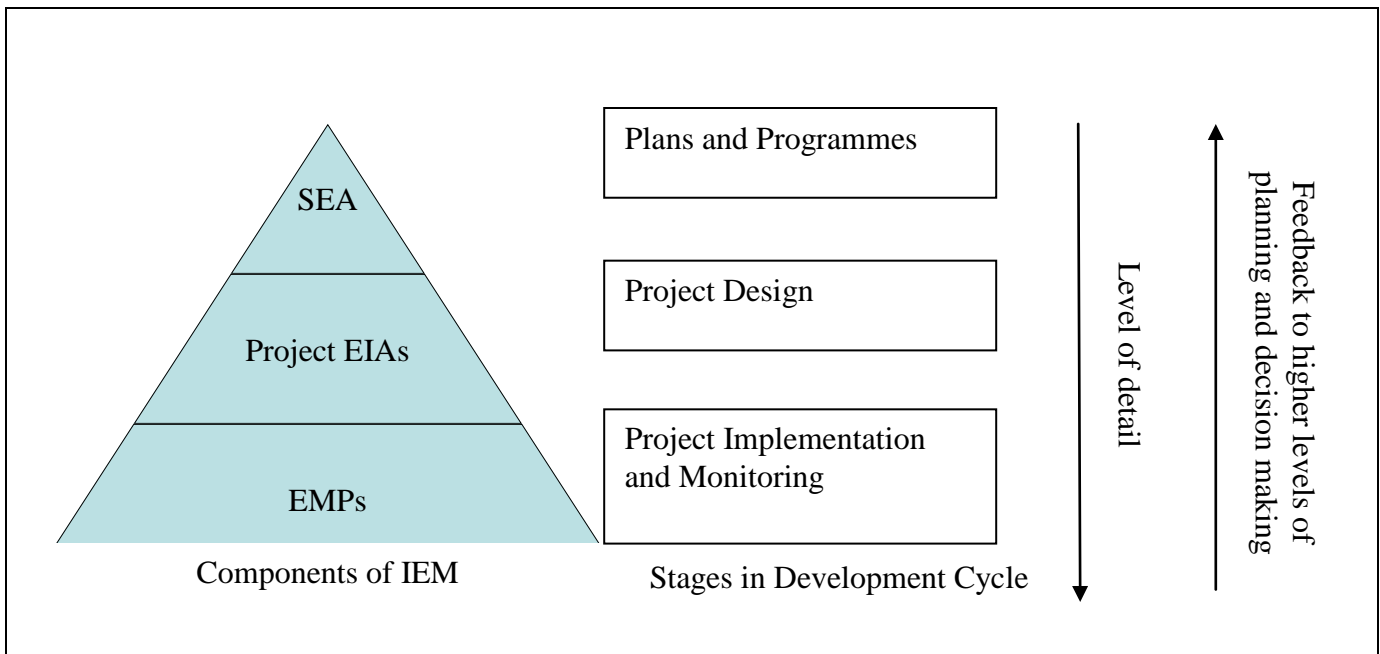
Figure 2.1: Relationship between IEM tools in different stages of the development cycle (DEAT, 2004: 12)

Despite strategic planning being used in various public sector agencies for more than two decades, not much is known about its effectiveness (Poister and Streib, 2004 cited in Ugboro *et al.*, 2011: 88). Ugboro *et al.* (2011: 88) conclude that public organizations are not good candidates for strategic planning because of the difficulty in designing and implementing it in such environments. The limited and dispersed interaction between EIA and planning theory has meant that EIA has largely failed to benefit from planning theory insights and lessons (Lawrence, 2000: 607). Strategic planning is defined by Ugboro *et al.* (2011: 89) as "the process by which organizations determine and establish long-term directions and formulate and implement strategies to accomplish long-term objectives while taking into account relevant internal and external environmental variables." In many public sector organizations, the adoption of strategic planning is motivated by the need and desire to set policy and define program direction (Ugboro *et al.*, 2011: 89). Furthermore, Ugboro *et al.* (2011: 89) state that as an operational management tool, "it can help facilitate communication and participation, accommodate divergent interests and values, foster wise and reasonably analytical decision making, and promote successful implementation."

While there is a myriad of arguments for the benefits of SEA in comparison to EIA, Gerber (2009: 2) argues that the EIA and the IDP can never be separated, with the IDP being the all encompassing plan which guides strategic planning. EIA's must be considered within the sustainability vision, goals and

objectives of the IDP and the desired spatial form and pattern of the SDF. EIA therefore, should provide the strategic context and decision making framework as having arising from the foundations of the IDP, SDF and refined by the EMF, where the EMF provides area by area land use (Gerber, 2009: 2; Kilian *et al.*, 2009: 20). In concurrence of this view DEAT (2012: 2) states that the EMF is meant to act as a support function to the EIA. In this regard, the process of environmental assessment should facilitate environmental management in that the project level EIA's provide feedback on sustainability outcomes and hence provide the basis for review of the sustainability objectives of the IDP (Gerber, 2009: 2).

2.2.2.1 Environmental Management Frameworks

The EMF Regulations of June 2010, Regulation three state that the Minister or MEC with the concurrence of the Minister may initiate an EMF for an area (Department of Agriculture, Environmental Affairs and Rural Development-DAEARD, 2011: 10). EMF processes are defined through a combination of legal references, including the National Environmental Management Act (NEMA) Section 24(2) and (3), NEMA Section 24(4) (b) (i), NEMA Section 24O (1) (b) (v), NEMA Section 44(2), and the EMF Regulations which provide the legal mechanisms for EMF compilation and application. The NEMA is based on a set of national environmental management principles which require that development be socially, environmentally and economically sustainable (de Villiers and Hill, 2008: 341). The EMF regulations were issued along with the EIA regulations in 2010, and detail the requirements for EMF studies in terms of purpose, content, process and function (Department of Environmental Affairs - DEA, 2011: 17). The EMF as an environmental assessment tool addresses some strategic and regional focus aspects that need to be considered in both environmental evaluation and spatial planning (Marais, 2010: 22), yet many do not consider important issues such as gender equity and child development inherent in the relevant societal norms (Magwaza, 2012: 25).

The EMF is a unique South African instrument that was first conceptualised in 1989, enacted in 2006 and updated in 2010 (Marais, 2010: 1). Kilian *et al.* (2009: 20) broadly describe the EMF as "a management and decision-support tool which provides authorities with information about the state of environment and planning parameters". The objective behind the development of EMFs are to map environmental sensitivity to aid in the screening of developments in sensitive environments and also thereby minimise the number or project level environmental assessments conducted (Marais, 2010: 1). However, the apparent lack of capacity, the skills shortage and limited understanding of sustainable

development is undermining the efforts in South Africa (Kilian *et al.*, 2009: 20). In the research conducted by Marais (2010:2), it was concluded that more focus is required on aligning scales and resolutions of map inputs, mapping methods and the integration of spatial data, particularly with regard to adjacent districts. Furthermore, it was concluded that buffer systems require more research and application (Marais, 2010: 2). Nonetheless, Marais (2010: 2) states that the practice of conducting EMF in South Africa is well established and it can be valuable in sustainable development planning and decision-making. Kilian *et al.* (2009: 20) state that the EMF has resulted in more proactive public consultation, with input from stakeholders being an important aspect of developing an EMF, yet as discussed in chapter one, Marais (2010: 25) found in her study that the public consultation aspect was the poorest in the EMF process. Considering that the EMF is strongly spatially inclined (Kilian *et al.*, 2009: 20), one of its outcome is to produce management zones of land use, if this is not done so in close consultation with the indigenous people of the study area, this has significant implications for sustainable livelihoods and voice and therefore is the perspective from which this study is conducted.

In Government Notice number 806, (DEAT, 2012: 1) it is stated that the EMF forms part of the IEM suite of tools for environmental management and assessment and provides a myriad of information which are useful in the diverse field of environmental application. DEAT (2012: 4) further provides 11 guiding principles for the development of EMFs which clearly outline the context of EMFs and what it should promote. In his study into the effectiveness of EMFs in South Africa from the stakeholder perspective, Mtolo (2010:1) found that debates are rife around whether this tool is needed in South Africa. Mtolo (2010: 64) identified weak enforcement of the EMF by government, unclear roles and responsibilities, inadequate institutional arrangements, budget constraints, unreliable information sourcing, undefined scope of the EMF, poor attendance to project steering committees of the EMF as the causes in decreasing effectiveness of the EMF, from the perceptions of stakeholders interviewed.

2.3 Sustainability Science

Research in sustainability science aims to understand the complex ways in which people impact the environment and the environment impacts people, a topic often referred to as human-ecological coupled systems (Silka, 2010: 4). Such theory plays a pivotal role in understanding the interrelationship between people and their environment which is critical for this study. Sustainability science as elaborated on by Blackstock and Carter (2007: 344) recognises the limitations of reductionist disciplinary approaches to understanding systems. Integration is urged of the four areas identified, namely, biological;

geophysical; social and technological to consider how the earth, its ecosystems and its people are interdependent (Blackstock and Carter, 2007: 344). This is an approach supported by IEM (Aregbeshola *et al.*, 2011: 1277). Blackstock and Carter (2007: 346) summarise sustainability science as a concept being used to consider the degree to which new research approaches are being implemented. Institutional and transition theories are used to explain why changes can take multiple forms, may follow *ad hoc* journeys, and will face resistance (Blackstock and Carter, 2007: 346). Despite sustainability being a globally endorsed objective, it has not yet reached the syllabus of higher degrees. This is attributed to low levels of sustainability literacy, even among science students at universities (Assaraf and Damri, 2009: 368). Blackstock and Carter (2007: 344) stress that sustainability and traditional science are not a binary opposition but could be considered to be "positions on a spectrum, allowing an analysis of shifts in emphasis." The fluctuation in environmental systems poses various challenges for sustainable management and human wellbeing. This then requires a change to environmental thinking (Shackleton *et al.*, 2011: 1). Since sustainable development can also be relatively complex and requires specialized skills, a network of organizations can strengthen the capacity of local governments to plan and implement sustainability initiatives (Hawkins and Wang, 2012: 7). Sustainability science is integrative because it requires bringing together different disciplinary perspectives to develop new understandings as they arise from the interaction of multiple perspectives (Blackstock and Carter, 2007: 344). Not only does sustainability science require new forms of integration, but it also requires the synthesis of theory and practice to resolve persistent societal problems (Blackstock and Carter, 2007: 344). Furthermore, sustainability science utilises multiple forms of knowledge production (co-production of knowledge), requiring the interaction of academics with other stakeholders (Blackstock and Carter, 2007: 344).

Blackstock and Carter, (2007: 344) states that sustainability science is not just interdisciplinary, but also requires a transition in conceptualising why, how and by whom science is practised. Blackstock and Carter (2007: 344) explain that geography's focus on scale, both spatial and temporal, is also one of the key challenges of sustainability science, as it requires understanding of the inter-relationships between multiple scales. Furthermore, geography has welcomed different epistemological treatments of society and space in ways that generate new and improved scientific understandings (Blackstock and Carter, 2007: 344). This combination of social and biophysical processes forms the basis of sustainability science (Blackstock and Carter, 2007: 344). In scientific and academic circles worldwide, the opportunity to develop the emerging discipline of sustainability science has never been greater

(Komiyama and Takeuchi, 2006: 1). Blackstock and Carter (2007: 345) posit that the concept of sustainability science reflects the literature on the changing relationship between science and society whereby research is expected to contribute to the wellbeing of the society which funds its existence. Blackstock and Carter (2007: 345) elucidate that within this new science-society interaction, academic institutions are only one site of knowledge creation and sustainability science requires further research with, rather than on, other groups involved in managing the environment. Blackstock and Carter (2007: 345) offer the following example: Robinson and Tansey (2006) distinguish between weak and strong stakeholder engagement processes in research. This has been a long standing debate in literature on public participation. These terms relate to the roles and responsibilities within research relationships that involve stakeholders (including the public). Blackstock and Carter (2007: 345) state that oftentimes, stakeholders are informed or consulted on the research but do not "define, participate in or evaluate the research itself." Therefore, the stakeholders provide information whilst the power remains with the researchers (Blackstock *et al.*, 2007 cited in Blackstock and Carter, 2007: 345). A major sustainability science conclusion is that stakeholders need to be involved earlier and in different ways than has previously been the case in practice (Silka, 2010: 4). Flexibility and co-learning are paramount to the implementation of sustainability science and it further requires reflection on how individual prejudices and experiences influence research practices, as well as drawing attention to the socially constructed and contested nature of "evidence". (Blackstock and Carter, 2007: 345).

Blackstock and Carter (2007: 353) offer the solution to enabling a transition to sustainability science as ensuring that all researchers worked full-time on a project. The authors go on to explain that unless sustainability science is recognised as more valuable by organisations and the wider peer group in terms of its outcomes and outputs, than those produced under traditional modes of research, there will not be any incentive to transition to sustainability science (Blackstock and Carter, 2007: 353). Blackstock and Carter (2007: 353) are of the opinion that the involvement of stakeholders complicates issues because these stakeholders may have different motives and may be non-academic; this in turn has implications on project delivery. Furthermore, when project delivery is delayed, stakeholders endure stakeholder fatigue which decreases trust in the researchers (Blackstock and Carter, 2007: 353). Nonetheless, the authors believe that policy makers and organisations still encourage sustainability science, together with stakeholder involvement and engagement, however, the rules or guidelines to follow in sustainability science have not yet been finalised (Blackstock and Carter, 2007: 353). Silka (2010: 3) is of the opinion that in sustainability science scholars are struggling with the question of how stakeholders and scientists

can coproduce knowledge that offers useful solutions to complex and urgent environmental problems. Shackleton *et al.* (2011: 13) urge that graduates and researchers become equipped with the skills to deal with challenges in environmental science and they need to constantly seek improved and innovative approaches. These skills require inter-disciplinary teaching and research programmes to equip graduates and researchers with core competencies of sustainability science, adaptability (Silka, 2010: 3), innovation, dealing with uncertainty and trade-offs, social learning and integration of different knowledge systems (Shackleton *et al.*, 2011: 13). Both environmental justice and the livelihoods approach provide good frameworks for sustainability science and are discussed in the proceeding sections.

2.3.1 Environmental justice

The concept of environmental justice, according to Neimanis *et al.* (2012: 349) evolved from the Civil Rights Movement of the1950s, and captures the notion that exposures to environmental threats can be asymmetric. Neimanis *et al.* (2012: 349) explain this asymmetry as "for example, children, women of colour, people living in poverty, indigenous peoples, and other vulnerable groups may be disproportionately affected by harmful environmental hazards."
Neimanis *et al.* (2012: 349) define environmental justice as:

> *The fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.*

(Neimanis *et al.*, 2012: 349).

Environmental justice, according to Scott *et al.* (2002: 50), provides a useful framework for understanding the relationship between marginalised groups and the environment, which is crucial for this study. Given that this study explores the voice of the rural community in the development of the iLembe EMF, environmental justice provides a good framework within which to assess this. Rainey and Johnson (2009: 144), for instance argue that women of colour represent devoted grassroots social justice activists and environmental justice organizers who use direct and indirect actions to create healthy, sustainable, safe, and liveable communities (Rainey and Johnson, 2009: 144). The IDS in its policy briefing contends that public engagement in scientific debates and policy processes is necessary to address how research agendas are framed and the social purposes they serve, and to ensure that poorer people and communities will benefit from them (IDS, 2006: 1). Environmental justice has been a central

concern across disciplines, and both the concept and its coverage have expanded substantially in the past twenty years (Schlosberg, 2013: 37). The National Environmental Protection Act (NEPA) has this goal for all communities and persons. NEPA was passed in the United States of America (USA), and initiated a global inter-disciplinary interest in environmental evaluation and management. This Act was primarily concerned with environmental protection in the USA (Aregbeshola, 2011: 1267). According to NEPA (cited in Neimanis *et al.*, 2012: 349), environmental justice will be achieved when "everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work." There have been various definitions of environmental justice and the plurality in definitions is further complicated by its multi-purpose nature (Neimanis *et al.*, 2012: 349). For example, environmental justice may be regarded simultaneously as being a "grassroots movement, a research paradigm, a policy framework, and a political ideology" (Neimanis *et al.*, 2012: 349).

Research on environmental justice is primarily around identifying areas and patterns of environmental inequity and describing the historical processes underlying these patterns (Neimanis *et al.*, 2012: 350; Scholsberg, 2013: 38). Distributive justice and procedural justice form the essential components of the environmental justice framework (Neimanis *et al.*, 2012: 350). Furthermore, Scholsberg (2012: 37) states that environmental justice has been broadening and expanding in scope a great degree beyond its initial application to inequities in the distribution of environmental risk. In the Neimanis *et al.* (2012: 354) study, eleven major themes arise when considering who the users of environmental justice are:

- vulnerable population,
- biophysical landscape,
- distributive justice,
- human health,
- law,
- procedural justice,
- environmental health,
- restorative justice,
- economy,
- autonomy, and
- gender

Neimanis *et al.* (2012: 359) found in their study that of particular interest, the emergent theme of environmental health was most frequently cited in the indigenous literature, indicating its vast use in the sphere of environmental health. In his argument on the expansion of environmental justice Scholsberg (2012: 38) states that the expanding sphere of the environmental justice discourse has been extended further to application in "climate change and climate justice," as well as growing concerns and movements around local food and energy that have become the centre of environmental justice. The environmental justice framework is key to examining whether EMFs are providing opportunities for voice and the sustenance of rural livelihoods as the core components of environmental justice are distributive and procedural justice.

2.3.2 Livelihoods approach

Friedman's literature later focused on the theme of planning for the poverty stricken south of the globe (Chettiparamb *et al.*, 2013: 102) and this is particularly relevant to the aim of this research. Arising from this theme was a model which presents a disempowerment model of poverty. The model is a variation of thinking in poverty alleviation and development studies current at any given time, such as the livelihoods approach; basic needs approach and the entitlement or capabilities approach (Chettiparamb *et al.*, 2013:102). Livelihoods are considered to be that which sustain a community or society and in the rural context often refer to livestock raising, agriculture and fresh produce sale on an informal small scale (Brocklesby *et al.*, 2010: 24). Glavovic and Boonzaier define livelihoods as:

> *The capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels in the long and short term.*

(Glavovic and Boonzaier, 2007: 2).

Brocklesby *et al.* (2010: 20) make reference to the term "livelihood security," explaining that is used to refer to "adequate and sustainable access to and control over resources, (economic, social, physical, natural and political)." It means that individuals and households are able to claim goods, services and entitlements that help achieve wellbeing without undermining the natural resource base (Brocklesby *et al.*, 2010: 20). In the context of Ethiopia, Brocklesby *et al.* (2010: 20) made the assumption that, however imperfect, there are a range of public actions which work to promote greater livelihood

security. These actions, both formal and informal, are carried out by rural community members for one another, and also by the government and developers (Brocklesby *et al.*, 2010: 20). Geography, community affiliation, access to government services, abundance of natural resources, connections to markets and other aspects assist in shaping the nature and extent of livelihood security (Brocklesby *et al.*, 2010: 25). Understandably, Brocklesby *et al.* (2010: 27) relate livelihood to competency, stating that competency plays a pivotal role in livelihood security. This is depicted in Figure 2.2. The figure shows the livelihood strengthens with greater competence where high competence results in a thriving livelihood and non-competence results in a destitute livelihood.
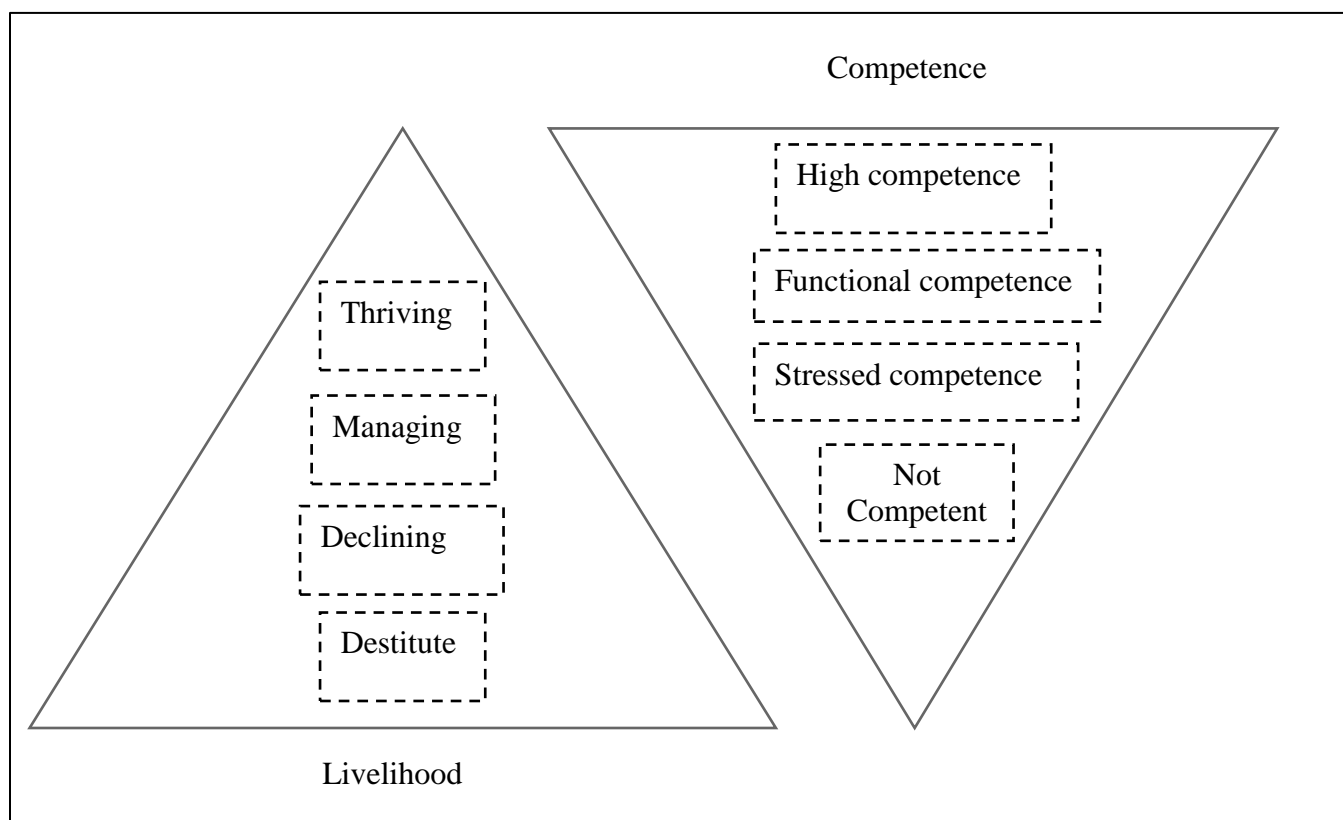
Figure 2.2: Securing livelihood: importance of competence (Brocklesby *et al*., 2010: 27).

The idea of a sustainable livelihood was initially introduced at the Brundtland Commission on Environment and Development and was then further expanded at the 1992 UNCED where the achievement of sustainable livelihoods as a broad goal for poverty reduction was advocated (Krantz, 2001, cited in Bassa, 2010: 10). In South Africa, the coast is considered very important for the sustenance of its communities (Glavovic and Boonzaier, 2007: 1). As discussed in chapter one, the background, master planning in both historical and modernist approaches have focused on urban over rural (Todes, 2010: 415), and furthermore on coastal areas over in-land areas, where South Africa has

been promoting sustainable coastal livelihoods (Glavovic and Boonzaier, 2007: 1). Glavovic and Boonzaier (2007: 2) elaborate on the sustainable livelihoods approach, stating that it enhances integrated coastal management (ICM). However, in the rural context, Davidson (2007: 48) argues that the livelihood strategies of many farming women and men and their families, particularly those that are more resource-disadvantaged, are for obvious and necessary reasons more concerned with addressing short-term economic realities than long-term sustainability. The livelihoods of rural communities are complex and have to adapt to unpredictable and economic and environmental challenges (Davidson, 2007: 48). The sustainable livelihoods approach is "the link between capabilities, equity and sustainability (Glavovic and Boonzaier, 2007: 1). While the approach has already been used, it is not without being critiqued. The sustainable livelihoods framework, according to Glavovic and Boonzaier (2007: 2) demonstrates that people live in a "context of vulnerability, exposed to various trends, shocks and seasonal shifts over which they have little or no control." In a sustainable livelihood system, its people are able to create resilience to adversity through robust livelihood strategies, thereby enabling them to cope with challenges and yet still take advantage of opportunities which arise (Glavovic and Boonzaier, 2007: 2). Glavovic and Boonzaier's (2007: 3) adaptation of the sustainable livelihoods approach is illustrated in Figure 2.3.

Livelihood Assets

POLICIES
INSTITUTIONS
PROCESSES
Levels
Of
Government
Private
Sector

LIVELIHOOD
OUTCOMES
More income
Increased well
being
Reduced
vulnerability
Improved food
security
More
sustainable
use of natural
resources.

H

S

N

Vulnerability
context:
Shocks
Trends
Seasonality

Livelihood
strategies

P

F

Influence &
Access

Laws
Culture
Policies
Institutes

Key:
H: Human capital
N: Natural Capital
F: Financial capital
P: Physical capital
S: Social capital

Figure 2.3: The sustainable livelihood framework (Glavovic and Boonzaier, 2007: 3).

2.3.3 Indigenous people and indigenous knowledge in environmental planning

Indigenous knowledge forms a very important conceptual framework within which the obectives of this study are achieved. It outlines the concepts with which the relationship of planning for people and their relationship with the environment can be best understood. Modernity has both popularised and threatened indigeneity (Dove, 2006: 191). The International Labor Organization (cited in Dove, 2005: 192) define indigenous as:

> *(a) Tribal peoples in independent countries whose social, cultural, and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) peoples in independent countries who are regarded as indigenous on account of their descent from populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of*

their legal status, retain some or all of their own social, economic, cultural and political institutions.

(Dove, 2006: 191).

Indigenous cultures and knowledge systems have been virtually ignored by planning theory and practice, in spite of the increasing willingness of indigenous peoples to engage in the holistic and integrative research and planning (Hardy and Patterson, 2012: 75). Locals want to know what scientific advances are being made in all spheres of science, including environmental, and furthermore, they want to heard, to undertand and to be understood, however their avenues are limited (IDS, 2006: 1). Indigenous peoples live in challenging environments and engage in complex negotiations to access their rights, yet research on their social mobilization often stereotypes them as victims of environmental management (Coombes *et al.*, 2011: 810). The use of indigenous knowledge has been seen by many as an alternative way of promoting development in poor rural communities in many parts of the world (Briggs, 2005: 2). In an explicit effort to counter the dominant development discourse, indigenous knowledge scholars argued that indigenous peoples possess unique systems of knowledge that can serve as the basis for more successful development interventions (Dove, 2006: 191). Further interest by scholars into indigenous knowledge centres on the purpose of improving the scientific contributions to earth's sustainable future. In this regard, there is the desire to avoid, for example, government officials making science-based decisions over resource management while ignoring highly relevant indigenous knowledge as such decisions can have devastating consequences (Aikenhead and Ogawa, 2007: 541). Interest in this concept gained momentum so fast that in 1996 the World Bank declared its own commitment to indigenous knowledge by committing itself to becoming the knowledge bank (Dove, 2006: 195). The IDS argues that science, policy and technology developments prove culturally unacceptable, or tend to miss key opportunities that emerge from the local, context-specific conditions in which people live. A focus on the overall growth or health of a society may also miss the particular vulnerabilities of its very poorest or most marginalised members and their particular technology needs (IDS, 2006: 2). Similar to the concept of indignity, indigenous knowledge soon became the subject of a wide range of critique (Dove, 2006: 195). Dove (2006: 195) states that when the origins of knowledge can be revealed, the label of indigenous knowledge often becomes more questionable. Dove (2006: 196) goes on to explain that much of the interest in indigenous knowledge has been focused on natural resources and the environment, which was reflected in the emergence of the concept of indigenous environmental

knowledge. This concept to a great extent question the historical blame placed on indigenous peoples for the degradation of their environments (Dove, 2006: 194). Aikenhead and Ogawa, (2007: 552) state that:

> *Indigenous scholars discovered that Indigenous knowledge is far more than the binary opposite of western knowledge. As a concept, Indigenous knowledge benchmarks the limitations of Eurocentric theory, its methodology, evidence, and conclusions, reconceptualises the resilience and self-reliance of Indigenous peoples, and underscores the importance of their own philosophies, heritages, and educational processes. Indigenous knowledge fills the ethical and knowledge gaps in Eurocentric education, research, and scholarship.*

(Aikenhead and Ogawa, 2007: 552).

To understand and appreciate indigenous knowledge systems, Aikenhead and Ogawa (2007: 552) urge that one views the system with heightened sensitivity, uncluttered by previous notions of the empirical thinking applied with Eurocentric worldviews. The ''depth of indigenous knowledge systems'' is testament to its content validity. Any knowledge system that has succeeded for such a long time must have content validity and the evidence lies in time plus survival (Aikenhead and Ogawa, 2007: 563). Battiste and Henderson, 2000 (cited in Aikenhead and Ogawa, 2007: 565) summarise indigenous knowledge systems as such:

> *Indigenous peoples regard all products of the human mind and heart as interrelated within Indigenous knowledge. They assert that all knowledge flows from the same source: the relationships between a global flux that needs to be renewed, the people's kinship with other living creatures that share the land, and the people's kinship with the spirit world.*

(Aikenhead and Ogawa, 2007: 565).

In the Australian case, indigenous societies suffered massive depopulation through frontier violence as well as widespread territorial dispossession and dislocation, however, this is also true, for indigenous societies in other parts of the "new world," where colonial and state formation have had profound consequences for first peoples (Lane, 2003: 364) – such as in the case of South Africa. The concept of indigenous knowledge is faulted in favour of the mixed products of modernity, and the idea of indigenous environmental knowledge and conservation is intensely disputed (Dove, 2006: 191). Indigenous Australians are now said to represent a "fourth world," which refers to an indigenous cultural

minority in a state over which they exercise little political control (Lane, 2003: 364). Lane (2003: 364) states that in recent decades, the postcolonial period, indigenous peoples residing in post settler societies such as Australia have made consistently powerful claims for natural resource control. These issues took centre stage in Australian politics in the early 2000s (Lane, 2003: 364). The participation of civil society, according to Lane (2003: 360) is said to act as check on state power, ensure the utilization of indigenous knowledge, and ensure that planning processes are more responsive and democratic. It is argued that the direct engagement of citizens and non-governmental associations enables the incorporation of indigenous knowledge which in turn can be considered a central determinant of successful project planning (Lane, 2003: 62). However, Dove (2006: 194) argues that one of the risks that stems from the attention given to indigenous people is that some areas and situations in the rural areas are privileged while others are overlooked, thereby limiting the field within which coalitions could be formed and local agendas identified and supported. These risks are particularly great for people who move about, which reflects the importance of place in conceptions of indigenous knowledge (Dove, 2006: 196).

Similar to the South African case, the often violent history of contact between blacks and whites in Australia helped cement a distinctive indigenous geography in which multiracial populations are concentrated on reserves in remote areas and in landscapes that were unpalatable for European consumption (Lane, 2003: 62). Subordination of indigenous land rights took place in two main ways. Firstly, African 'reserves' were created, at first as a way of containing resistance to dispossession, and later as reservoirs of cheap labour for the emerging (Saruchera, 2004: 140). (Lane (2003: 369) goes on to elucidate that the exclusion of indigenous peoples from a national community based environmental management program demonstrates the malevolent effect of differential power relations within civil society at the local and regional levels and the potential for decentralized planning to exacerbate rather than alleviate inequity. The South African case is depicted in Figure 2.4. Spatial fragmentation is still perpetuated 17 years into democracy (Osman *et al.*, undated: 2). The figure shows that areas designated for white citizens of South Africa surrounded the Central Business District (CBD) buffered by empty space or highways. Outside of these buffers were location townships and then on the outskirts were self-governing homelands, completely isolated from urbanisation.
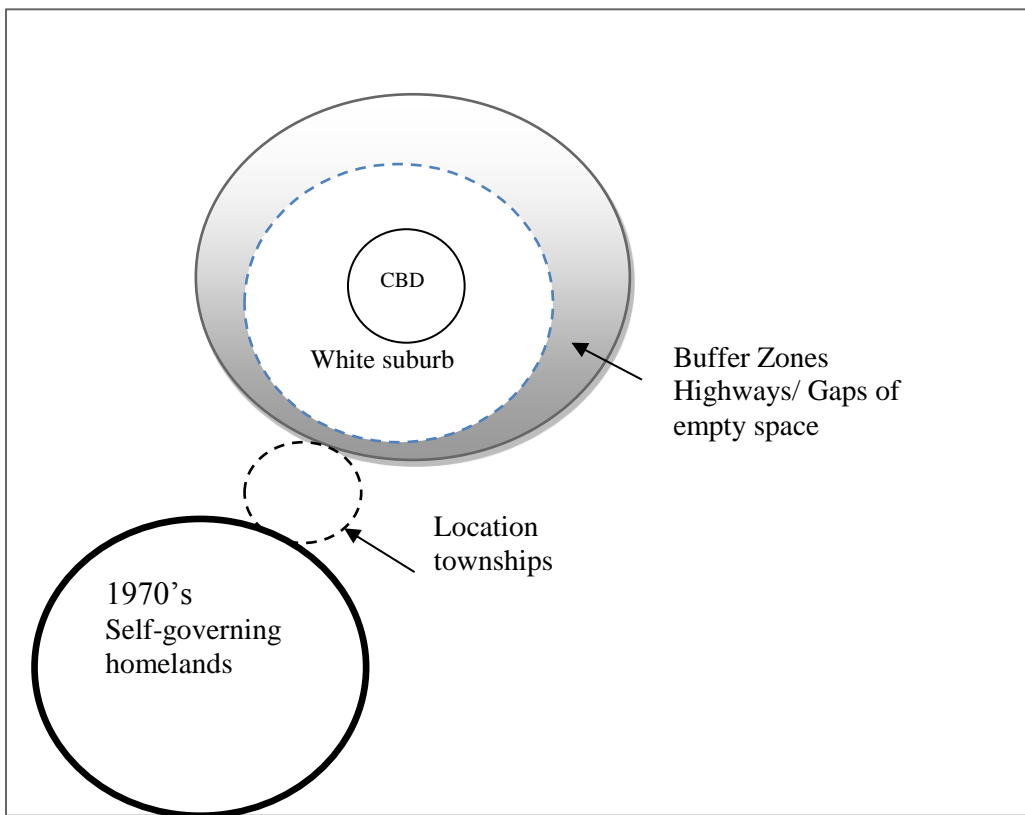
Figure 2.4: Apartheid legacy: spatial engineering through policy (Osman *et al*., undated: 2).

2.3.4 Climate and Development Needs

Climate change has to be considered in terms of spatial settlement, development and agricultural patterns (Royal HaskoningDHV, 2013a: 34) and therefore must be elucidated for the purposes of this study. Africa is thought to be the region most vulnerable to the impacts of climate variability and change (Challinor *et al.*, 2007: 381). In the desired state framework of the iLembe EMF, climate change and its effects are explored in each aspect, namely socio-economy, biodiversity and agriculture to state a few. The iLembe EMF (Royal HaskoningDHV, 2013a: 30) explains that communities can potentially be highly sensitive even if most individuals are not. Heavy reliance on natural resources is the reason this is so. In contrast, communities that are diverse and contain a range of industry types and have a wide resource base are expected to be less sensitive to climate change. In terms of future climate change, the dominant effect of climate change in southern Africa will likely be altered water balances, which will change hydrological regions thereby changing cropping patterns (Leichenko and O'brein, 2001:6). Royal HaskoningDHV (2013a: 20) offer the following strategies to reduce vulnerability to climate change effects:

- Manage for climate risk and uncertainty;
- Develop skills for planning, learning and re-organising;
- Absorb costs of adaptation;
- Develop an interest in adapting to climate change;
- Decrease resource dependency by enhancing and diversifying livelihoods; and
- Develop, access and use climate technology.

Research on the agricultural impacts of global change often emphasizes the physical and socio-economic impacts of climate change (Bryan *et al.*, 2008: 1; Leichenko and O'brein, 2001:1). Agriculture plays a dominant role in supporting rural livelihoods and economic growth over most of Africa (Challinor *et al.*, 2007: 381). Climate change and globalization are exposing farmers to new and unfamiliar conditions and while some farmers may be in a position to take advantage of these changes, many more are facing increased vulnerability, particularly in the developing world (Leichenko and O'brein, 2001:1). Farmer's adaptation strategies include use of different crops or crop varieties, planting trees, soil conservation, changing planting dates, and irrigation (Bryan *et al.,* 2007: 1).

In South Africa, reports on progress towards the development of a genuinely post-apartheid society use the benchmarks of housing, education, health and water as indicators that the life of the impoverished black majority is improving (Hemson, 2002: 24). It has been noted that in the past economic development and urbanization have tended to go hand in hand, and the legitimacy of this link continues to draw substantial attention (Barrios *et al.*, 2006: 357). Despite a drive to provide water and sanitation to rural communities in South Africa, there are reports of failure in this service delivery (Hemson, 2002: 24). There is vigorous debate about the nature and extent of these problems, but the issue raised by researchers in explanation is poor Institutional and Social Development (ISD) (Hemson, 2002: 24). Rural inhabitants make considerable use of natural resources from communal areas surrounding their settlements. The resources play a significant economic and nutritional role in rural livelihoods (Wallace, 2007: 18). There is a substantial dependence by rural people on natural resource extraction for sustainable livelihoods (Bassa, 2010: 43). Rural development is a complex and multi-faceted process that requires a measured conceptual approach that can engage with varied interests and perspectives (Davidson, 2007: 40). Further to the effects climate change has on rural livelihoods; there is also evidence that that climatic change has been an important determinant of rural–urban migration (Barrios *et al.,* 2006: 357). Leichenko and O'brein (2001: 1) posit that economic globalization in particular is

exposing many rural regions to global markets causing these regions to be doubly exposed to the impacts of globalization and climate change, as there are new sets of "winners" and "losers" created. With reference to earlier review of literature on environmental justice in section 2.3.1, climate change has pushed environmental justice toward more broad considerations of both environment and justice (Schlosberg, 2013: 38). The transition to a growing focus on sustainable materialism depicts a sophisticated analysis of power and injustice on the part of environmental justice movements and an important development in transformative politics and practice (Schlosberg, 2013: 38). Both trends extend a conception of environmental justice into a new realm − where environment and nature are understood to create the conditions for social justice (Schlosberg, 2013: 38).

2.4 Stakeholder theory

Arising from Freeman's (1984, cited in Reed *et al.*, 2009: 1934) work on stakeholder theory there exist differing opinions on what stakeholders are, often these are divided into active and passive stakeholders in natural resource literature. The stakeholder theory is explored in the study in order to better understand the origins of stakeholder engagement and public participation. Freeman's initial intent was to offer a pragmatic approach to strategy that urged organizations to be cognizant of stakeholders to achieve superior performance (Laplume *et al.*, 2008: 1153). The word ''stakeholder'' originates from the seventeenth century, where it was used to describe a third party entrusted with the stakes of a bet (Reed *et al.*, 2009: 1934) and attention to stakeholder theory appears to have plateaued in recent years after receiving peak attention in 1999 (Laplume *et al.*, 2008: 1153). The term stakeholder is described by Reed *et al.* (2009: 1934) as groups or individuals ''without whose support the organisation would cease to exist'' and further states another definition as ''any naturally occurring entity that is affected by organisational performance.'' Van Puyvelde *et al*. (2011: 433) refer to the term stakeholder as "any person or group that is able to make a claim on an organization's attention, resources or output or who may be affected by the organization." Unlike traditional management, which focuses on internal affairs, stakeholder management focuses on the explicit management of those actors who may be internal, external, or interface with an organization (Van Puyvelde *et al.*, 2011: 433).

Freeman in his many years of contribution and development of this theory drew on various literatures including corporate planning, systems theory, and corporate social responsibility to develop a stakeholder approach (Laplume *et al.*, 2008: 1157). He argued that existing management theories were not equipped to address "the quantity and kinds of change which are occurring in the business

environment" (Laplume *et al.*, 2008: 1157). The debate in literature on the definition of stakeholders is partly due to the problem of defining what constitutes a legitimate stake. Furthermore, stakeholder theory needs to identify who decision-makers are morally responsible to in their legal and institutional context (Reed *et al.*, 2009: 1934). Laplume *et al.* (2008: 1153) states that Stakeholder theory is timely yet adolescent, controversial yet important. Work on the theory gathered around five broad themes, each with distinct questions and preferred empirical approaches (Laplume *et al.* (2008: 1160). The themes, according to Laplume *et al.* (2008: 1160) are:

- Definition and salience,
- Stakeholder actions and responses,
- Firm actions and responses,
- Firm performance, and
- Theory debates.

Stakeholder theory was developed within organisational studies and focuses on strategic management (Desai, 2010: 98), but it's social responsibility element allowed it to blend into social issues in management as well (Laplume *et al.*, 2008: 1156). More recently, it has begun to enter the conversation about sustainable development ((Laplume *et al.*, 2008: 1156). Whereas managers and employees are internal stakeholders, and customers, competitors, and suppliers are examples of external stakeholders, the board of directors can be seen as an interface stakeholder due to its connecting function between the organization and its environment (Van Puyvelde *et al.*, 2011: 433).

A fundamental thesis of stakeholder-based arguments is that organizations should be managed in the interest of all their constituents, not only in the interest of shareholders (Laplume *et al.*, 2008: 1153). The involvement of stakeholders has many benefits, such as increased flow of information and knowledge, environmental protection and conflict management (Desai, 2010: 98). Desai (2010: 99) further states that a key component of the stakeholder theory is that people will protect what they perceive to be valuable, therefore local communities are considered key stakeholders and should be afforded the opportunity to be involved in decision making processes to uplift the sometimes poverty stricken communities in which they live. Identifying and engaging stakeholders are vital for sustainability (Desai, 2010: 99, IDS, 2006: 3). Van Puyvelde *et al.* (2011: 433) suggest that an organization can classify stakeholder types and delineate strategies for managing these stakeholders based on two dimensions: potential for threat and potential for cooperation. Many of the concepts and much of the language of agency theory can be applied to stakeholder relationships and furthermore,

principal-agent relationships can be seen as a subset of the more general class of stakeholder relationships (Van Puyvelde *et al.*, 2011: 433). This is illustrated in Figure 2.5.
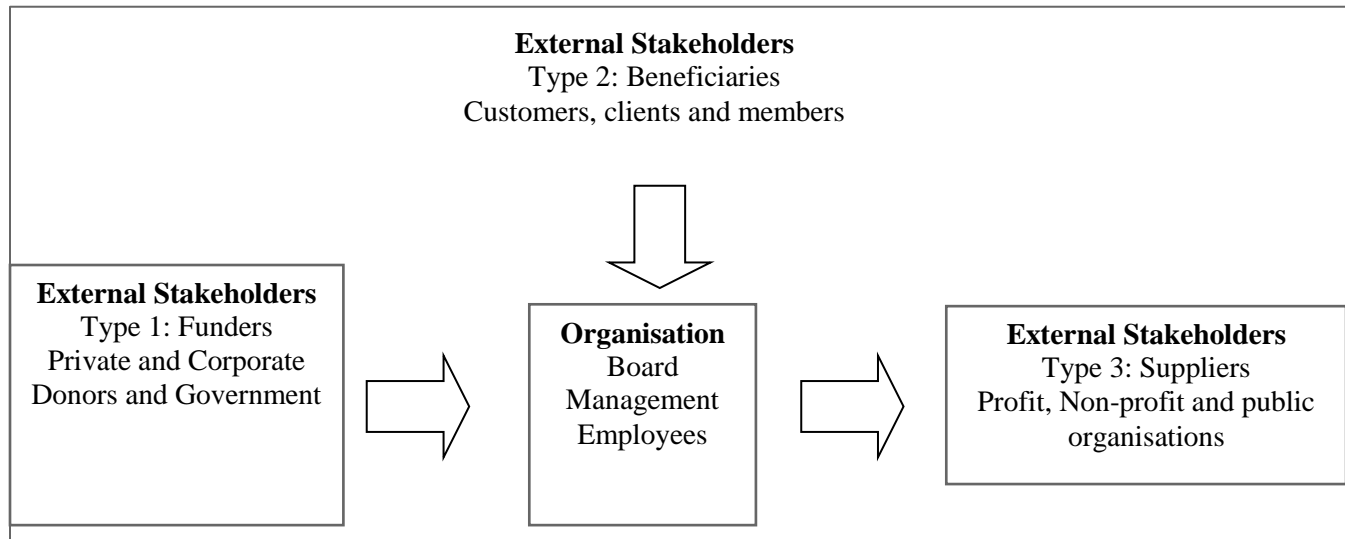
Figure 2.5: Principal-agent relationships (Van Puyvelde *et al*., 2011: 435).

Further to stakeholder theory public participation in planning and then in environmental assessment is discussed in the proceeding sub-sections.

2.4.1 Public participation in planning

For the purposes of this study, it must be noted that "public" in the researcher's reference to public consultation and/or participation is all inclusive of civilians and the readers interpretation of stakeholders, with definitions of the latter provided in section 2.4. Current developments in environmental policy increasingly emphasize public participation (Beierle and Konisky, 2000: 587; Gaventa, 2012: 1). Modern debates regarding the role of citizens in processes of development have often focused on institutionally arranged forms of participation. There has therefore been an eruption of efforts to involve citizens in policy and decision-making, ranging from classic consultations to more innovative forms such as citizens' juries, councils and participatory appraisal (Leache and Scoones, 2007: 7). Public participation is an important element of the original USA NEPA (Boyco, 2010: 9). Bryson *et al.* (2012: 23) states that public participation cuts across a myriad of disciplines and further offers an evidence based and design science approach for a guideline on designing the process. Political participation is one of the primary avenues by which citizens influence the direction of public policy (Flavin and Griffin, 2009: 544). Public participation also has been described as:

All interaction between government and civil society… including the process by which government and civil society open dialogue, establish partnerships, share information, and otherwise interact to design, implement, and evaluate development policies, projects and programs.

(Du Plessis, 2008: 6)

Literature on public administration, planning and governance provide interesting arguments for and against active citizen involvement in local governance (Moodley, undated: 2). Incorporating the views of members of the public into planning decisions is seen to give greater legitimacy to those decisions (Aitken, 2010: 249). Slunge and Loayza (2012: 258); Buccus and Hicks (2008: 99) and Piper (2011: 31) state that multi-stakeholder dialogue and participatory mechanisms should be linked to public administration in order to overcome the "event culture" (the reaction to major events which are then highlighted in media and attract recourse) and proclivity on governments part for co-optation (seeking support for pre-planned activities) which prevails with regard to calls for public participation and civic engagement. Despite a growing desire to innovate in the public sector, there exists limited recognition among public administrators of "design science" as a feasible way to promote adaptation and change (Bryson *et al.*, 2012: 24). Bryson *et al.* (2012: 24) attribute this to the sector's risk-adverse culture and structural barriers. Design science is used to illustrate the cycle of the public participation process in Figure 2.4 (Bryson *et al.*, 2012: 24). The figure depicts a constant cycle between evaluating, assessing and designing and obtaining resources to manage public participation. The IDS states that science (and its application to environmental science used for the purposes of planning) is no longer relying on natural findings but is increasingly recognised as being open to shaping by individual creativity, collective ingenuity, cultural priorities, institutional interests, stakeholder negotiation and the exercise of power (IDS, 2006: 2).

Evaluate and redesign continuously

Assess and design for context and purpose

Enlist resources and manage the participation
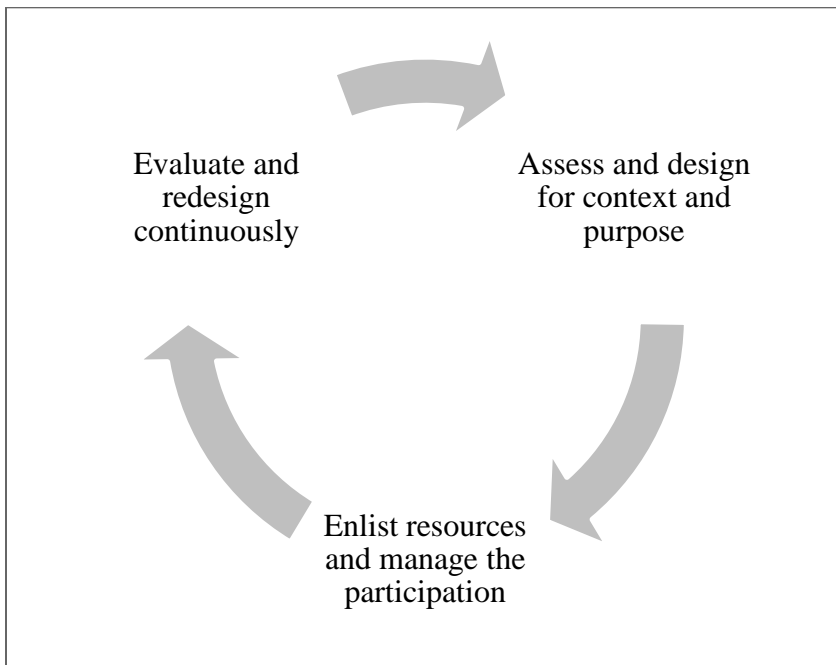
Figure 2.6: The Cycle of Public Participation Process Design and Redesign (Bryson *et al.,* 2012: 24).

Within the planning theory literature public participation is a much-debated topic (Aitken, 2010: 249). Adebo (2005: 4) defines participation with following points:

- The involvement of significant number of persons in situations or actions which enhance their well-being, i.e. their income, security, self-esteem;
- Giving more attention to decentralized development;
- Recognition of the need to understand and use local approaches to development

Public participation in the processes of policy and governance in democratic South Africa could be regarded as a cornerstone of society, with formal recognition of public participation marking a departure from the authoritarianism of the past (Booysen, 2009: 2; Gaventa, 2012: 2). A study conducted by Retief (2010: 391) found that debates in South Africa on public participation are now around need and value versus past debates on how to conduct the process. The emphasis on the desirability of public involvement forms part of a tradition with the aim to avail the planning processes to democratic inspection and to expand the scope of public involvement as an important part of improvements in the planning process and policy (Rydin and Pennington, 2010: 153). However, Aitken (2010: 249) argues that tension exists between commitments to public participation and desires to control decision-making processes and outcomes.

Government policymakers need to be held accountable by citizens (Ackerman, 2008: 602) and public participation is an essential means to accomplish this (Draai and Taylor, 2009: 112). In a democracy, citizens exercise control indirectly through votes for political parties (Ackerman, 2008: 602). Booysen (2009: 3) posits that public participation and democracy are often closely linked. Using a participatory orientation, the author defines democracy as "a system of government in which every individual participates in the process of government maximally or minimally." Relative to the South African context, the objective of Agenda 21, sub-section 8.2, is to restructure the decision-making process to allow full integration and consideration of socio-economic and environmental issues and ensure a broader range of public participation (DEAT, 2000: 2). To achieve this, it is required that mechanisms to involve concerned individuals, groups and organisations in decision-making are improved. Effectual engagement between stakeholders and the public alike contributes to the identification of key issues of concern, possible solutions, and relevant local or traditional knowledge (DEAT, 2002: 2). This helps to ensure that environmental considerations are taken into account in the planning process (DEAT, 2002: 2). Booysen (2009: 2) states, however, that the integration of public participation into the daily operation of government and multiple phases of the policy processes proves more challenging than principled endorsement. UNCED (1992: 4) states that fundamental reorganisation of decision-making is needed, which is specific and pertinent to unique conditions of South Africa in order to allow environment and development to be put at the centre of economic and political decision-making. This is further supported by Lombard (2013: 136) who states that different "cultures of engagement" in specific settings suggest that understandings and practices of participation draw on different traditions. However, Retief (2010: 376) argues that literature is often too context specific which results in generalisation and knowledge transfer becoming difficult in the processes of development and progress in environmental decision making. Strategic tools such as the EMF have the ability to highlight underlying legislation and implementation practices that hinder information disclosure, public participation and access to justice on environmental matters (Slunge and Loayza, 2012: 249).

While public participation is described as being of great importance within planning policies, Aitken (2010: 253) urges that one must question how meaningful or influential participation actually is, particularly in cases where public participation leads to vocal opposition towards projects which reflect national policy goals. In these cases restricting or controlling public participation might be a means of social control to ensure desirable outcomes (Aitken, 2010: 253). Booysen (2009: 5) argues that not only do citizens have to be interested and mobilised to practise democratic participation as "citizen-activists"

but governments also need to provide the space in which civil society might influence policy making. A central focus therefore is power, in terms of who possesses it and how is it exercised within participatory processes (Aitken, 2010: 253). In this regard, when decision-makers assume the power to decide which stakeholders are relevant and should be heard are essentially creating a situation that is directly counter to the notion of participation (Aitken, 2010: 253). However, established democracies incorporate citizen and interest group input in a variety of ways (Ackerman, 2008: 602) which help to avoid situations of power control by government. It must further be noted that improved participation rights mean little unless organized groups exist that are willing to be part of the process. If groups simply organize street protests or engage in self-help, a more open administrative process will have minimal impact (Ackerman, 2008: 606). Several public participation typologies exist in South Africa, which use motivations for and potential effects of public participation as organising criteria (Booysen, 2009: 8). These typologies are illustrated in Figure 2.5. The seven modes or typologies, according to Booysen (2009: 9) provide for both bottom-up participatory actions and top-down initiatives, where the former refers to, electoral participation and protest and the latter to co-optation and co-governance, extended civil society opportunities, and citizen engagement with the state through communicative activities.
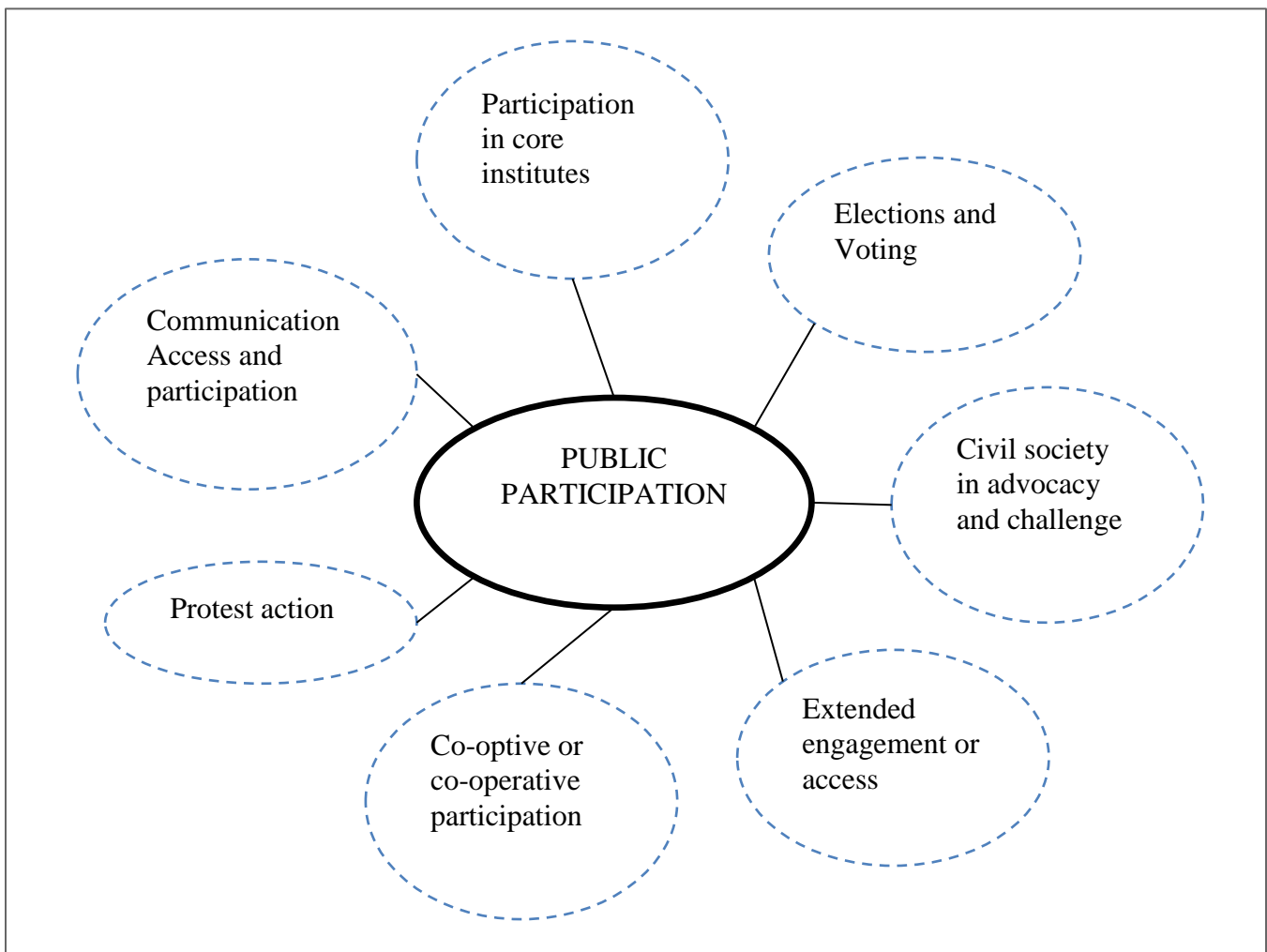
Figure 2.7: The typology of seven modes of public participation in South Africa (Booysen, 2009: 9).

2.4.2 Public participation in environmental assessment

Aregbeshola *et al.* (2011: 1277) state that an essential component to the EIA process is of public participation. The National Environmental Management Act (NEMA), Act 107 of 1998, and particularly the NEMA EIA Regulations (2010) stipulate the mandatory public participation process to be conducted in both EIA's and Basic Assessments (BA) (DEA, 1998). The Act further provides that all stakeholders have the right to be consulted on the environmental impact assessment of every project which may affect them, in whichever dimension (social, economic, and/or environmental) before any decisions are made (section 2 and chapter 4 of the Act) (Aregbeshola *et al.*, 2011: 1278). Section 2(4)(f) of the Act states: "The participation of all interested and affected parties in environmental governance must be promoted,

and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by the vulnerable and disadvantaged persons must be ensured." (DEA, 1998 cited in Aregbeshola *et al.*, 2011: 1278)

Reasons put forward for the inclusion of public participation in IEM include the following (Aregbeshola *et al.*, 2011: 1277):

- It is viewed as fair conduct in a democratic system for the public to be involved in issues that affect them;
- It allows people to feel that their views and values are heard and are then incorporated into a programme or project;
- It improves the quality, efficiency and effectiveness of the project;
- The public are less hostile and more actively involved in the project; and
- The local community is better able to understand its environment and intervene in environmental problems by applying past experiences.

Given that public participation has become an institutionalised process, it is imperative that public input should constitute a critical part of the project process as it would be erroneous to see it only as a privilege (Aregbeshola *et al.*, 2011: 1277). However, there are various problems encountered with the public participation process in the EIA. These include that there is limited access to information in that public participation is limited if there is insufficient information provided to the people (Aregbeshola *et al.*, 2011: 1277). With regards to equity, a large proportion of participatory researchers show an imbalance in the representation of people in the public participation processes. It has been found that some groups are more represented in decision making than others, thereby rendering the process unjust (Aregbeshola *et al.*, 2011: 1277). Furthermore, participation may be limited if the process is not transparent. Openness in the participation process helps to improve project standards, reduce corruption and promotes trust and open governance (Aregbeshola *et al.*, 2011: 1277). Time and financial constraints can also pose problems in public participation, environmental assessments are often constrained by timeframes, financial resources, infrastructural resources and project cycle schedules (Williams, 2006: 16); these results in snapshot data collection that can be an inaccurate representation of the actual input received (Aregbeshola *et al.*, 2011: 1277). Aregbeshola *et al.* (2011: 1277) also discuss limited awareness as a problem, planning has remained intangible because of inadequate public awareness. Undermining of goals further present challenges in participation, the participants can be frustrated when targeted goals such as needs, beliefs, values and interests are not incorporated into the final decision-making process (Aregbeshola *et al.*, 2011: 1277). Late consultation or late public

participation often results in project delays and this sometimes leads to protest action or legal proceedings. Furthermore, internal and external constraints creates the possibility for participation to be reduced if the authorities are unwilling to share power with the public, due to institutional motives (internal) or their relationship with powerful external economic forces (Aregbeshola *et al.*, 2011: 1277). Lastly, Aregbeshola *et al*. (2011: 1277) discuss education or a lack of literacy, or the technical nature of the project which can hinder public participation (Aregbeshola *et al.*, 2011: 1277).

In contrast, and if executed properly, Gilfillan (2011: 39) identifies several advantages of public participation in the EIA process, such as, improved quality of decisions; increased democracy (Williams, 2006: 16); more ownership of decisions, leading to more effective implementation; the building in capacity of those who participate (Siphamandla, undated: 41; Williams, 2006:16); increased fairness and equity; early identification of potential pitfalls; and increased legitimacy. Siphamandla (undated: 4) states that encouraging participation increases legitimacy not only of a process, but of an organisation which stresses it. However, these advantages discussed her are not the concern from a legal perspective (Gilfillan, 2009: 39). He highlights the following aspects of public participation as being on the radar of legal scrutiny. Firstly, that public participation is required for a fair administrative process. Secondly, that there needs to be early identification of any possible legal challenge. Thirdly, it is imperative to note that "public participation" and "consultation" are distinguishable. Fourthly, public participation can create or remove the platform for review (of, for example, a proposed development). Fifth, in a mining context, Gilfillan (2009: 39) argues that there are far more onerous requirements. Sixth, public participation can create the opportunity to prepare for and to answer a legal challenge, if raised. Lastly, there should be an increasing focus on content and responses to Interested and Affected Party (I&AP) queries.

Gilfillan (2009: 41) goes on to reference Froneman (2011 cited in Gilfillan, 2009: 41) in that "the consultation process and its result are an integral part of the fairness process." In regard to "fairness" Gilfillan (2009: 42) refers to the promotion of the Public Administrative Justice Act (PAJA), of 2000. The Act stipulates the notice and comment periods mandatory for the review of reports in the EIA process, and therefore, the EIA plays a role in a upholding of the PAJA (Gilfillan, 2009: 42). Gilfillan (2009: 42) states that "fairness is the ultimate standard by which administrative action is judged and should guide the public participation process." In consideration of "fairness" in this context, the notion of "voice" holds impetus (Buccus and Hicks, 2008: 98) and is discussed in the next section.

2.4.3 Voice and the rural voice

Voice, according to Brocklesby *et al.* (2010: 19) can be considered as shorthand for the communication, connection, dialogue and negotiation within which people engage with one another. Voice and rural voice in particular are theoretical frameworks which forms a crucial aspect of this study. Those considered to have a significant voice are able to negotiate on various and varying matters for the benefit of themselves and for those with whom they are concerned. People with voice are able to reach agreements and understandings with others about what needs to be done and how. They influence how issues, such as economic growth and rural development, are understood and acted upon (Brocklesby *et al.*, 2010: 19). Such people, Brocklesby *et al.* (2010: 19) explain, make successful claims for benefits, goods and services. They influence "the ways in which people are treated, levels and direction of investment, design and delivery of projects, details of policies, accountability of leaders and the definition and implementation of law" (Brocklesby *et al.*, 2010: 19). Brocklesby *et al.* (2010: 19) state that "effective voice means that people of all social groups, including the poorest and most marginal, are listened to and feel their views are being satisfactorily represented by, or acted upon, by others. Effective voice also implies that the channels to which people have access are socially and institutionally recognised."

According to Aitken (2010: 249) the participatory approach in the public planning domain has become institutionalized as a method of good planning practice and democratic principles and public participation have become increasingly accepted as means for balancing and rationalizing multiple interests and preferences. Rydin (2007: 54 cited in Aitken 2010: 250) asserts that within planning theory the new belief bands around the idea that the core of planning should be an engagement with a range of stakeholders, giving them voice and seeking to achieve planning consensus (Aitken, 2010: 250). However, these participatory approaches are criticized particularly with regard to process, it has been suggested that the focus on interaction directs attention away from the justice and sustainability of the material outcomes of planning interventions (Healey, 2003: 110 cited in Aitken, 2010: 250). An important area of consideration is who participates, and equally who does not participate, critical attention must be paid to which voices dominate participatory processes (Aitken, 2010: 250). The notion of voice is one which Buccus and Hicks (2008: 98) believe to be particularly important for analysis in order to determine whether effective participation is possible.

In a study into how the raising of voice by a historically marginalised and excluded group is shifting and changing in efforts to secure livelihoods, Brocklesby *et al.* (2010: 1) discuss the role, value and impact of voice within rural livelihood systems in Ethiopia. Voice constantly represents and re-represents concrete concerns, and as discussed in the motivation, will form the focus of this study. Every day people within communities, particularly in rural areas are speaking to one another, calling for support from neighbours and, making suggestions about how things should be done, drawing on tradition, and introducing new ideas (Brocklesby *et al.*, 2010: 1). This dialogue can be described as vital conversations which link everyone in society in bonds of belonging and occasions of challenge. Often, the very culture of the society is the voice, for example, Zulu women in Ndwedwe express themselves through the use of certain garments (Magwaza, 2012: 25).This communication between community members highlights the relative power to speak and act of those who have built competence within the society, who have large herds and maintain networks of useful contacts, as well as those who have lost competence, who are too old, too poor, too ill and too invisible to speak (Brocklesby *et al.*, 2010: 1). Studies clearly illustrate how strongly rural community members value their own dialogue as a way of holding their society together and securing everyone's livelihood. Dialogue constantly renews the social and political competence of the whole and is subject to the rules of a long tradition (Brocklesby *et al.*, 2010: 1). According to the United Nations Development Programme - UNDP (2009: 1) in order to ensure that participation is meaningful, socially inclusive and contributes to improving urban planning, a number of minimum conditions need to be satisfied, including mechanisms for socially marginalized groups to have a voice in both representative politics and participatory planning processes.

In the Ethiopian case (Brocklesby *et al.*, 2010: 1) there is no evidence as to whose voice is being heard and how these different voices are being responded to by leaders within the community, or by the government and other developers. Brocklesby *et al.* (2010: 15) discuss the CR2 Framework, which is a framework that links ideas of voice, social inclusion and fulfilment of responsibilities to a structured exploration of the processes. Through this, different people engage with and have voice in the decisions of informal and formal institutions and these institutions respond to and/or are accountable to the claims and issues of diverse voice. One of the components of the CR2 Framework is voice, participation and accountability (Brocklesby *et al.*, 2010: 15). The authors proceed to explain that this component examines how people express their voices, share their opinions and participate in development processes. Understanding is gained of what participation looks like and appears to lead to, and

furthermore of what people feel about their participation and the goals set for it (Brocklesby *et al.*, 2010: 15). Brocklesby *et al.* (2010: 15) argue that voice is linked to the issue of accountability, and put forward the following questions in this regard:

- Who is accountable to whom?
- For what are they accountable?
- How are they accountable?
- Is accountability only to powerful individuals and institutions?
- What systems exist for mutual accountability?

Across rural communities, the dynamics of wealth, gender and age, are shaping and influencing the capacity to raise voice (Brocklesby *et al.*, 2010: 37). Broad categories of poor, or of women and youth, are not sufficient to capture the specific nature of socially differentiated voice (Brocklesby *et al.*, 2010: 37). There are critical differences in power and influence within all social groups which either serve to enable or block the raising of voice. For example, some women may have a relationship with power or administration (through marriage and kinship), and this is then empowering for those women These women in power can in turn repress the voices of other women who are not akin to power (Brocklesby *et al.*, 2010: 37). On the other hand, Vigar (2013: 214) find that the use of planning to play strategic political games and the strength of the Not in My Back Yard (NIMBY) voice was substantially acknowledged in his studies undertaken.

2.4.4 Vulnerable Groups

Vulnerable groups constitute a signicant portion of the study area population and contributes significantly to the objectives of this study and hence is examined for this study. The typology discussed in section 2.3 and figure 2.5 (Booysen: 2009: 18), with its seven modes of participation, identified and briefly assessed the major modes of public participation that manifested in South Africa's first fifteen years of democracy. The Presidential Working Group on Women, a Ministry of Women, Youth, Children and People with Disability was created and therby represents a case in point of these modes. The modes cumulatively characterise the new complex of public participation that has taken shape in the post-liberation political era (Booysen: 2009: 18). Such recognition of the vulnerable groups displays that public participation aspires to be within the context of the predominant phase of policy (Booysen: 2009:18).

Brocklesby *et al.* (2010: 38) found that disability in the rural communities is a cultural taboo as well as a characteristic which severely reduced people's capacities to secure a livelihood. As a taboo, it means that disabled people have few opportunities to exercise voice within cultural or traditional systems and when they do, it is often limited to requests for support from neighbours and family (Brocklesby *et al.*, 2010: 38). It is also stated that with reference to climate change and its impacts on water availability, vulnerable rural communities are most affected (UNDP, 2009: 24, Washington *et al*., 2006: 1355). Furthermore, with the tendency to view problems from an increasingly global perspective, poor people's own local needs and perspectives can often be misrepresented (IDS, 2006: 2). Government targets disabled people as welfare recipients, but unfortunatley not as people with capabilities to exercise agency and voice (Brocklesby *et al.*, 2010: 38). The extreme non-representation of disabled people reflects on their marginalisation from development processes on a global scale (Brocklesby *et al.*, 2010: 38). A rural woman, speaking of a fellow rural woman was quoted in Brocklesby *et al.* (2010: 39) as having said:

> *You are stronger when you have a husband. You are two voices but if you are alone yours is one voice. With a husband you are respected and listened to.*

(Brocklesby *et al.*, 2010: 38).

This quote directly confirms the case of gendered voice (Brocklesby *et al.*, 2010: 38). While there is a wide range of different approaches which can be used to provide information to the public, not all are equally accessible to all potentially interested participants. Access to information is oftentimes very limited for most people and therefore particularly in the rural context, this will carry implicit gender, class and urban biases (IDS, 2003: 31). Women tend to take secondary and supportive positions, as auxiliaries to the main positions as "vices" (Hemson, 2002: 26). Since 1994 South Africa has committed itself not simply to working against discrimination of women in society but also to actively involving them in development and decision-making (Sithole, undated: 1). However, for women, it remains that their circles of mobility are more restricted and their information comes through interaction with other women and also through their husbands and other male relatives (Brocklesby *et al.*, 2010: 38). It was observed by Hemson (2002: 26) that women on committees were not free to express their views or to participate in decision-making; they were only there to fulfil the quota system. They rely on their husbands to settle disputes and mediate on their and their family's behalf while they are responsible to tending to the duties of their home and animals (Brocklesby *et al.*, 2010: 38). The participation of women can be argued as pure tokenism (Hemson, 2002: 26). However, Brocklesby *et al.* (2010: 39) and Shotshongaye and Moller (2010: 131) state that women do have ways of making their voice heard; of

being of use and being respected within clans in their community. While it is not free and open, it is nonetheless voice (Brocklesby *et al.*, 2010: 38). The role of women in customary institutions is limited, however. Brocklesby *et al.* (2010: 38) found that women rarely expressed interest in being actively involved. It is noticed that where they have trust in the leadership they feel they can voice their concerns freely (Brocklesby *et al.*, 2010: 38). General observation found that it is the youngest and the oldest who experience most difficulty in being able to speak out and be heard (Brocklesby *et al.*, 2010: 42). Poverty and vulnerability are critical to the exclusion and disconnection of vulnerable groups from customary and government systems (Brocklesby *et al.*, 2010: 42). The UNDP (2009: 36) therefore highlight the need for a rights-based approach, which demands equal access to 'equal quality' urban services, with the needs and rights of vulnerable groups appropriately addressed.

2.5 Conclusion

The literature review indicates that planning theory has evolved and continues to evolve over the past century forming into a more fragmented theoretical field. Within this current theoretical fragmentation emerges acceptance of stakeholder engagement. There is evidence in South Africa that government has made attempts to extend the grid of formalised or regulated development over rural areas. These cases pay testament to the biased nature of planning toward urban communities. A major theme in the literature review is that there exists a gap in planning theory and practice and this relates to the involvement and engagement of stakeholders. In the South African situation, many municipalities continue to struggle with institutional capacity to carry out effective environmental planning. Modernist planning is critiqued in relation to the search for new ways of conceptualising the science behind the Brundtland Commission's goals of sustainable development to create long-term integrity of the biosphere and human well-being. Modernist planning therefore leads the researcher to the concepts of sustainability science, environmental justice and sustainable livelihoods approach. In an ideal system environmental justice will be achieved when "everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work" (Neimanis *et al.*, 2012: 349). The EMF is a management tool which geographically provides a framework for the management of land in the study area which will support sustainability and controlled development. Its objectives are to guide land use and decision making. The concept of sustainable livelihoods is identified in terms of livelihood security, where if the livelihood is able to cope with stresses and shocks and is still able to provide assets and opportunities for its people then it is considered to be sustainable. While there are many arguments for the benefit of

strategic planning, the EIA and strategic planning in form of the IDP and its suite of plans cannot be separated. Public policy and planning systems can best be influenced by citizens through what is referred to as political participation. In moving on from an authoritarian system, public participation is considered paramount in South Africa. This extends to public participation being an essential component to EIA process. Inherent to public engagement is the concept of voice. From the literature review it is evident that the voice of many in South Africa is still repressed. The impact and value of voice in rural areas is vital to planning and environmental planning. Marginalised groups are still excluded yet shifting. The dialogue between members of rural communities strongly supports their rural livelihoods. Yet, the high degree of non-representation of marginalised groups still persists on a global scale. In order to understand and appreciate indigenous knowledge, one is meant to view it without an empirical eye. The depth of Indigenous knowledge systems pays testament to its validity and strength. Climate change has to be considered in terms of spatial settlement, development and agricultural patterns. The literature provides strong evidence that Africa is thought to be the region most vulnerable to the impacts of climate variability and change.

CHAPTER THREE: STUDY AREA

3.1 Introduction

Provided in this chapter is a background to the study area, Ndwedwe situated in the iLembe District Municipality in KwaZulu-Natal. The study area's geographical orientation, socio-economic profile and biophysical profile are provided. The service backlog of the area is also discussed. Thereafter specific focus is given to the predominant drivers of land use change, as well as an overview of the local culture, testament to the appropriate choice for this study.

3.2 Geographical orientation and study area description

The study area, the NLM (Figure 3.1), is one of four local municipalities in the IDM and has been formalised into a town as specified in the IDP (2012/ 2013: 12). However, it must be noted that there is a town within the municipality but the municipality itself has not been formalised into a town. Ndwedwe was formerly a tribal area forming part of the KwaZulu homeland under the Apartheid era. It is relatively a large block of land south of the Maphumulo Local Municipality and east of Camperdown, west of Tongaat and north of Pinetown (Sotshongaye and Moller, 2010: 119). NLM spans 1 076 square kilometres and general overall settlement densities are approximately 145 people per square kilometre (Ximba, 2009: 6). Access to the area is limited to the east-west link roads while north-south link roads are few and of poor quality (Ximba, 2009: 6).

Of Ndwedwe land, 69% is owned by the State or the Ingonyama Trust Board (ITB) (IDM, 2013: 15). The ITB is the entity responsible for administration of Ingonyama Trust land, approximately 2.8 million hectares in extent spread throughout the province of KwaZulu-Natal. Established in 1994 by the KwaZulu Ingonyama Trust Act, (Act No 3 of 1994), its purpose is to hold the land in title for "the benefit, material welfare and social well-being of the members of the tribes and communities" living on the land (http://www.ingonyamatrust.org.za). Figure 3.2 (Royal HaskoningDHV, 2013a: Appendix A) depicts the location of the study areas within the broader scale of South Africa. Despite being an approximate 40 minute drive from Durban Metropolitan, Ndwedwe remains an underdeveloped tribal area (Sotshongaye and Moller, 2010: 131). Figure 3.2 (Royal HaskoningDHV, 2013a: Appendix A) depicts the NLM within the IDM and highlights the predominant land uses of the area. This shows predominant rural subsistence farmland and bush land.

The NLM is an area largely associated with King Shaka, the warrior, military strategist and builder of the Zulu Nation in the early 1800s. An area within the radius 90 kilometres was strongly regarded as within the domain and influence of King Shaka's royal day to day livelihood rather than military power and governance (Ximba, 2009: 59). To this day, the Ndwedwe area is not only a multi-cultural rural village, but also an area strongly influenced by the Shembe religious beliefs, symbolised by the mythological "Holy Mountain of *Nhlangakazi*". The Ndwedwe area is not only a land of pre-colonial or pre-Shakan conflict as well as apartheid massacres; but its people have pride in their land and call this place home (Ximba, 2009: 59).
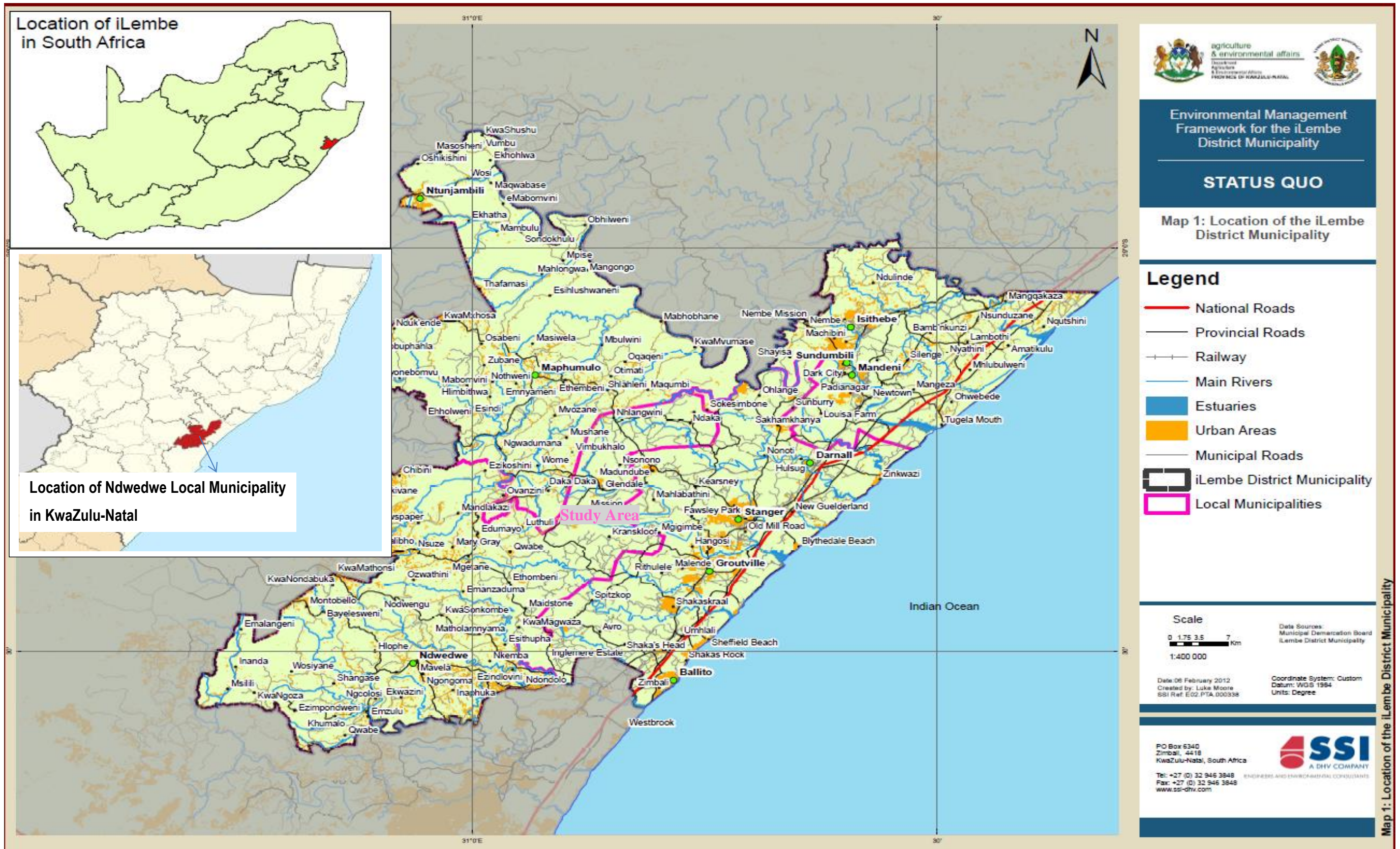
Figure 3.1: Location of study area within South Africa and KwaZulu-Natal (inset) and within iLembe District Municipality (source: Royal HaskoningDHV, 2013a: Appendix A).
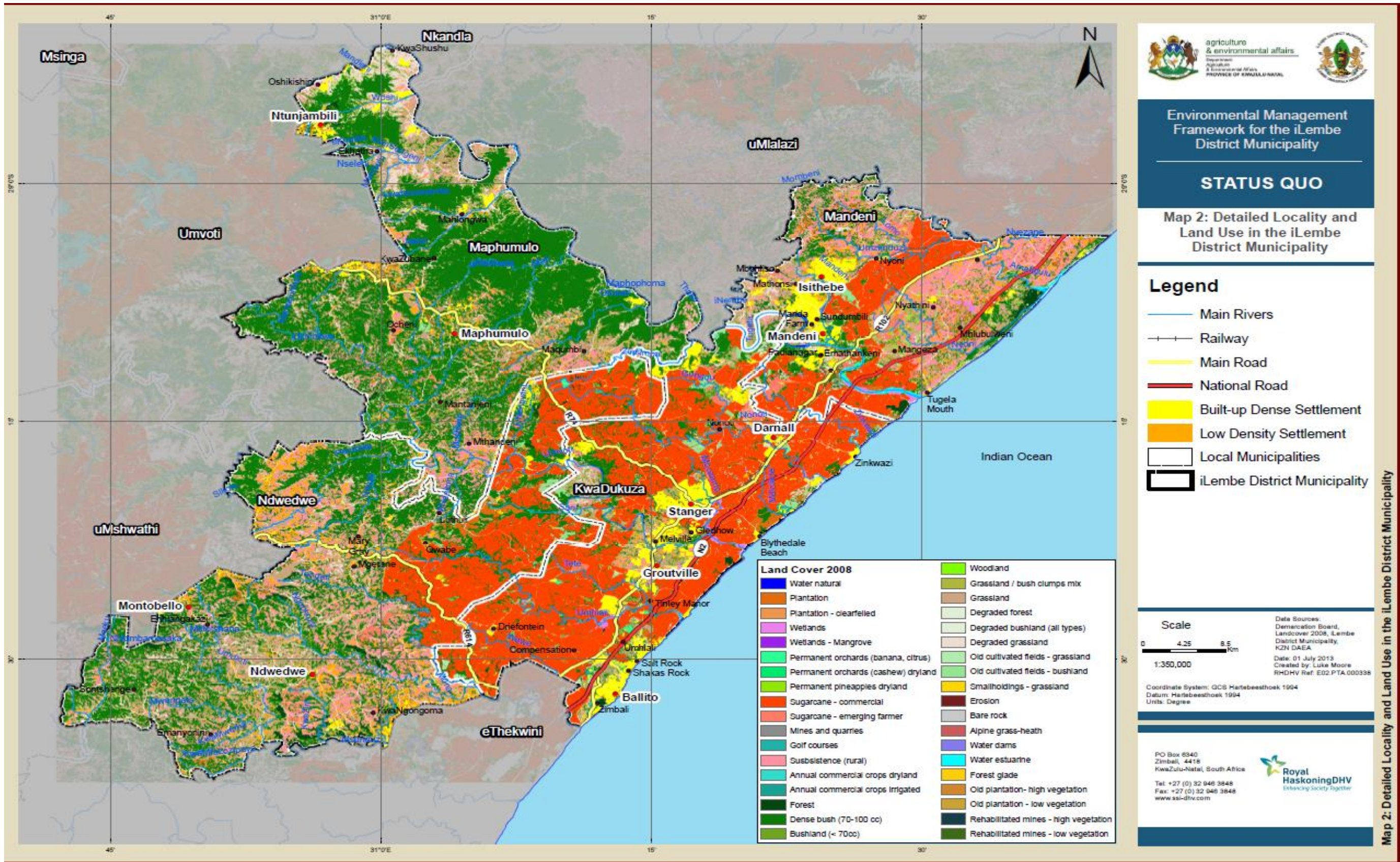
Figure 3.2: Detailed land use map for iLembe District Municipality (Source: Royal HaskoningDHV, 2013a, Appendix A).

The Ndwedwe SDF (Figure 3.3) seeks to establish a hierarchy of nodes and corridors with a particular focus on encouraging linear development of rural housing along major access routes. The eastern parts of the municipality are identified for agricultural development appropriate for agricultural potential in the area. Ndwedwe village is the administrative centre. Rural settlement occurs to the west of the municipality and it is proposed that agricultural projects that encourage subsistence farming be set-up in this area (Royal HaskoningDHV, 2013a: 79). Furthermore, the area has dispersed land of environmental protection areas predominantly acting as buffers along rivers and wetland systems.
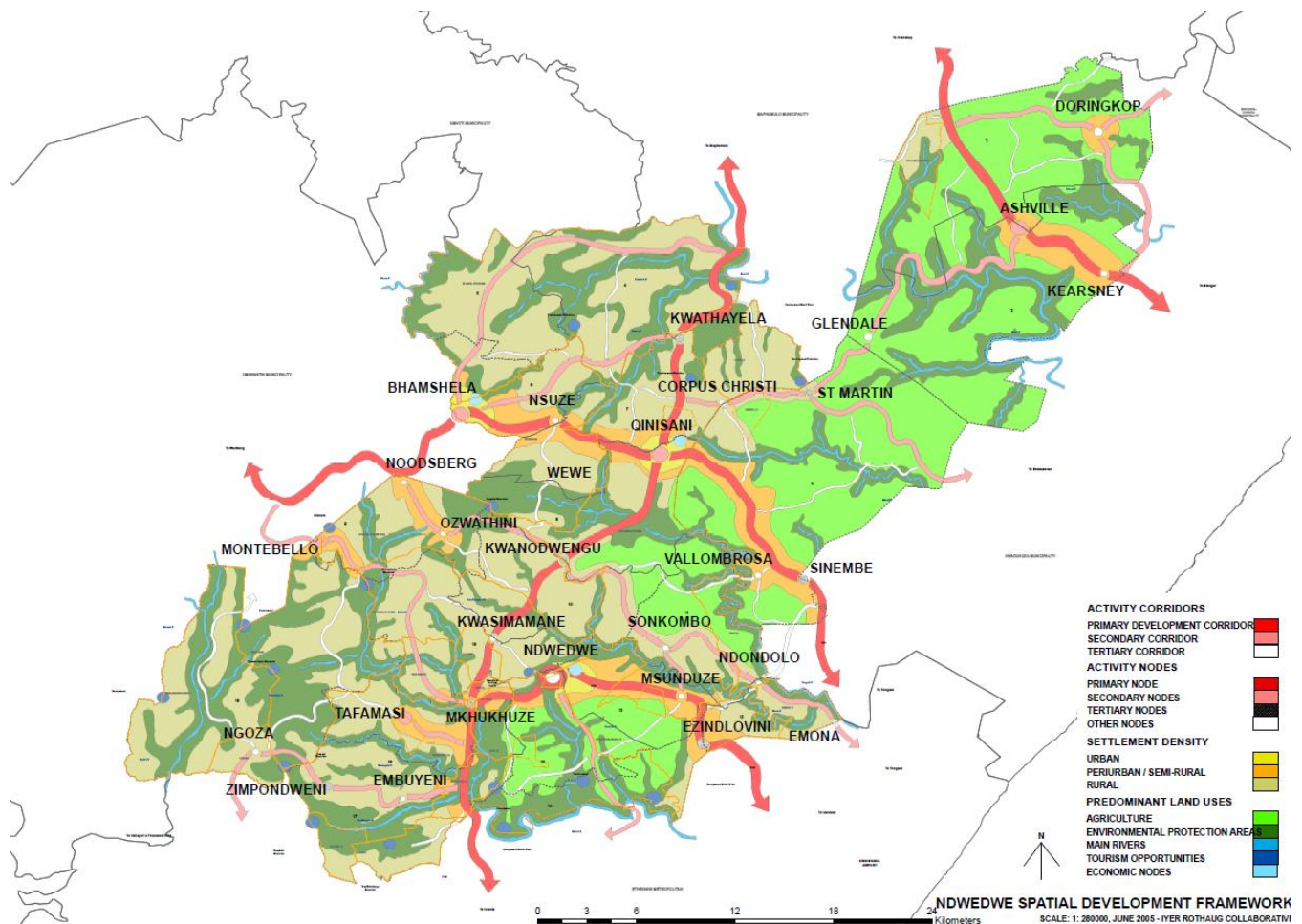
Figure 3.3: The Ndwedwe Spatial Development Framework (Royal HaskoningDHV, 2013a: 1).

3.3 Socio-economic profile

The IDM (DC29) is situated on the east coast of KwaZulu-Natal (KZN), between the eThekwini Metro in the south and the Thukela River mouth in the north (Isikhungusethu Environmental Services, 2009: 5). The IDM is the smallest of the ten KZN district municipalities, measuring 326 518 ha (Isikhungusethu Environmental Services, 2009: 5).

IDM consists of four Local Municipalities, Mandeni, KwaDukuza, Ndwedwe and Maphumulo (Isikhungusethu Environmental Services, 2009: 5). The major economic nodes within IDM include Stanger, Ballito and Mandeni. KwaDukuza is the most urban of the four local municipalities, as it contains both Stanger, and the rapidly developing coastal town of Ballito. However, the iLembe District contains large areas that are predominately rural in nature (Royal HaskoningDHV, 2013a: 12). It can therefore be noted that the NLM is the only local municipality out of the four which is not classified to any extent as being or having a major economic node. The NLM consists mainly of poor black communities which makes up 99.3% of the population, most of whom are Zulu, and whose livelihood depends on subsistence agriculture (Sotshongaye and Moller, 2010: 119; Ximba, 2009: 6). The main agricultural activities involve production of bananas, avocados, pawpaws, oranges, lemons and mangoes (Ximba, 2009: 6). Maize, beans, madumbes (yams) and sweet potatoes are grown on a smaller scale by individual farmers. Cattle, goats and sheep are also kept; however, these are not for commercial purposes. Other microenterprises include sewing, candle making and block making (Ximba, 2009: 6). Ximba (2009: 6) identifies Ndwedwe as an authentic cultural place of heritage which has remained unchanged and therefore an excellent tourism opportunity. The author further recognises this opportunity as a means to uplift the communities (Ximba, 2009: 6).

The gender split in Ndwedwe is close to even, with only 8230 more females (Census, 2011). The average age in Ndwedwe is under 20 years (Census, 2011). The highest level of education across all wards is Grade 11 (Census, 2011). There are more female headed households in Ndwedwe (Census, 2011). There exist several women clubs in the Ndwedwe area. These women are strong in their views, responsible for their households and oftentimes the sole breadwinner for their household, predominantly involved in agricultural activities to sustain their families (Shotshongaye and Moller, 2010, 132).

3.4 Service Backlogs

The coastal municipalities of the IDM can be considered better serviced. Areas of urbanisation in the IDM comprise of KwaDukuza (also referred to as Stanger), Mandeni, the Dolphin Coast and Nkwazi (IDM IDP, 2010/2011: 2). Land uses within these areas are typically urban mixed uses with high levels of infrastructural and service development and an adequate provision of social facilities and services to support the resident populations (IDM IDP, 2010/2011: 2). Industrial development is concentrated in KwaDukuza, Isithebe and

Darnall, most notably the Gledhow and Darnall sugar milling operations at Stanger and the Sappi Paper mills at Mandeni (IDM IDP, 2010/2011: 2). In comparison, the study area faces a myriad of challenges such as restricted skill levels of its people, backlogs in basic services, lack of employment opportunities, inadequate infrastructure and difficulties in accessing tribal land for development opportunities (NLM IDP, 2012/2013: 9). Electricity, sanitation and water backlogs are the three major challenges facing the municipality (NLM IDP, 2012/2013: 40). Such stark comparisons between the coastal and inland municipalities highlight the findings that master planning favours coastal areas (Gangerdine, 2011: 35). In line with these findings, Glavovic and Boonzaier (2007:1) state that efforts in South Africa have been focused on sustainable coastal livelihoods in order to alleviate poverty.

Circumstances which arise from the challenges faced by the study area require tailored stakeholder engagement methods as the area adequately fits the profile of the least represented or least heard civil society. The study of Shotshongaye and Moller (2010: 131) depict an exorbitant list of developmental needs from the women in the community and the desire and aspirations to live in peri-urban or urban areas. Furthermore, the study shows that the rural communities await social upliftment and feelings of relative deprivation were expressed (Shotshongaye and Moller, 2010: 131). Shotshongaye and Moller (2010:132) state that should policies be developed for the Ndwedwe municipality it is recommendable that women be involved in setting a realistic and sustainable development targets and schedules for their communities, possibly through participatory methods such as rapid rural appraisal as this will result in community upliftment and empowerment of women. The authors further state that uplifting rural communities may shift some of the burden of addressing development backlogs from municipalities, thereby fostering trust and grassroots development (Shotshongaye and Moller, 2010: 131).

3.5 Biophysical profile

The NLM is a unique locality due to its variety of natural environmental attributes (Ximba, 2009: 61). This is elucidated by descriptions of topography, climate, hydrology, geology and soils and vegetation or land use.

3.5.1 Topography

The majority of the western parts of the District is characterised by slopes in excess of 40%, with the Ndwedwe only having approximately 14.56% of respective areas available to annual cropping (≤12% slope) (AfricaWide Consulting, 2012: 5). The topography of the NLM environment is rather steep with undulating hills consisting of ridges, mountains and valleys dissected by steep drainage lines. The geomorphology of the area is characterised by weathered sandstone with cliffs that define the undulating landscape with some rock faces being mined for kaolin deposits and other soft-rock powders. The altitude in the area ranges from 200-580 metres above sea level at several high mountain points. The highest point in the Ndwedwe area is situated in the west of the region and is just over 580 metres above the sea level. The lowest point in the Ndwedwe area is found in the east and is rising from 120 to 200 metres above the sea level (Ximba, 2009: 61). The topography of the Ndwedwe area, between mountains, ridges and valleys, can oftentimes be characterised by cave formations (GPI, 2008 cited in Ximba, 2009: 61). The topography of the municipality is structured as follows (NLM IDP, 2012/2013: 49):

a) In the east and north-east a band of flat to undulating low-lying topography forms part of the coastal flats;

b) In the western half of the area mostly steep, fragmented and elevated topographic conditions prevail which are interspersed with undulating high-lying areas;

c) Very steep and dramatic topographic conditions in the form of cliff faces and escarpments occur in the western and south-western part of NLM; and

d) A series of incisive river valleys running largely in an east-westerly direction bisecting in particular the western part of the municipality into a series of spurs and valleys.

3.5.2 Climate

With regard to seasons, the spring and summer months are September to March, while the autumn and winter months are April to August. The rainy season falls between October and March. The majority of the District receives relatively high rainfall in excess of 900mm, with even the drier inland areas usually receiving in excess of 750mm (AfricaWide Consulting,

2012: 2). Much of the rainfalls are torrential, such that it is not uncommon for 400mm of rain to fall in one month (Ximba, 2009: 62).

Mean daily maximum temperatures are 28° C in January and 22° C in July with extremes of 43° C and 34° C respectively (Ximba, 2009: 62). Mean daily minimum is 19° C in January and 9° C in July, with extreme falling to 7° C and 1° C respectively (Ximba, 2009: 62). Frost does not occur in some areas of Ndwedwe (Ximba, 2009: 62). The relatively warm winter temperatures along the coast permit a wider range of agricultural production in winter than is possible in many other places in the country which become limited in potential due to severe cold or frost (AfricaWide Consulting, 2012: 2). The longest day is 14 hours 6 minutes and the shortest day is 10 hours 12 minutes (Ximba, 2009: 62). Direct light of shade is one of the main factors determining growth on the forest floor (Ximba, 2009: 62). The climatic conditions in this area make it more attractive in summer than in winter months (Ximba, 2009: 62).

3.5.3 Hydrology

The IDM is drained by the major rivers flowing eastwards. The largest river is the Tugela River which is also the largest in KwaZulu-Natal (Royal HaskoningDHV, 2013b: 51). South of the Tugela there is the Mdloti River located the furthest south with the Tongaat River the next one north (Royal HaskoningDHV, 2013b: 51). The three main watercourses in NLM are the Mdloti, iNsuze and Umvoti Rivers (Ximba, 2009: 63). These rivers usually do not run dry; however, all three rivers had experienced reduced water levels during drought years (Ximba, 2009: 63). Some of these rivers consist of steep rocky streambeds in deeply incised valleys thereby creating waterfalls, rapids and pools, examples include: Umsilili Waterfall, and Ubende Waterfall. Moderate to dense vegetation covers the banks of the rivers. In many places the waterways are shaded by forest and steam-bank trees such as in the case of the Kwaloshe Forest (Ximba, 2009: 64).

3.5.4 Geology and soils

In the iLembe region the geology varies to quite a degree and includes sediments of the Karoo Supergroup which has Dwyka tillites, mudstones and lesser sandstones of the Adelaide and Tarkastad Subgroups (Beaufort Group) with intrusions of Dolorite. There is also Ecca

Group shale present. In some areas Ordovician Natal Group Sandstones dominate and in others have layered quartz-feldspar metasediments (Mapumulo Group, mokolian). Where there is Dwyka-tillite the soils tend to be compact, clayey soils. Land types are Fa, Fb with some Ca, Bd, and Ac where these soils are found. NLM is dominated by the Mapumulo Group (Mzimkulu formation) and the Natal Group formation (Ximba, 2009: 62). Ndwedwe is varied in agricultural potential, with some high potential areas, and others with severe soil and climate limitations (AfricaWide Consulting, 2012: 2). Approximately 14% of Ndwedwe land is unsuitable for any form of agriculture (AfricaWide Consulting, 2012: 2).

3.5.5 Vegetation and land use

The vegetation in the MLM area consists of subtropical thickets, bushland, forest patches of varying character and interspersed with tall grassland and shrubs which are classified under Ngongoni Veld and KwaZulu-Natal Belt vegetation types (Ximba, 2009: 62). Approximately three-quarters of the Ndwedwe Municipal area are covered in grasslands, which makes it very suitable for grazing, cultivation and game rearing (Ximba, 2009: 62), however only 38.72% Ndwedwe is classed as arable (AfricaWide Consulting, 2012: 12). The grasslands provide habitats for fauna in the area, and humans have converted some into cultivated lands, mainly more towards the eastern part of Ndwedwe. The grasses in the study area are generally coarse and tall and in some areas they grow in clumps and do not form a continuous cover of sod. On some grasslands poor drainage and other soil conditions favour the growth of grasses instead of trees (Ximba, 2009: 67).

Ndwedwe is also home to the Ozwatini grassland, the Hlomatethe Forest and the Ndwedwe Nature Reserve (Royal HaskoningDHV, 2013a: 99). Forests grow along the watery slopes, valleys and streams and particularly on south-western slopes, which are moister and benefit most from the effects of south-westerly winds which are rain bearing. In places, where the forest patches are small and closely associated with drainage lines or rock outcrops, some bushland and grassland patterns are formed (Ximba, 2009: 67).

3.5.6 Selection of study area

3.5.6.1 The iLembe EMF

The EMF was undertaken for the IDM with the intent to guide to sustainable land use planning. The study area for the EMF is the iLembe District Municipality including the four local municipalities of Mandeni, KwaDukuza, Maphumulo and Ndwedwe (Royal HaskoningDHV, 2012: 2). The ultimate goal is to ensure that water resources, biodiversity and associated ecosystem services of the various biomes are sustained and secured for the benefit of current and future generations (Royal HaskoningDHV, 2012: 2). Further to this goal, the IDM EMF seeks to facilitate the integration between sectors in service delivery to foster the balance in the triple bottom line (Royal HaskoningDHV, 2012: 2).

3.5.6.2 The NLM

Forming part of the study area for the IDM EMF, the majority of the NLM is still largely rural, tribal and indigent (IDM, 2013: 15; NLM, 2013: 24), making the NLM an ideal study area as it satisfies the definition of rural. Furthermore, the fact that the NLM is inland serves as a good example of the urban planning bias discussed earlier in chapter one and two, here referring to the stark contrast between the developed coastal municipalities over NLM.

The findings of the Shotshongaye and Moller (2010) study further motivate for Ndwedwe as a competent study area where results show a stark lack of services, alluding to the fact that the local people are not being heard in terms of basic needs. The study which focuses on the self-assessed development needs of the local women in Ndwedwe and highlighted in every category of service delivery that basic standards are not met (Shotshongaye and Moller, 2010: 131). Moreover, there is a strong will for development to reach Ndwedwe, and a resistance to moving out of the tribal Ndwedwe for fear of a township life in an urban area. This represents an attachment to their land and as an emotional investment (Shotshongaye and Moller, 2010: 131).
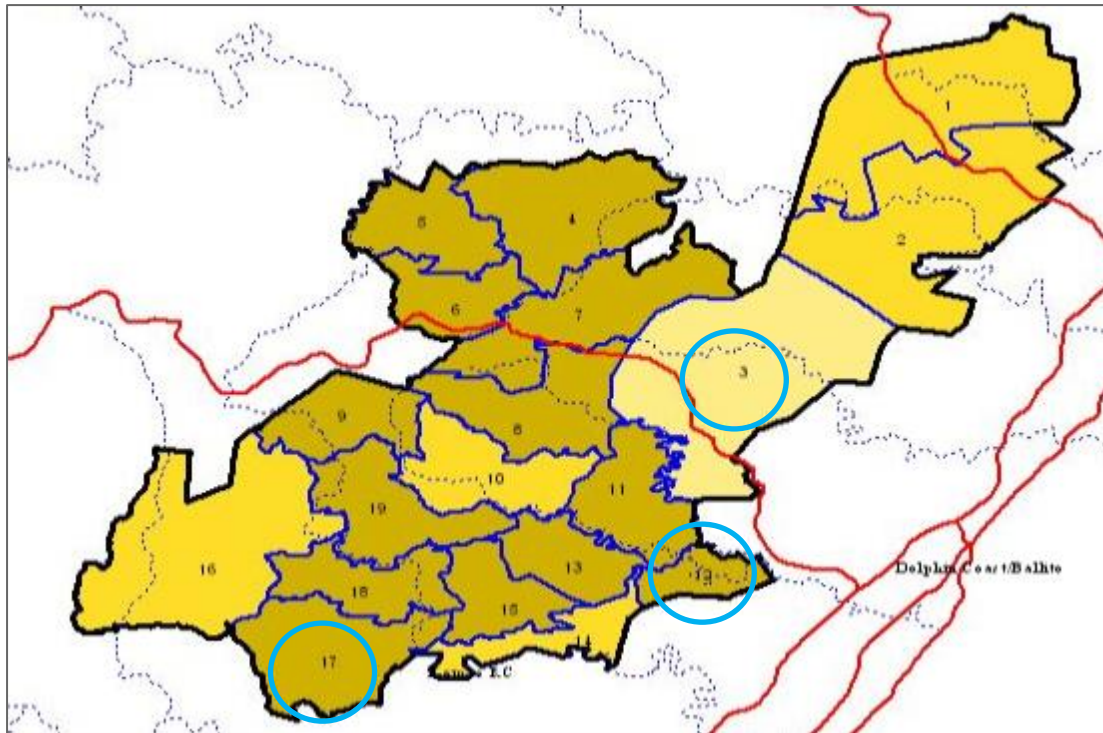
Figure 3.4: Wards selected for study (Census, 2011).

This study focuses on wards three, twelve and seventeen within the NLM, as highlighted in Figure 3.4 (NLM SDF: 20). These wards were selected based on criteria such as unemployment rates (Census, 2011), education levels (Census, 2011), annual income and type of dwelling (Census, 2011), where these wards emerge as the most disadvantaged and indigent. Figure 3.5 depicts the employment rate, annual income, type of dwelling and school attendance per ward of the 19 wards within NLM respectively as reported in the Census (2011).
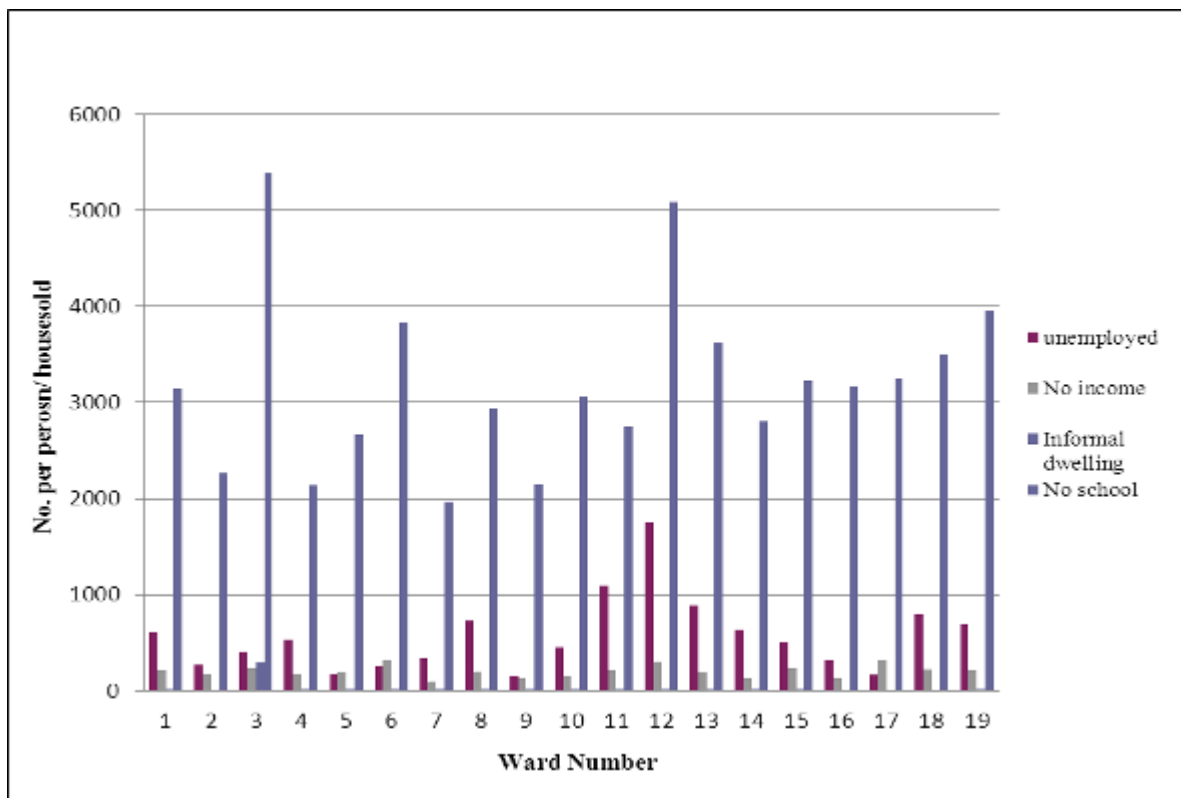
Figure 3.5: Rate of unemployment, income, dwelling type and schooling in the NLM wards (Census, 2011).

Ward three is characterised as having high rates of unemployment, with 409 people unemployed, however, 2 926 people are reported to be employed (Census, 2011). With regards to service delivery, electricity is sourced the most from wood where 1 327 households use wood for electricity (Census, 2011). Water is sourced from boreholes more than any other source of water (Census, 2011). Ward three has the highest rate of lack of sanitation facilities, relying mostly on pit toilets without ventilation. The majority of people residing in ward three have had some level of education up to grade twelve of school, however, 1 620 have had no schooling. While the majority of people in ward three reside in brick or block structures, 293 households live in shacks in informal settlements. This is the highest rate of rural settlement in all wards within NLM (Census, 2011). In ward twelve, 1 340 households are serviced with electricity from the national grid (Census, 2011). Furthermore, this ward receives most of its water from municipal schemes but does rely mostly on pit toilets with ventilation (VIP) (Census, 2011). Education levels are similar to that of ward three albeit higher numbers due to a higher population in ward twelve (Census, 2011). Ward seventeen was selected due it being the ward with the highest level of no annual income (310 households) (Census, 2011). Furthermore, ward seventeen has an unemployment rate of 316 yet only 779 persons had no formal level of education (Census,

60

2011). Ward seventeen ranks in the top four wards with the highest number of informal dwellings and is therefore one of the wards most in need of houses or shelter, with 1 040 informal dwellings (Census, 2011).

3.5.7 The iLembe District EMF

The EMF for the iLembe region was initiated by the then DAERD in a roll out of EMF's having the intention to create an EMF for all district municipalities in KwaZulu-Natal (S Funeka, 20 10). In 2006 an Integrated Environmental Plan was developed as a Sector Plan during the Integration Phase of the IDP for the iLembe district and highlighted various focus areas for the district. It identifies service delivery as an issue in Ndwedwe (GAEA Projects, 2006). The EMF is broad in scale, covering the family of iLembe local municipalities, namely, Maphumulo, Ndwedwe, KwaDukuza and Mandeni. In developing the terms of reference for the iLembe EMF, the previously completed Integrated Environmental Plan (IEP) (2006) was used to filter focus areas for the iLembe region (R Hulley, 2010). In developing the EMF, Royal HaskoningDHV (2012: 6) investigated IDM's natural recourse base and sensitive ecological features by investigating existing information in the following (Royal HaskoningDHV, 2012: 6):

a) Water resources;

b) Wetlands;

c) Coastal and estuarine resources;

d) Biodiversity (flora and fauna);

e) Social economic situation;

f) Development planning;

g) Cultural heritage; and

h) Soils and agriculture (Royal HaskoningDHV, 2012: 6).

In so doing, the outcomes of the EMF were a status quo of the study area, a desired state for the study area and finally EMF zones which designate advised land uses per area coupled with a Strategic Environmental Management Plan (SEMP) which is aimed to guide the implementation of the EMF (Royal HaskoningDHV, 2012: 6).

The development of this EMF was informed by the simultaneous development of the iLembe Regional Spatial Development Plan (IRSDP), and therefore aligns with the IRSDP in planning up to the year 2050 (Royal HaskoningDHV, 2013a: 7). The iLembe EMF outlines the legal context governing EMFs, provides a background to the study areas, and lists the objectives of the EMF (Royal HaskoningDHV, 2013a: 7). The methodology employed for the iLembe EMF, conforms to the legislated guidelines and is depicted in Figure 3.6 (Royal HaskoningDHV, 2013a: 7).
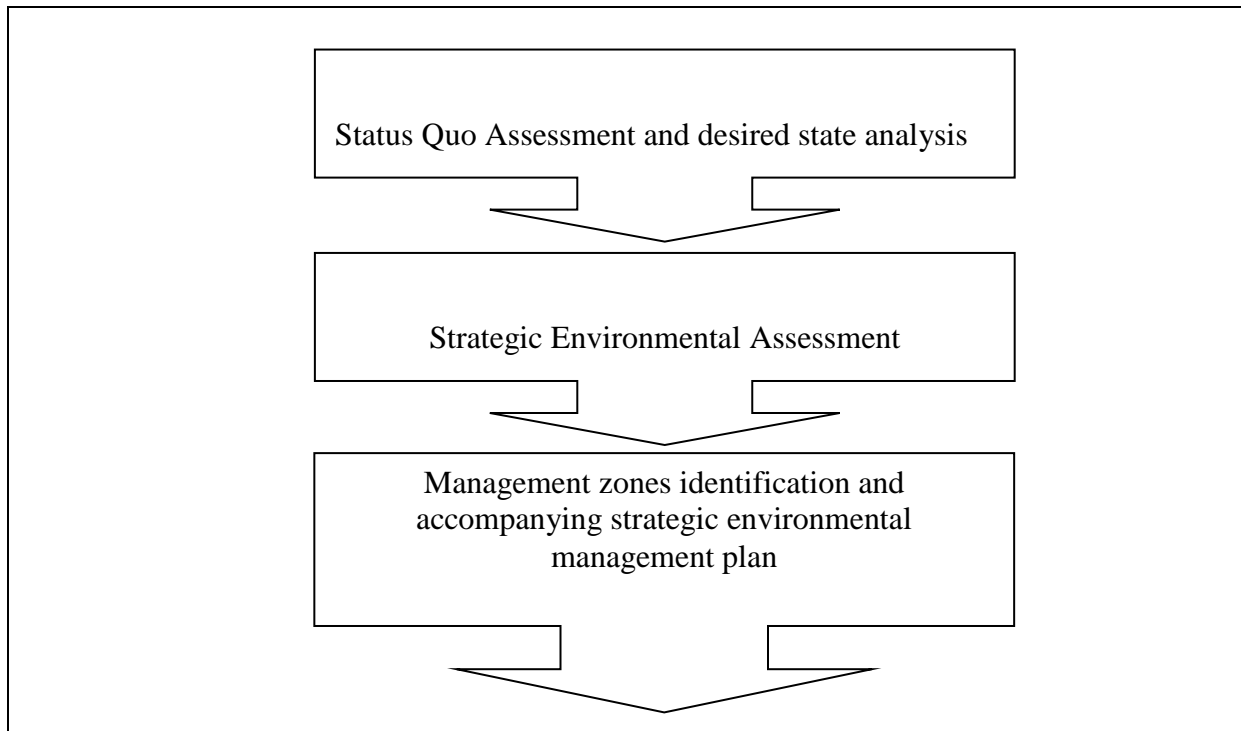
Figure: 3.6: The ILembe EMF Methodology (Royal HaskoningDHV, 2013a: 7).

Throughout the phases of the EMF, public participation and stakeholder engagement took place though mechanisms such as public meetings and steering committees (Royal HaskoningDHV, 2013a: 7). The EMF goes on to explore the status quo of the iLembe region, within a sustainability framework by using the strengths, weaknesses, opportunities and threats (SWOT) method (Royal HaskoningDHV, 2013a: 15). Among many findings, the EMF status quo highlights that there is uncontrolled rural development in Ndwedwe which is impacting on grasslands and bushveld resource assets. With regard to development planning, much of the focus is placed on opportunities along corridors such as the N2 and then on the coast and it is identified that there is a "lack of integration between rural (low-income) hinterland and coastal corridor (high income)" (Royal HaskoningDHV, 2013a: 24). Ndwedwe is identified to be a lagging municipality in terms of service delivery (Royal HaskoningDHV,

2013a: 27). The desired state framework of the EMF identifies the development objectives of the iLembe region. Lastly, the EMF provides environmental management zones (EMZ) and a SEMP to implement these. The iLembe EMF, in its appendix C, also ties the framework with the EIA regulations, offering guidance for decision-makers in each EMZ. The EMZ's are listed below and depicted in Figure 3.7. The majority of Ndwedwe is designated terrestrial biodiversity management zone, with areas of commercial agriculture zones, rural support zones and stewardship zones. The iLembe EMF goes on to elaborate on the land uses supported in the eight EMZs.

- Terrestrial Biodiversity
- Rural Support
- Commercial Agriculture
- Stewardship & Agricultural Transition
- Coastal Management
- Urban Settlement
- Industrial & Manufacturing Activity
- Infrastructure & Development Corridors (Royal HaskoningDHV, 2013a: 103).
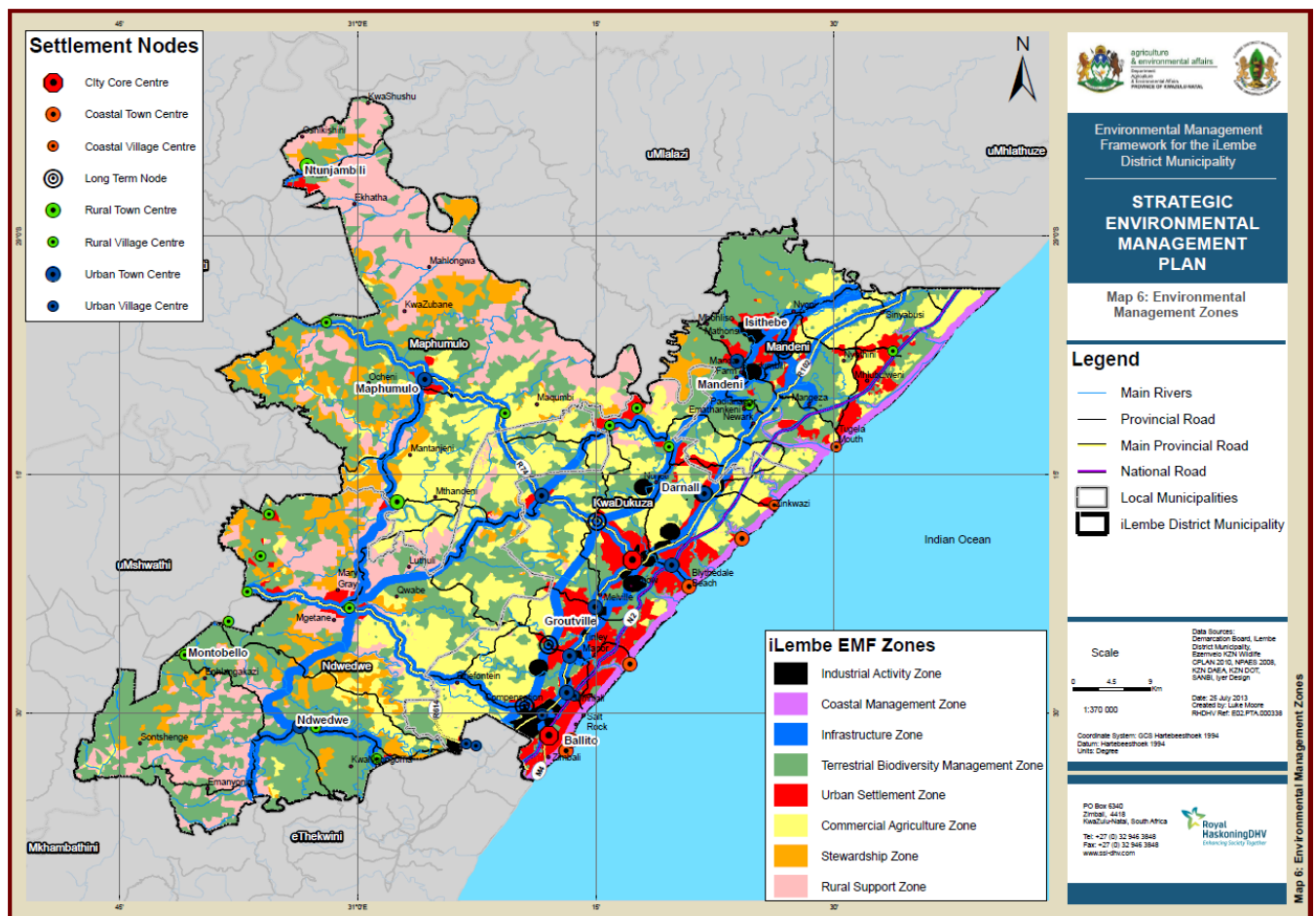
Figure 3.7: The iLembe EMF Environmental Management Zones (Royal HaskoningDHV, 2013a: 103).

The iLembe EMF identifies that there is limited large scale commercial cultivation potential in Maphumulo and Ndwedwe. This is attributed to reasons such as erosion, soil loss, veld degradation, loss of agricultural land to development and high potential agricultural land being earmarked for urban development (Royal HaskoningDHV, 2013a: 92). Yet the Department of Agriculture, continues to uphold the objectives of the Subdivision of Agricultural Land Act, Act 70 of 1970 in preserving agricultural land, advocating for Ndwedwe to be targeted as prime agricultural land (iLembe EMF Project Steering Committee, 2013). In this regard it is important to note, that while locals desire development, agriculture as a land use is still favoured due to the fact that this is the primary skill of the locals (iLembe EMF Project Steering Committee, 2013). This creates a conflict considering the land that was afforded to blacks during the Apartheid era was not fertile and hence was not identified as suitable land for agriculture in the EMF process (iLembe EMF Project Steering Committee, 2013).

3.7 Conclusion

NLM is a municipality dominated by rural areas predominantly making use of the land through subsistence agricultural processes. This is an area with service delivery backlogs, particularly with reference to electricity, water and sanitation. The majority of the municipality is tribal and indigent, being the only municipality out of the four locals which to no extent can be considered to be or to house an economic node. It is an area rich in cultural heritage but still faces many challenges in terms of development and service delivery. The iLembe EMF is outlined in this literature review and includes a status quo of the study area, a desired state for the study area and finally EMF zones which designate advised land uses per area coupled with a SEMP which is aimed to guide the implementation of the EMF (Royal HaskoningDHV, 2012: 6).

CHAPTER FOUR: METHODOLOGY

4.1 Introduction

Qualitative and quantitative data was randomly collected in the communities (from 400 respondents) within wards three, six and twelve of the NLM, in KwaZulu-Natal. This data was collected in order to gauge the level of awareness regarding environmental planning in the area, to examine the mechanisms of public consultation of the EMF using the iLembe EMF case study, to analyse the extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge (with respect to the natural resource base in Ndwedwe) and to examine to which extent community needs and concerns are reflected in the EMF. The data was collected by means of surveys, both questionnaires and key informant interviews.

This chapter discusses the research methods used to achieve the objectives of this study. Both primary and secondary data were utilized. Discussed herein are these primary and secondary data sources, the qualitative and quantitative research methods used and the methods for analysing these data. The chapter explains the use of a case study approach and the research instrument design.

4.2 Case Study Approach of the iLembe District EMF

The study undertakes a case study approach of the EMF for the IDM, with a focus on the processes for creating awareness and public participation in a community within the NLM. The iLembe EMF was chosen as a case study because the environmental planning tool was undertaken at regional level, at the District Municipality level. The case study communities were selected as being a representative of rural communities of the iLembe district. Stake (2000, cited in Bassa, 2010: 54) describes the objective of the case study approach as "that of capturing the complexity of a single case coming to understand its activity within important circumstances". In this instance, three wards were selected based on the satisfaction of the definition of the term 'rural' and the geographic location being within the EMF study area of iLembe.

4.3 Quantitative Methodologies

Research is described by Rajasekar *et al.* (2013: 1) as a logical and systematic search for new and useful information on a particular topic. It is an investigation of finding solutions to scientific and social problems through objective and systematic analysis. It is a search for

knowledge, that is, a discovery of hidden truths (Rajasekar *et al.*, 2013: 1). The authors further state that the results of scientific research very often force a change in the philosophical view of problems which extend far beyond the restricted domain of science itself (Rajasekar *et al.*, 2013: 1; MacDonald and Headlam: 7). Research is important both in scientific and non-scientific fields (Rajasekar *et al.*, 2013: 1). Research methods are the various procedures, schemes and algorithms used in research. All the methods used by a researcher during a research study are termed research methods. They are essentially planned, scientific and value-neutral (Swart *et al.*, 2009: 140). Particularly, scientific research methods call for explanations based on collected facts, measurements and observations and not on reasoning alone (Rajasekar *et al.*, 2013: 1; Swart *et al.*, 2009: 142).

Research methods are often divided into two types, namely quantitative and qualitative research methods (Mujis, 2004: 1). Rajasekar *et al.* (2013: 8) state that the two types of research are basic and applied. MacDonald and Headlam (undated: 8) state that the quantitative method is concerned with trying to quantify things; it asks questions such as 'how long', 'how many' or 'the degree to which'. Quantitative methods look to quantify data and generalise results from a sample of the population of interest. They may look to measure the incidence of various views and opinions in a chosen sample for example or aggregate results. It is often considered that when quantitative research methods are used, certain aspects are pre-empted, such as statistics and numbers which can in some cases create a level of anxiety in researchers (Mujis, 2004: 1). Quantitative research is defined by Aliaga and Gunderson (2000, cited in Mujis, 2004: 1) as:

> *Explaining phenomena by collecting numerical data that are analysed*
> *using mathematically used methods (in particular statistics).*
>
> (Aliaga and Gunderson, 2000, cited in Mujis, 2004:1).

Furthermore, Rajasekar *et al.* (2013: 9) state that some of the characteristics of quantitative research methods are:

a) It is numerical, non-descriptive, applies statistics or mathematics and uses numbers;

b) It is an iterative process whereby evidence is evaluated;

c) The results are often presented in tables and graphs;

d) It is conclusive; and

e) It investigates the what, where and when of decision making.

The limitations of quantitative analysis as identified by Swart *et al*., (2004: 140) mean that it should be complemented by qualitative scenario exploration, which can probably better capture other factors influencing the future such as system shifts and surprises, or non-quantifiable issues such as values, cultural shifts and institutional features. Furthermore, Sibanda (2009:1) states that quantitative research focuses on gathering numerical data and generalising it across groups of people. The first element in this type of research is explaining phenomena or conceptual theory; this is a key element of all research because, to explain this in simple terms, when we set out to conduct research we are setting out to explain something. Therefore, as quantitative research is essentially about collecting numerical data to explain a particular phenomenon, specific questions seem immediately suited to being answered using quantitative methods (Mujis, 2004: 5; Sibanda, 2009: 2). While the methods used in this study require answers to structured questionnaires, this data was coded to provide numerical data to be analysed. Therefore, this study follows a quantitative approach with qualitative research methods as well in order to facilitate the extraction of people's perceptions. Mujis (2004) states in support of this approach that many data that do not naturally appear in quantitative form which can be collected in a quantitative way. We therefore design research instruments aimed specifically at converting phenomena that do not naturally exist in quantitative form into quantitative data, which we can analyse statistically. Examples of this are attitudes and beliefs. The number of phenomena that can be studied in this way is almost unlimited, making quantitative research quite flexible.

The last part of the definition above refers to the use of mathematically based methods, in particular statistics, to analyse the data. This is often perceived as the most important part of research, however, Mujis, (2004: 3) argues that this is a misconception as while using the right data analysis tools is important, using the right research design and data collection instruments is actually more crucial. Rajasekar *et al*. (2013: 9) state that this method finds applications not only in physical sciences but also in economics, social sciences and biology. Quantitative research using statistical methods often begins with the collection of data based on a theory or hypothesis or experiment followed by the application of descriptive or inferential statistical methods. According to Sheppard (2001, cited in Bassa, 2010: 55), quantitative methodologies are crucial as the world we live in is increasingly quantifiable with numbers and statistics continually being thrust at us by decision-makers and policy-makers.

The difference between quantitative and qualitative research is often seen as quite fundamental, resulting in discussions on 'paradigm wars' in which quantitative and qualitative research are seen as warring. Many researchers define themselves as either quantitative or qualitative (Mujis, 2004: 4). This idea is linked to what are seen as the different underlying philosophies and world views of researchers in the two 'paradigms' (also called 'epistemologies'). According to this view, two fundamentally different world views underlie quantitative and qualitative research (Mujis, 2004: 4); however, there are advantages to the combination of the methods (Swart *et al.*, 2009: 140). The quantitative view is described as being 'realist' or sometimes 'positivist', while the world view underlying qualitative research is viewed as being 'subjectivist' (Mujis, 2004: 4, Swart *et al.*, 2009: 140).

Both quantitative and qualitative methods of data collection were deployed for this study as it allows for adequate data analysis and a better presentation of the results. The collection of quantitative data was chosen because it reduced participatory fatigue by the respondents and also assisted in lessening the challenges posed by high illiteracy in the study area. However, as highlighted by Swart *et al.*, (2004: 140) the quantitative data were complemented by qualitative data in order to better capture other factors, such as those contributing factors to the study which were not pre-empted by review of the pertinent literature.

By developing reliable measurement instruments, we can objectively study the physical world. This view that there is a true reality which we can measure completely objectively is problematic (Mujis, 2004: 4). We are all part of the world we are observing, and cannot completely detach ourselves from what we are researching. Historical research has shown that what is studied, and what findings are produced, are influenced by the beliefs of the people doing the research as well as the political and social climate at the time the research is done (MacDonald and Headlam, undated: 11). Qualitative researchers on the other end of the scale are seen as subjectivists. In contrast to the realist view they point to the role of human subjectivity in the process of research. There is no pre-existing objective reality that can be observed. The process of our observing reality changes and transforms it, and therefore subjectivists are relativistic. All truth can only be relative, and is never definitive, as the positivist claims (Mujis, 2004: 5). According to Mujis (2004: 6) and Swart *et al.* (2009: 140) many researchers, both quantitative and qualitative take a pragmatist approach to research, using different methods depending on the research question at hand. In some cases, this will lead them to quantitative research in other cases, they will employ qualitative methods.

4.4 Research Instrument Design

Rubin and Babbie (2005: 1) state that survey research methods can be used for a variety of research purposes and is an effective way to efficiently collect information about many individuals in a particular population. Self-administered questionnaires are one form of survey research. In instances where key informant interviews could not be conducted, questionnaires were emailed to the EMF team members in order to obtain responses. Issues related to these questionnaires do however exist (Rubin and Babbie, 2005:1). MacDonald and Headlam (undated: 10) further state that surveys are a popular method of collecting primary data. The broad area of survey research encompasses any measurement procedures that involve asking questions of respondents. The authors' consider it a flexible tool, which can produce both qualitative and quantitative information depending on how they are structured and analysed. Rubin and Babbie (2005: 1) state that e-mail distribution and return remains the basic method of obtaining responses, however, electronic surveys are now possible as well. It must be noted as advised by Swart *et al.* (2009: 142) that a cover letter is an integral part of the questionnaire. Furthermore, the authors states that it is important to monitor the returns and follow-up mailings can increase the response rate. It is also important to maximize the response rate; 50% or more is generally considered an acceptable response rate. The recommendations of Rubin and Babbie (2005:1) were used to mitigate the challenges associated with self-administered questionnaires. Self-administered questionnaires have a number of advantages and disadvantages. MacDonald and Headlam (undated: 15) caution that a loaded or leading question biases the response given by the respondent. A loaded question is one that contains loaded words. Loaded or leading questions may hint to the respondent how you expect the question answered.

MacDonald and Headlam (undated: 12) further elaborate that face-to-face interview surveys are a second form of survey research. Some critical points noted relating to these however, are that the survey interviewer affects the quality of the interview; maintaining coordination and quality control for interviewers is critical; specifications on how interviewers should handle difficult situations are useful; interviewers must be able to overcome language barriers and finally that this is best suited when the population can be counted. Rubin and Babbie (2005: 2) provide the following rules for survey interviewing:

   a) Maintaining an appropriate appearance and demeanour,

b) Being familiar with the survey instrument,

c) Following question wording exactly,

d) Recording responses exactly, and

e) Probing in a non-directive manner.

For the purposes of this study, students from the University of KwaZulu-Natal (UKZN) assisted with the dissemination, explanations with regards to concepts that were difficult to grasp and completion of the 400 household surveys. Furthermore, the researcher undertook the key informant interviews (KII) for the EMF team and stakeholders who partook in the overall EMF process (refer to Appendix C for an example of the questionnaire completed during the KII).

4.4.1 Household Questionnaires

Qualitative and quantitative data regarding the awareness and views of rural households were collected in a community in the NLM, within the IDM, KwaZulu-Natal. The data was collected using questionnaires (refer to Appendix A for the Consent Form, and Appendix B for an example of the English and Zulu household questionnaire). Four facilitators were assigned 100 questionnaires each. A meeting was held in February 2014 with these facilitators for the researcher to explain the objectives of the study and to discuss logistics. The facilitators were able to respond in Zulu to any queries that rose during data collection. The questionnaires were completed by the facilitators and the researcher by face to face interviews with the heads of the household in May 2014. Stratified random sampling was used. The households were randomly selected in wards which were selected by using four selection criteria, namely unemployment, income, dwelling type and schooling to best satisfy the conditions of indigent rural communities for this study. Quantitative analysis took place with a stratified random target sample size of 400 household surveys out of the 6 511 households (Census, 2011) within the selected wards 3, 12 and 17 in Ndwedwe. The sample size of 400 allows for results to be statistically significant using a 95% confidence interval. The 400 households were randomly selected as the facilitators randomly selected a household within a cluster of households as they walked the study area.

The purpose of the questionnaire was to determine the level of awareness of environmental planning in the study area and to determine from the responses to what extent these communities have a voice in terms of the planning of the land they reside on. Furthermore, it aimed at determining the views of the communities in terms of the public participation processes and effectiveness thereof, given that oftentimes the community is assumed to be unanimous in their response to developments and planning (Ncapai, 2005: 1).

The components of the questionnaire are as follows:

i)   Section A: Social and demographic profile;

ii)   Section B: Environmental Management Framework; and

iii)   Section C: Planning and Public Participation.

Section A requested responses in terms of gender, age, education levels, language proficiencies, employment and status. Section B focused on questions guided by the planning theory and required responses regarding development needs of the community, awareness of the iLembe EMF, participation in the EMF public participation process and whether or not environmental conservation is considered an important issue. This was included in order to gain an understanding of the level of knowledge surrounding environmental planning in among rural communities and the extent to which it is prioritised if at all. Section C was informed by the stakeholder theory and included questions on what the community would like to recommend to the officials in terms of community planning, environmental issues, level of satisfaction regarding service delivery, public participation process and representation within their community. This section is aimed at ascertaining whether the rural communities were given the opportunity to voice their concerns as much as the more advantaged community groups as literature indicates that the latter tend to be favoured in this regard (Merritt and Stubbs, 2012: 280).

4.4.2 Key Informant Interviews

KIIs were conducted with relevant stakeholders and officials in the iLembe district with the objective of ascertaining the strategic process followed in public consultation and the methods commonly used. Key informants are observant, reflective members of the community of interest who know much about the culture and are both able and willing to share their knowledge (Tongco, 2007: 147). The key informants for this study included:

a) IDM public participation (PP) officer;

b) NLM public participation (PP) officer;

c) The technical EMF team;

d) Representative of NGO's in the area; and

e) Stakeholders who participated in the EMF or provided comment during the public participation process.

Surveys conducted focusing on stakeholders who participated in the EMF as opposed to households who may or may not have participated provided information on the opportunities for participation. These yielded only three participants, of whom one agreed to participate. The technical EMF team members who designed and managed the program were identified to be interviewed in order to determine what the strengths and weaknesses of the process were. For the EMF team, two representatives from IDM and one representative from RHDHV and DAEA each were selected, yielding 4 EMF team participants. However, only two participants responded, both from IDM. Furthermore, the IDM public participation officer and the representative the local NGO also declined to participate due to time constraints.

These categories of KII yielded a total of four key informant interviews conducted. The components of the surveys used in the KII's were as follows:

i)   Section A: Social profile;

ii)   Section B: Environmental Management Framework; and

iii)   Section C: Planning and Public Participation.

Within these sections, however, the questions were tailored to the objective of the information required from the identified key informant. Furthermore, unlike the household questionnaires, section A, social profile, was limited to fewer questions focusing on education level and whether the respondents reside in the study area. The latter is considered important to the researcher as aspects of the study focus on indigenous knowledge.

4.4.3 Open ended questions versus Close ended questions

According to Reja *et al.* (2003: 161) open ended and close ended questions differ in several characteristics. The open ended questions are those questions where the research seeks

narrative, qualitative information (Marshall, 2005: 132, cited in Mugabe, 2011: 61). Reja *et al.* (2003: 161) explain that close ended questions limit the respondent to the set of alternatives being offered, while open ended questions allow the respondent to express an opinion without being influenced by the researcher (Foddy, 1993: 127, cited in Reja *et al.*, 2003: 161). The consequence of this is that the quality of the survey is compromised. The advantages of the open ended questions include the possibility of discovering the responses that individuals give spontaneously, and thus avoiding the bias that may result from suggesting responses to individuals, a bias which may occur in the case of close ended questions. Reja *et al.* (2003: 161) continue to explain that open ended questions do however, also have disadvantages in comparison to close ended, such as the need for extensive coding and a greater degree of non-responsiveness. The researcher's findings are that open ended questions were suggested for use decades ago, at the initial stage of questionnaire design in order to identify adequate answer categories for the close ended questions. In the later stages of the questionnaire design, open ended questions can be used to explore deviant responses to the close ended questions.

The surveys of this study utilised open ended questions to encourage free expression with regard to what the communities believe to be the prevailing issues in environmental management, service delivery, public participation processes currently employed and recommendations that can be made to improve public participation. Open ended questions were used to a significantly greater extent in the EMF team survey, with the intention to gain an understanding of the lessons learnt from the iLembe EMF. Open ended questions in the officials and stakeholders' surveys were used mainly for recommendations to improve the public participation process. For the most part, in all surveys, close ended questions were used.

4.5 Data Collection

As Sibande (2009: 20) states, "a study is only as good as the data" one has. Data gathering is crucial in research, as the data is meant to contribute to a better understanding of a theoretical framework. It is therefore imperative that selecting the manner of obtaining data and from whom the data will be acquired be done with sound judgment (Tongco, 2007: 147).

For this study, questionnaires were used to collect qualitative and quantitative data to gauge the level of awareness regarding environmental planning in the area, to examine the mechanisms of public consultation of the EMF using the iLembe EMF case study, to analyse

the extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge and to examine to which extent community needs and concerns are reflected in the EMF. The data were collected by means of surveys, both questionnaires and key informant interviews. The questionnaires were completed in 400 households while the key informant interviews were conducted for five categories, namely the EMF team, participating stakeholders, NGO representative, IDM public participation officials and NLM public participation officials. According to Sibande (2009: 14) sample size should be determined at the design stage.

4.5.1 Sampling Framework

Quantitative research ideally involves probability sampling to permit statistical inferences to be made (Sandelowski, 2000: 248). Mujis (2004: 8) states that when data are collected in quantitative research, we have to collect them from someone or something. The people or things we collect data on or from are known as units or cases and the data collected are referred to as variables. Units or cases are also known as samples, which are defined by Ladner (2008:3) as:

> *A sample is a subset of the population selected by either probability or non-probability methods. If you have a probability sample, you simply know the likelihood of any member of the population being included (not necessary that this is "random)*

(Ladner, 2008: 3)

A variable is any measured characteristic or attribute that differs for different subjects. Quantitative variables are measured on an ordinal, interval, or ratio scale (MacDonald and Headlam, undated: 24). Variables are any characteristic of the unit we are interested in and want to collect (e.g. gender).

According to Rubin and Babbie (2005: 247), purposive sampling is referred to as choosing a sample by regarding a population who may represent best the general opinion. In addition, purposive sampling is a deliberately non-random method of selecting participants for research, which allows individuals to be selected because they have knowledge relevant to the research. Despite its inherent bias, purposive sampling can provide reliable and robust data (Tongco, 2007: 154). Furthermore, the description given by Ladner (2008: 5) above leads to the choice of probability sampling, which allows for the results to be generalized to

the population and is not limited to make inferences only about the group of individuals participating in the study (Mugabe, 2011: 64; Tongco, 2007: 147). Tongco (2007: 153) states that whenever possible and deemed efficient, random or probability sampling is recommended as a means of informant selection because randomization reduces biases and allows for the extension of results to the entire sampling population. The sample for this study was therefore selected by purposive sampling in the selection of Ndwedwe and then stratified random sampling to select households within the wards identified through selection criteria. This was done in order to select communities with the indigenous knowledge required and whose views are required to satisfy the aim of this study. In this regard a systematic sampling design or mixed design was used. However, Tongco (2007: 147) warns that random sampling is not always feasible and efficient. A high dispersion of samples may induce higher costs for a researcher. Furthermore, not everybody is willing to participate, and possibly not be available.

Purposive sampling is an informant selection tool widely used (Tongco, 2007: 147). Tongco (2007: 147) further states that the purposive sampling technique, also referred to as judgment sampling, is the deliberate choice of an informant or informants due to the qualities the informant possesses. It is a non-random technique that does not need underlying theories or a set number of informants. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience. Purposive sampling is especially exemplified through the key informant technique, as undertaken in this study. In stratified random sampling, the population is subdivided into subpopulations called strata (Kitambara, undated: 10), as this case, Ndwedwe was subdivided into the wards. Within these strata, each has its own sample size, which refers to the 400 households randomly selected (Kitambara, undated: 10). The advantages of such a sampling method are increased precision, being flexible in the choice of the sample design for different strata and the able to get estimates of each stratum in addition to the population estimates (Kitambara, undated: 10).

While Ndwedwe was selected based on being an in-land municipality and having the highest rate of rural settlements, in order to narrow the scale of the study area, Census 2011 Interactive data in SuperCROSS was used to select wards which recurring emerged as indigent in the following criteria:

a) Unemployment;

b) Predominant age group between 20 – 30 years of age;

c) Low levels of education or school attendance;

d) Annual income levels

e) Predominant language;

f) Service delivery, where focus was placed on electricity, water and sanitation.

These criteria resulted in the selection of wards three, twelve and seventeen for the study area.

4.5.2 Ethical Considerations

With regards to ethical considerations, as this study was interested in the input from both youth and the elderly, ethics were abided by, by ensuring that respondents were older than the age of eighteen. Furthermore, the facilitators were briefed and requested to treat all respondents with respect, accepting their responses without insistence if they wished to decline to partake at any point in the survey. Respondents were not questioned on their health status. The study did not involve the collection of confidential information, participants being required to commit an act which might diminish self-respect or cause them to experience shame, embarrassment, or regret; participants being exposed to questions which may be experienced as stressful or upsetting, or to procedures which may have unpleasant or harmful side effects; the use of stimuli, tasks or procedures which may be experienced as stressful, noxious, or unpleasant; or any form of deception. Furthermore, the study proposal underwent an ethical clearance process prior to conducting the study. During data collection, each respondent was provided with a consent form (refer to Appendix A) which detailed the nature of the research, identified the researcher and the institution at which the research was being undertaken, and the voluntary, anonymity, options for withdrawal and confidentiality assurances of the research.

4.6 Secondary data

Secondary data collation and analysis refers to the review of existing information, and in the quantitative context may involve the manipulation of statistical data. It differs from primary research techniques in that the researcher does not collect the data directly and cannot control

the actual data collected (MacDonald and Headlam, undated: 20). In order to gain knowledge of the concepts and theories pertinent to this study's objectives, a myriad of literature was reviewed. These included journal articles, books, internet resources, policies, green papers, white papers, gazettes, legislation, published papers of studies conducted in the area, submitted theses and dissertations. For over a decade the internet has become an important source of knowledge and an effective medium for research. For researchers, it is providing a range of new opportunities for collecting information, networking, conducting research, collecting data and disseminating research results (Rajasekar *et al.*, 2013: 18)

4.7 Data Analysis

Rejaseker *et al.* (2013: 31) emphasise that when analysing the data, appropriate statistical tools have to be employed. The number of data used, units of the data, error bars and other necessary details must be noted in the graphs. The authors continue to explain that in any experimental work, mere measurement of certain quantities is not enough. The interpretation of the kind of data observed and explanation for the particular pattern must be made. On the basis of interpretation general principles underlying the process can be formulated. Data assimilated from the questionnaires were entered into the Statistical Package for the Social Sciences (SPSS) Version 21 to form a database (SPSS, 2006). SPSS is among the most widely used program for statistical analysis in social science. This is a data analysis package for quantitative research and is particularly useful for the analysis of survey data as it covers a broad range of statistical procedures (MacDonald and Headlam, undated: 18). Data collected from the questionnaires were assigned individual codes which were then captured into SPSS in a digital format. Descriptive and inferential statistics were used. Data were analysed thematically in terms of issues arising from the literature as well as the questionnaires. The data were then depicted and illustrated with the use of charts, tables and graphic representations showing key trends and correlations discussed.

4.8 Limitations and Challenges of the Study

There were a few limitations to the study. Firstly, from a data collection perspective, several challenges were posed. Many of the identified key informants declined to participate due to time constraints and demanding workloads which did not permit the time to afford completion of a questionnaire or an interview. Another reason for declining to participate in the study which was communicated to the researcher was that the KI was in a stage of phasing out from participating voluntarily in research conducted as they were retiring.

Time and security constraints posed further limitations to the study. Honours students from the University of KwaZulu-Natal who assisted with data collection were requested to complete the questionnaires at the entrance of homes so as to maintain a level of security. It was however clarified that declining an invitation into a home is considered disrespectful. Nonetheless, the students maintained their safety. While the duration of the field work was limited, time also posed a challenge in that oftentimes the data collectors had to wait for family members to return from prayer meetings, shopping trips, work etcetera. An ideal time at which to meet with respondents could not be determined.

Many respondents declined to complete the open-ended questions in the questionnaires, which resulted in the loss of the opportunity to analyse qualitative data. The responses to the open-ended questions were single word answers or single points, which could be grouped into themes and therefore did not provide usable opinions and explanations which could have significantly contributed to the study.

Lastly, a challenge to the study was that some women declined out of respect for their husband, and a repeated response to a request to participate, was that the student return when their husband is home so that he may complete the questionnaire. It was observed that in many cases where the women did participate, their husbands lived away or they did not have husbands. This links to the rural culture of the women being less inclined to voice their opinions. This, however, did not pose a significant limitation to the study as can be noted in section 5.2; table 5.1, which show that a fair distribution of the sexes was obtained. Furthermore, members of the community declined to participate due to perceptions that the research was related to recent political campaigns.

4.9 Conclusion

This chapter summarised the research methodology followed during this study. The framework for collecting, capturing, processing and analysing the data was outlined. In order to reach the objectives outlined for this study an appropriate research methodology was adopted. This chapter has also explained that research was used with regard to a quantitative approach where the survey method was adopted through self-completion questionnaires and KIIs conducted by the researcher and a purposive non-probability sampling method used. The

use of secondary data was also discussed. Furthermore, the methods of data analysis and the limitations to this study were discussed.

CHAPTER FIVE: RESULTS AND DISCUSSION

5.1 Introduction

This chapter addresses the aim and objectives outlined in chapter one through the interrogation of the primary and secondary data collected in this study. In interrogating the data collected, this chapter presents the data, relates the data to the pertinent literature and thereafter explores what the data portrays in terms of findings to take forward in addressing the objectives of this study. The chapter discusses the results of the 400 questionnaires completed as well as the data collected from the KIIs undertaken. The latter data is presented where recommendations can be made or some insight can be provided to the responses of the household surveys. The Key Informant Interviews are numbered and the category is provided to ensure anonymity.

5.2 Socio – Economic and Demographic Characteristics of Selected Wards in NLM

This section analyses the demographic aspects of the 400 surveyed respondents' socio-economic and demographic characteristics including their gender, age, level of education, status of descent, language and employment status. Table 5.1 presents the gender distribution of the respondents.

Table 5.1: Gender distribution of household respondents (in %)

Gender	Respondents (n = 400)
Female	49.5
Male	50.5
Total	100.0

Table 5.1 illustrates that of the 400 respondents, there were marginally more male respondents than female respondents, with a total of 50.5% males and 49.5% females. A possible reason for this fair distribution is that data collection took place during working hours of weekdays and therefore many women were at home, allowing a significant number of female respondents despite many women declining to participate. In addition, and as mentioned in section 4.8, some of the limitations of women participation was due to respect for their husbands, however, this relatively fair distribution of respondents allows for a gender bias to be ruled out. Notwithstanding, with reference to environmental justice and voice, gender plays a significant role. It was noted that during data collection, many women declined to participate, stating that their husbands were not at home at the time. This confirms

the existence of gendered voice (Brocklesby *et al.*, 2010: 38). Women often take on secondary and supportive positions (Hemson, 2002: 26). Despite the commitment to working against discrimination of women in society (Sithole, undated: 1) there still exists the scenario where women depend on their husbands or other male relatives for information and to voice their concerns (Brocklesby *et al.*, 2010: 38). This was evident in that when asked to participate in the survey, many women responded but asked their husbands permission, as well as asked their husbands to sign the declaration form required for the ethical clearance aspect of the research (Appendix A).

Figure 5.1 depicts the age distribution of the respondents. Given that there was a wide distribution of ages, these were grouped into eight groups.
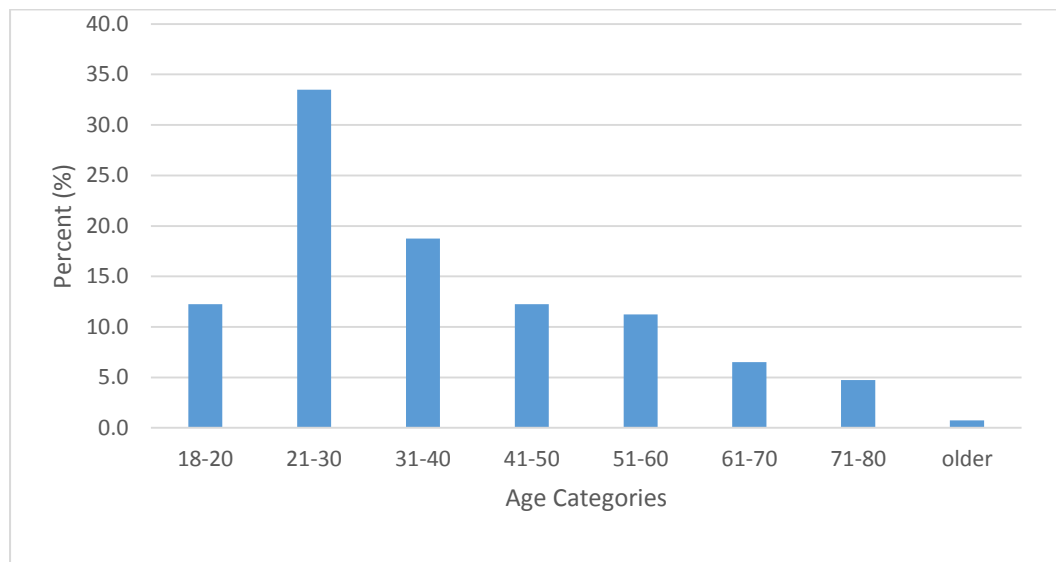
Figure 5.1: Age of respondents (n = 400)

Figure 5.1 shows that the majority (35 %) of the respondents fell within the age category of 21 – 30. Of the 400 respondents, 12% were between the ages of 18 and 20, 19% were between the ages of 31 and 40, 12% were between the ages of 41 and 50, 11% were between the ages of 51 and 60, 7% were between the ages of 61 and 70, 5% were between the ages of 71 and 80 and 0.8 were older than 80 years of age. The average age of the respondents was 37.83 and the ages ranged from 18 to 82 with a range of 64. Approximately 88% of the respondents fell within the age group considered to be economically active, yet a high level of unemployment (74%) was indicated (refer to table 5.5). It is interesting to note that despite the majority of the respondents being relatively young, there was still the lack of participation and knowledge of environmentally related considerations, with regards to conservation, EMF

and EIA. A reason for this may be the fact that there are high levels of unemployment and therefore high poverty, resulting in the focus of these people being that of survival.

Table 5.2 shows the level of education of the respondents. The levels of education provided for selection in the questionnaire were primary, secondary, degree obtained, tertiary, diploma obtained, honours obtained, masters obtained or no education obtained.

Table 5.2: Level of education of respondents (in %)

Level of Education	Percent (n = 400)
Primary	16.5
Secondary	66.0
Degree	0.5
Tertiary	5.8
Diploma certificate	3.3
Honours	1.0
Masters	0.3
No education	6.8
Total	100.0

It can be seen from Table 5.2 that 17 % of the respondents had an education level which did not extend beyond primary, 66% had a secondary level of education, 6% had a tertiary level of education, 3% held Diploma certificates, 1% hold Undergraduate degrees, 1% of the respondents holds an Honours degree, 0% holds a Master's degree, and 7% of the respondents had no formal education. The results correlate with that of Census (2011), stating a low rate of education in the Ndwedwe area. The relatively low level of education could also be a contributing factor to the lack of attendance to the public open day. This could be an indication that the public did not have the necessary understanding of the processes and hence did not have confidence in their input.

Table 5.3 depicts the descent status of the 400 respondents. This question in the questionnaire asked whether the respondent's forefathers or ancestors resided in their home area.

Table 5.3: Status of descent of respondents (in %)

Ancestors resided in area	Percent (n = 393)
Yes	59.0
No	39.3

Of the 400 respondents, seven declined to answer this question, 236 (59%) stated that their ancestors resided in the areas they now live in and 157 (39%) stated that their ancestors were not from the area they live in and they either came to Ndwedwe because they married someone from the area or they live with friends and / or relatives. This table is discussed in greater detail in correlation with voice in section 5.3. With the majority of the respondents being direct descendants of people who previously lived in the study area, there should be ample opportunity for the sharing of indigenous knowledge, for both environmental planning and EIA, however, table 5.9 below indicates that the majority of the respondents do not see the benefit of public meetings, and hence must not have confidence in the willingness of officials to engage in indigenous knowledge sharing. Furthermore, table 5.15 indicates that 43.8% of respondents are dissatisfied with the level to which their voices are heard. This indicates a loss in the opportunity to use indigenous knowledge in the environmental planning of the study area.

Table 5.4 shows the first or dominant language spoken by the respondents. The options provided were English, IsiZulu and Xhosa as these are the dominant languages in the area. An option was also provided for other languages which needed to be specified.

Table 5.4: Dominant language of the respondents (in %)

Language	Percent (n = 400)
English	0.3
IsiZulu	98.3
Xhosa	1.5
Total	100.0

Table 5.4 depicts that the dominant language in Ndwedwe is IsiZulu (98%). A comparatively low 0% of the respondents speak English as their first language and 2% of the respondents stated Xhosa to be their first language. Language is an important aspect to consider with regard to public participation and consultation as it presents a potential communication barrier (Buthelezi, 2010). The Southern African Institute for Environmental Assessment (SAIEA) identifies language barriers as one of the major communication challenges in Southern Africa, stating that there are numerous languages spoken throughout the region. Within a single environmental assessment process there may be stakeholders who come from several different language groups and this poses a significant challenge to ensure that all stakeholders can both be informed and be part of the dialogue (SAIEA, 2005). The SAIEA

(2005) further advises that when environmental assessment practitioners (EAPs), specialists or developers use inaccessible jargon, unfamiliar languages or behave in a way that is superior, a bad participation process is thereby encouraged and these should therefore be avoided.

The following table shows the level of employment among the respondents. As stated above, there is a high level of unemployment.

Table 5.5: Employment Status of Respondents (in %)

Status	Percent (n = 400)
Employed	21.8
Unemployed	73.5
Self-employed	2.8
Student	1.3
Pensioner	.8

The table above illustrates that 22% of the respondents have some form of employment, 74% are unemployed, 3% are self-employed, 1% are students, and 1% are pensioners. These findings correlate with Census (2011) which reported on high numbers of unemployment in Ndwedwe.

5.3 Planning Theory within the context of the EMF

With the demographics presented above, such as the predominant language of IsiZulu, high unemployment levels and low education levels, it is understandable that there is limited knowledge and participation in the EMF process, as is depicted by the results of this section. Some of the challenges presented by the demographics of the study area may be proving too challenging to overcome for the purposes of environmental planning. Table 5.6 depicts the development needs which the respondents believe to be indicative of the community needs. Multiple responses were permitted for this question.

Table 5.6: Development Needs of the Community (Multiple responses, in %)

Development Needs	Percent (n = 400)
Infrastructure	34.3
Conserving Nature	8.0
Job Opportunities	73.3
Farming	0.5
Education Facilities	0.5

Development Needs	Percent (n = 400)
Housing	0.5
Service Delivery	1.5
Recreation	0.8
Land	0.8
Security	1.0
Community Leadership	0.8

The table above shows a variety of opinions of what the respondents identify as development needs of their community. Of the respondents, 34% identified infrastructure as a development need, 8% identified conserving nature, 73% stated job opportunities as a development need, 1% stated farming, 1% stated educational facilities such as schools, 1% stated housing or shelter, 2% stated service delivery, 1% stated recreational facilities, 1% stated land (for agricultural use), 1% stated security and 1% stated community leadership is needed.

The responses highlight the interrelationship between planning and environmental assessment. Local and regional planning theory and the theory and practice of EIA and other tools of environmental assessment, particularly EIA, have largely proceeded along parallel but separate paths. Planning theory has much more to offer EIA than is generally reflected in EIA literature and practice (Lawrence, 2000: 607). Lawrence goes onto elucidate that depictions of the EIA planning process generally parallel the rational planning process. Here, rational refers to rationalism which Lawrence (2000: 607) defines as an idealized planning model which is simple, explicit, and adaptable. Consequently, the EIA shares many of the characteristics and positive and negative tendencies of rationalism (Lawrence, 2000: 607). Lawrence (2000: 607) does however credit the EIA planning process as being more successful at marrying process and substance. Lawrence (2000: 612) explains Socio-ecological idealism (SEI) which seeks to reintegrate social and environmental substance into the planning process. The explicit focus on environment in EIA already represents a partial integration of planning process and environmental substance (Lawrence, 2000: 614). Lawrence (2000: 614) is of the opinion that cumulative effects assessment, social, economic, and ecological impact assessment, as well as biodiversity, sustainability, social justice, human health, risk, and trans boundary concerns and environmental principles (such as the precautionary and pollution prevention principles) have all furthered the integration of process and substance. The author goes on to explain that social and ecological ideals are evident in life cycle assessment, SEA, integrated impact assessment, and in on-going efforts to link EIA to urban and regional planning (Lawrence, 2000: 614).

Of the respondents, 1% stated security as their development need. Crime is a reality in South Africa, and the assumption that spatial planning and design can reduce crime is not a new idea (Watson, 2012: 93), however, in recent years there have been international reports which highlight growing concerns with urban and rural violence and which further point to local planning-type interventions as a strategy to counter it (Watson, 2012: 93). Watson (2012: 93) states that UN Habitat has included the role of local spatial interventions, which arises from the argument that conflict and violence have become a permanent feature in everyday life, and should therefore be prioritized in local spatial interventions. Watson (2012: 93) goes on to explain in this regard that there is recognition that local spatial interventions on their own will not be sufficient and that they need to be reinforced with supportive and representative local government, a range of peace-building initiatives, and close collaboration with the community. Given that the other responses are repeatedly stated, they are discussed in proceeding sections.

The graph below shows the livelihoods of the respondents. The concept or term was not necessarily understood by the respondents and required detailed explanation.
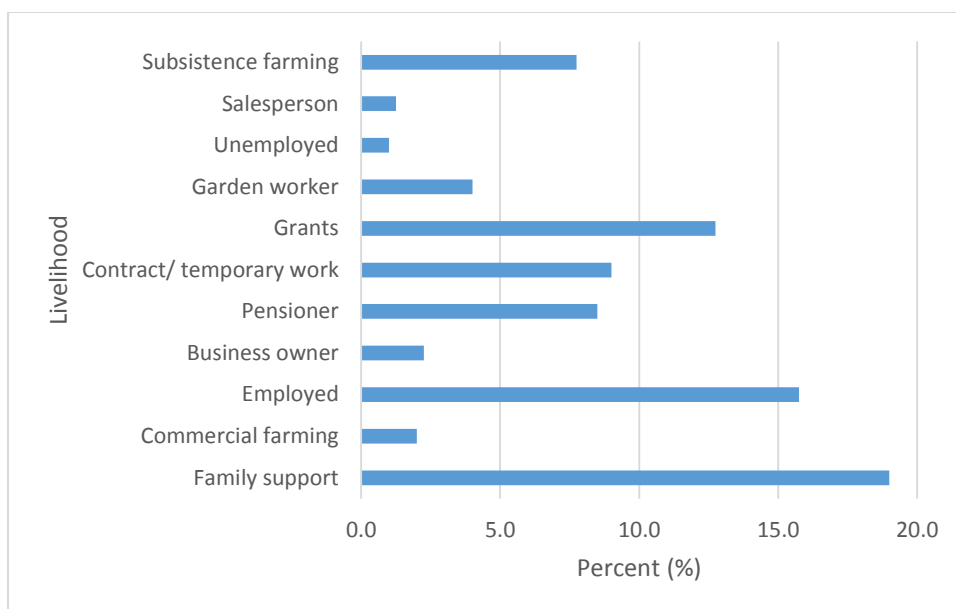
Figure 5.2: Livelihood of respondents (in %, n = 333)

Of the total respondents, 67 did not respond to this question, resulting in a sample size of 333. The graph depicts that the majority of the respondents (19%) rely on family support, either

from parents, spouses or children. Often, this support that they rely on comes from grants, such as their parent's pension, or their spouse's disability grants. Of the total respondents, 2% stated commercial farming as their livelihood, 15% stated employed, 2% own businesses, 9% are pensioners, 10% have temporary work, 13% rely on grants (social, child or disability), 4% are garden workers, 1% stated unemployed, 1% stated salesperson, and 8% practice subsistence farming.

The iLembe EMF identifies Northern areas of Ndwedwe as a commercial farming hub, as reflected in the data (2% were recorded in ward 3). In the rural context, there is a substantial dependence on natural resource extraction for sustainable livelihoods (Bassa, 2010: 43). In South Africa, the coast is considered very important for the sustenance of its communities (Glavovic and Boonzaier, 2007: 1). However, with modernist approaches in planning focusing on urban over rural (Todes, 2010: 415), and furthermore on coastal areas over in-land areas, where South Africa has been promoting sustainable coastal livelihoods (Glavovic and Boonzaier, 2007: 1), in-land areas such as Ndwedwe often become underdeveloped and indigent as depicted by the high level of reliance on family and grant support. Aside from those forms of income, and other than the 16% that are employed, the next most common livelihoods are temporary work, and both subsistence and commercial farming. In this context, such livelihood strategies address short term economic realities and are not necessarily sustainable in the long term (Davidson, 2007: 48). Furthermore, the livelihoods of rural communities are complex and have to adapt to unpredictable and economic and environmental challenges (Davidson, 2007: 48).

The research indicated that there is an extant level of livelihood insecurity (Brosklesby *et al.*, 2010: 25), with livelihoods dependent on family members, grants and temporary jobs. These can hardly be described as sustainable. Furthermore, respondents indicated that they wish to see support from the government in community upliftment and empowerments, such that they can be put in a position where they can create sustainable livelihoods. The livelihoods of the Ndwedwe people can be described as declining which in turn places stress on competence (Brosklesby *et al.*, 2010: 26). This in turn has implications for voice, where voice is the basis for competence (Brosklesby *et al.*, 2010: 35). The implications for the livelihoods of the Ndwedwe people are therefore not encouraging, as raising voice is the process through which individuals and households produce and reproduce supportive connections and opportunities

for securing a living (Brosklesby *et al*., 2010: 35), yet, research indicates that the voice of many within Ndwedwe is suppressed or hindered.

Figure 5.3 below depicts the respondents' level of awareness of the EMF. A response of yes, no or no response was requested.
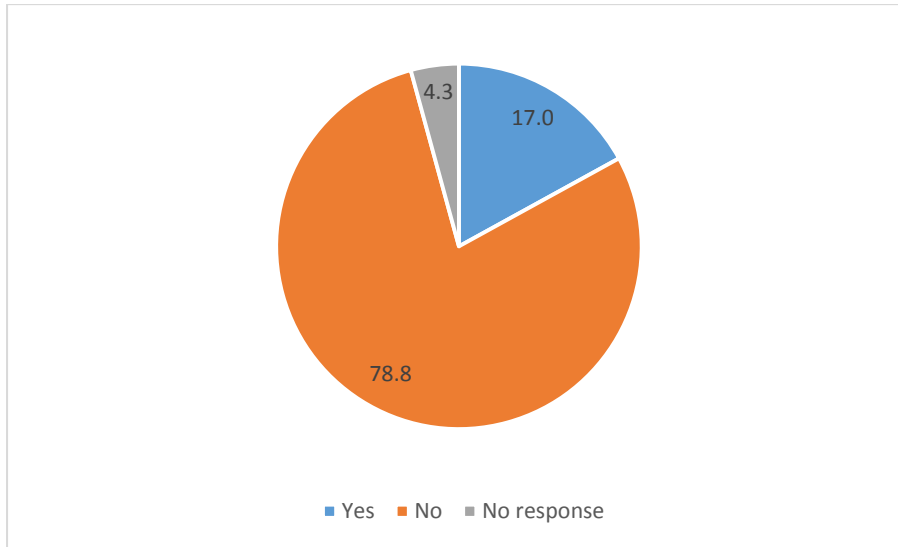
Figure 5.3: Respondents level of awareness of the EMF (in %, n=400).

The graph clearly depicts that the majority of the respondents did not receive notification of the EMF and were therefore unaware of the iLembe EMF. Of the respondents, 4% declined to respond, 17% were aware of the iLembe EMF and 79% were not aware of the iLembe EMF. Of the 17% who were aware of the EMF, the following table indicates the method of notification.

Table 5.7: Method of Notification (in %)

Method	Percent (n = 68)
Advertisement	3.3
BID	1.3
Site Notice	3.0
Door to door	0.8
Loud Speaker	0.5
Word of mouth	6.5
Work related information	0.8

Table 5.7 depicts that the most effective form of notification (7%) was word of mouth, 3% were notified via advertisements, 1% via Background Information Documents (BID), 3% via

site notices, 1% via door to door notifications, 1% via loud speakers and 1% were made aware due to their jobs. It is important to note that the iLembe EMF public participation process did not make use of door to door notifications or loud speakers. A possible explanation for this being stated as a response could be a misunderstanding, where other announcements were made via these methods.

Hobsbawm (2007: 106 cited in Booysen, 2009: 18) describes the media as one of the most crucial engines through which citizens exercise control and consultation and therefore explains why this was the second most effective way of notification, for example through advertisement. However, despite these methods being used to notify the public of the public open day as well as to notify the public of the EMF process, various aspects can be attributed to the shortcomings of the public participation process of the iLembe EMF. Firstly, it is important to note that the iLembe EMF was a regional assessment and therefore focused on strategic broad brush approach, and therefore, for the purposes of public engagement, heavy reliance was placed on officials and councillors (Loubser, 2013). This was thereby impacted on factors such as staff turnover, limited effort to attend meetings (both project steering and public meetings) (Hulley, 2014). These findings correlate with the findings of the studies conducted by Thambu (2012: 76) and Mtolo (2010: 133) which also found staff turnover and lack attendance at meetings to hinder the process.

Booysen (2009: 6) echoes concerns of capacity-related implementation problems. From the viewpoint of government officials, he argues, mechanisms of public participation, such as Community Development Workers (CDWs) and *Izimbizo*, revealed "a lack of procedural clarity, internal politicking between role-players, and a lack of officials to conduct consultation" (Booysen, 2009: 6). Literature indicates that such conditions in public participation have been occurring since the early 2000s. A number of studies explore the problems of implementing participation. In policy processes from both national and provincial government it was found that there was a lack of support (and resources) for implementation (Booysen, 2009; 6). Furthermore, Booysen (2001 cited in Booysen 2009: 6) states that that the democratic government often lacked clarity on the operationalisation of consultation, or left the role of public participation in the hands of consultants. Additionally, the expectations of local government are often too great and officials lack the capacity to cope with participatory demands (Booysen, 2009: 6). Bryson *et al.* (2012: 1) concur with this

view, stating that government officials frequently do not have a good understanding of how to design participation processes to achieve desirable outcomes.

Figure 5.4 below illustrates the respondents attendance to the public open day (PoD) held for the iLembe EMF. The question requested a simple yes or no response.
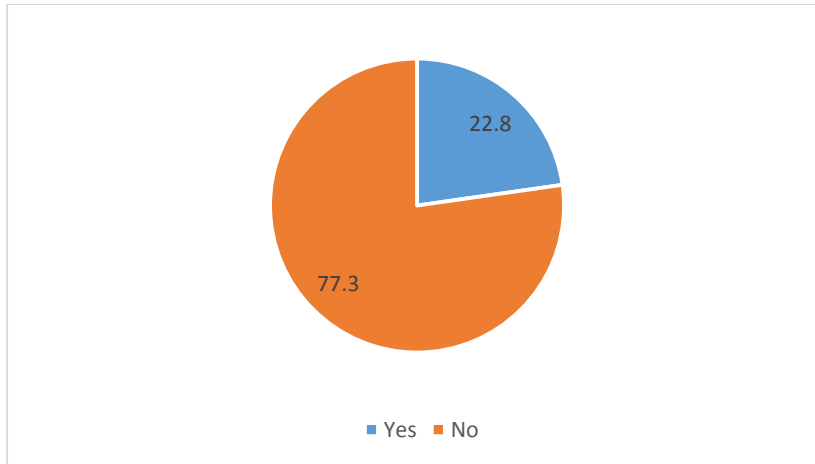
Figure 5.4: Respondents attendance to public open day (in %) n=400

The figure above depicts that 23% of the respondents attended the PoD held for the iLembe EMF and that 77% did not attend. Once again, this may be a misunderstanding as the first PoD was attended by only three gentlemen and the second PoD was attended by none (Royal HaskoningDHV, 2013c: 18). Of those who stated that they did not attend the PoD, their reasons for not attending are presented in table 5.8.

The KI who attended the meeting stated that it was a presentation of the Status Quo Assessment. The meeting was attended by only three people. The open day was arranged in conjunction with the District Municipality. No one from the Municipality or the Province attended (Key Informant No.1, Participating Stakeholder, 2014).

Table 5.8: Reason for not attending the public open day (in %)

Reason	Percent (n = 309)
Time constraints	9.0
Travel costs	4.8
Insufficient publicity	51.3
Choice	11.3
At work / School at the time	1.0

The table above denotes that 9% stated time constraints as the reason for not attending the PoD, 5% stated travel costs, 51% stated there was insufficient publicity on the meeting, 11% chose not to attend and 1% was unable to attend due to other commitments such as work or school.

Booysen (2009: 2) states that public participation has evolved for reasons of changing policy demands, fluctuating styles of government, and changes in participatory political culture. Changes in participatory political culture included continued political challenges by social movements. Public participation progressed through a series of manifestations, which were either officially facilitated or spontaneously claimed. But in response to this role of change with government, there needs to be the willingness among stakeholders, where the lack of attendance to public open days as reflected by the research results, for example, significantly invalidates this evolution. Participation practice thus constitutes a continuously expanding complex of public participation, which does not necessarily result in a deepening of participation (Booysen, 2009:2). Williams (2007 cited in Booysen, 2009: 6) notes that, subsequent to 1994, communities have been less civically active. The relatively high 11% of respondents who stated they do not attend meetings by choice were not probed further in terms of why they choose not to, however, it is important to note that participation needs to be conceptualised as voluntary action, in that members of the public have the right not to engage, if they so wish (Deegan 2002 cited in Booysen, 2009: 6). Furthermore, their choice to not attend could be attributed to a loss of trust in their government (failed projects/ promises to them from previous projects initiated in the same community could enhance distrust), where they feel their voices are supressed thereby not making these meetings a good platform to exercise its very purpose (Booysen, 2009: 6). Buccus and Hicks (2008: 100) challenge the notion that civil society participation can be strengthened simply through enhancing opportunities for stakeholders to engage with policy processes. The authors go on to state that various aspects need to be explored (Buccus and Hicks, 2008:100), implying that the case of Ndwedwe and the like are complex and therefore require solutions suitable to specifics of the area. Issues such as representation, power relationships and accountability must be explored (Buccus and Hicks, 2008:100). There are critical differences in power and influence within all social groups which enable or block the raising of voice (Brocklesby *et al.*, 2010: 37).

The reasons identified above raise concerns for the logistics of the platform for engagement. According to Aitken (2010: 252) this reflects an important criticism of participatory techniques. While they are advocated as means of replacing top-down decision-making with more people-centred processes which should empower participants, power remains with the individuals or organizations setting up the process. These individuals or organisations define the terms and methodology of the process and in doing so retain an enormous amount of power, and simultaneously restrict the power of participants (Aitken, 2010: 252). In the case on the iLembe EMF, the public meetings were held in KwaDukuza, Stanger (Royal HaskoningDHV, 2013c), and this could have been considered too far to attend.

The following table indicates whether the respondents believe that public meetings benefit them. The respondent was requested to respond with a simple yes or no.

Table 5.9: Respondents' opinion on whether public meetings are beneficial to them (in %)

Public Meeting Beneficial	Percent (n = 322)
Yes	21.8
No	58.8

Table 5.9 illustrates that 22% of the respondents believe that public meetings are beneficial to them, whereas 59% believe that they are not. This may be attributed to what Blackstock and Carter (2007: 353) explain as stakeholder fatigue which arises when project delivery is delayed. Stakeholders endure stakeholder fatigue which decreases trust in the researchers (Blackstock and Carter, 2007: 353).

It is thought-provoking to note that the majority of the respondents feel that public meetings are not beneficial to them, yet when given the opportunity to make recommendations for public participation, responses such as "more public meetings," "more public participation," and "more exchange of information" emerged. The reason offered for stating that they are not beneficial was that they felt they were not given the opportunity to speak, but that the meetings are purely to inform them of project or developments. It must, however, be noted that the underlying presumption appears to be that greater public participation in decision-making processes will lead to more socially acceptable and hence sustainable outcomes (Aitken, 2010: 249). Incorporating the views of members of the public into planning

decisions is seen to give greater legitimacy to decisions, and policy-makers have come to make frequent use of the term 'collaborative planning' (Healey, 2003 cited in Aitken, 2010: 249). However, Aitken (2010: 250) goes on to discuss that participatory approaches are not free of criticism. Particular concerns have been raised about the emphasis which is placed on process, it has been suggested that the focus on interaction directs attention away from the justice and sustainability of the material outcomes of planning interventions (Healey, 2003: 110 cited on Aitken, 2010: 250). An important area of consideration, according to Aitken (2010: 250) is who participates, and equally who does not participate, critical attention must be paid to which voices dominate participatory processes. In this regard, it raises concern that if the local community choose not to participate, then the most expressed voice is of those with power, and remains in power. Within local contexts there can be many conflicting interests (Kaza, 2006 cited in Aitken, 2010: 250) and existing relationships of power play critical roles. It can thus be seen that ultimately, 'an inclusionary collaborative process does not necessarily guarantee the justice of either process or material outcomes' (Aitken, 2010: 250).

Participatory approaches have been justified in terms of sustainability, relevance and empowerment and as such, meaningful participation requires empowerment of participants and thus any evaluation of participatory activities must consider where power is found and how this is deployed (Aitken, 2010: 253). There is a vast array of different theories which attempt to define or explore the concept of power. The concept of power emerges as relevant for Ndwedwe as there were many cases where respondents alluded to a loss of confidence in the process of democratic public participation. Power is visible in overt conflicts and decision-making arenas and can only be identified through careful examination of a series of concrete decisions, or the persistence and perpetuation of a situation which is less than ideal (Aitken, 2010: 254). From the perspective of excluded parties, the elements of power and control over key decisions remain the core issue of participation (Bridgman and Davis 2004; World Bank 1993 cited in Mohammed, 2013: 123). Participation necessarily raises questions about mutual influence and the control of resources and decisions (Mohammed, 2013: 123). Aitken's (2010: 262) findings of his case studies argues that power remains predominantly in the hands of decision-makers, and within the structures of the planning system, yet the author proceeds to argue that it is still not possible to contend that public participants are powerless. Local objectors can actively shape their participation. Opportunities exist for participants to challenge prevailing modernist assumptions of what constitutes legitimate knowledge

(Aitken, 2010: 262), but they themselves did not perceive this as necessary and as such upheld established norms which ultimately served to disadvantage their case (Aitken, 2010: 262). A similar loss of opportunity has taken place in Ndwedwe with respondents indicating the choice to not attend meetings and this may persist if there is the belief that public meetings are not beneficial remains. Aitken (2010: 262) argues that it is far simpler to suppose that lay voices are excluded or overlooked through the actions and rules of decision-makers and powerful elites rather than through their own actions. Aitken's (2010: 262) study found that there may be greater opportunities for more meaningful public participation but that the public actively construct boundaries to their own detriment. Such boundaries might serve to limit the scope and influence of public participation. The research of Lane (2003: 368) shows that it is naive to assume that merely enhancing the role of civil society will itself ensure fairness and democracy in planning.

Participation has other important advantages in a democracy. The first is the educational function where citizens increase their civic skills and become more competent when they participate in public decision making. Secondly, participation has an integrative function by contributing to the development of civic virtues, citizens' feeling of being public citizens and part of their community. Thirdly, participation contributes to a greater legitimacy of decisions (Mohammed, 2013: 123). Furthermore, Putnam (2000, 338 cited in Mohammed, 2013: 123) argues that participating in social networks and voluntary organisations contributes to life satisfaction and, more importantly in this context, to democracy. Citizen engagement in social networks allows individuals to express their interests and demands on government. It permits their individual and otherwise quiet voices to be heard, and thus leads to more inclusion (Mohammed, 2013: 123). It is a detrimental loss, that the public do not perceive public meetings to be beneficial, as shown in the research findings, because the benefits of citizen engagement can only accrue if participation is characterized by discussions and exchange of arguments in which individuals justify their opinions (Mohammed, 213: 124). Participants have the capacity, according to Mohammed (2013:124) to analyse issues, discuss problems, and offer plausible solutions to them. This has the potential to stimulate free public reasoning, equality, inclusion of different interests, and mutual trust (Mohammed, 2103: 124). Unfortunately, these characteristics seem to be lacking in participatory processes (Mohammed, 2103: 124) and this is not helped by what could be described as the lacklustre of the Ndwedwe public. Another consideration is that the move away from protests and wide, spontaneous mobilisation around political and sector-specific change, toward more

structured participatory forms suggests or symbolises an era where there are good practices in place, where there is a focus on implementation (Booysen, 2009: 22).

The respondents were also asked whether their councillors informed them of the iLembe EMF. Table 5.10 presents the responses.

**Table 5.10: Respondents response on notification of the EMF by councillor (in %)**

Response to whether the respondent was informed by their councillor	Percent (n = 363)
Yes	14.5
No	76.3

Table 5.10 denotes that 15% were notified by their councillor of the iLembe EMF and 76% were not. In the early 2000s, the ward committee system was introduced in order to facilitate an interface between local government and communities, its purpose was to 'provide community members the opportunity to express their needs, their opinions on issues that affect their lives and to have them heard at municipal level via the ward councillor' (DPLG 2005: 21 cited in Booysen, 2009: 14). Its aim was also to help ensure community familiarity with government projects. By 2008, the level of ward committee establishment was high, yet effective operation remained low, for various reasons (Booysen, 2009: 14). Booysen's (2009) statements are reflected in these findings and the level to which communities in the Ndwedwe area feel unrepresented by their councillor was found to be significant. Some of the respondents did not recognise a need to at the least be aware of who their councillor was, oftentimes stating that the councillor does not provide anything for them; hence there is no need to know them (Anonymous, 2014).

It is unexpected that there is significant proportion of the respondents who were uninformed, as it is noted that of the four local municipal workshops held as part of the iLembe consultative process, the Ndwedwe workshop was the best responded to, having given rise to interesting and pertinent issues. Furthermore, the councillors made several references to the issues brought to them by their community (Royal HaskoningDHV, 2013c: 15).

When asked whether the EMF as a tool is aligned with the objectives of IEM and that it is efficient in the realization of the objectives of IEM, Key Informant No.2 (EMF Team Member) responded stating that he is of the opinion that it is, but declined to comment further. Key Informant No. 4 (EMF Team Member) also agreed that the EMF is, adding that

the EMF is at the level of the SDF and level below the EMF are land use schemes, after which comes the EIA, the latter of which is aimed at being project specific. Key Informant No. 2 (EMF Team Member) did attend the second public meeting and was of the opinion that these meetings provide a good platform with which to achieve the consultation objectives of the EMF. Key Informant No. 3 (NLM PP Officer), however, stated that it is not a good platform. Key Informant No. 4 (EMF Team Member) did not attend the public open days due to the acceptance of another post during this time and a subsequent handover of the project. Nonetheless, Key Informant No. 4 (EMF Team Member) was of the opinion that public open says are a good platform but should be complemented by other means of public consultation. The figure below illustrates the responses received to whether it is believed that it is important to conserve the natural environment. The respondent was requested to respond with a simple yes or no.
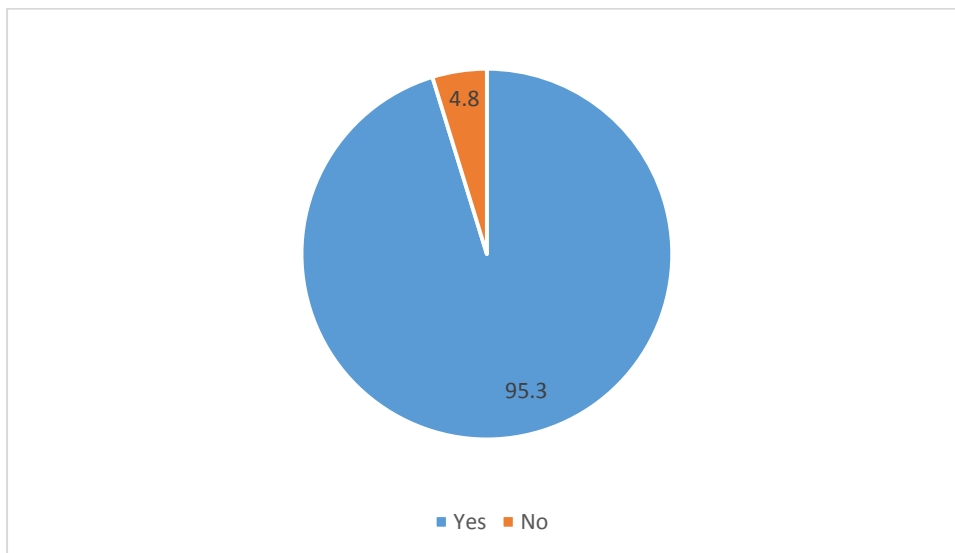
Figure 5.5: Respondents' opinion on importance of conserving nature (in %, n = 400)

The figure illustrates that 95% believe that it is important to conserve the environment, and 5% believe that it is not. The following figures depict the reasons for these responses.
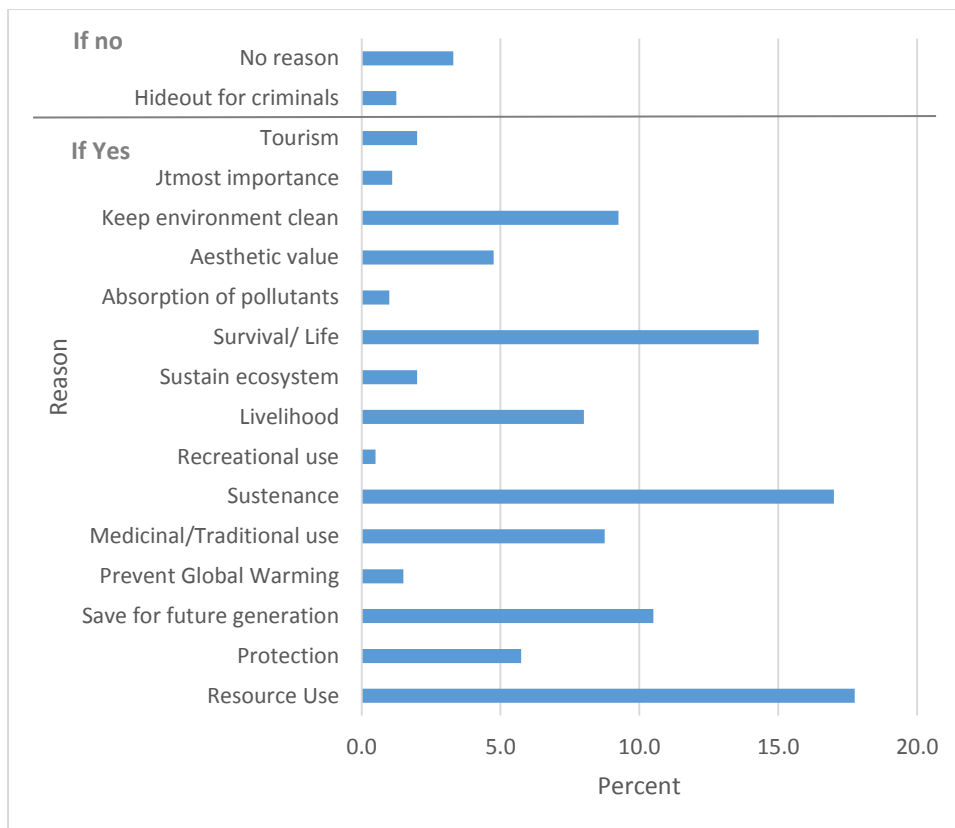
Figure 5.6: Respondents reason for or against nature conservation (in %, multiple responses, n = 400)

Figure 5.6 depicts that 18% stated resource use as the reason to conserve nature, 6% stated protection, 11% stated it is important in order to save the environment for future generations, 2% stated it is important to conserve nature in order to prevent the effects of Global Warming, 9% stated medicinal or traditional use of resources as a reason for conservation, 17% stated sustenance, 1% stated recreational use, 8% stated nature is their livelihood, 2% stated it is important to sustain the ecosystem, 14% stated it is important for survival and/or life, 1% stated that the environment absorbs pollutants, 5% stated it is important for aesthetic value, 9% stated that it is important to keep the environment clean, 1% stated it is of utmost importance, 2% stated tourism as key to conserving the environment, 1% stated that it is not important to conserve the environment because it provides a hideout for criminals, and 3% did not give a reason for their answer.

The respondents highlighted resource use, sustenance, survival and protection obtained from the environment as core reasons for conserving nature, alluding to the fact at ground level, there is an inherent understanding of the relationship between man, his space, and the

environment and their interrelationships. It should therefore carry through into the integration of spatial and environmental planning. Furthermore, conserving the natural environment for future generations was stated. In sustainability science, scholars are struggling with the question of how stakeholders and scientists can coproduce knowledge that offers useful solutions to complex and urgent environmental problems (Silka, 2010: 3). Yet it seems perplexing to the researcher, how scientists could develop solutions to environmental problems without the coproduction of knowledge with those who are most closely linked to the function of the environment, those who make use of its resources, are sustained by it and survive on it. This is particularly pertinent to the development of an EMF, where land-use management plays a significant role (Buthelezi, 2010). A foremost sustainability science conclusion is that stakeholders need to be involved earlier and in different ways than has previously been the case (Silka, 2010: 4). According to Kates *et al*. (2001 cited in Silka, 2010: 4), there needs to be a different way of doing science that is more participatory and engages scientists, stakeholders, advocates, active citizens, and users of knowledge in new ways.

Table 5.11 presents the weaknesses and strengths of the EMF as identified by Key Informants. The table presents the weaknesses and strengths in no particular order or priority.

Table 5.11: Key informant identification of strengths and weaknesses in the EMF

Strengths	KI. 2 EMF Team Member The alignment with existing and proposed municipal spatial plans.
	KI. 4 EMF Team Member Allows for the spatial representation of what the environment can and cannot provide and or sustain (e.g. whether a spatial node can be expanded on without impact on the environment or the loss of environmental assets).
Weaknesses	KI. 2 EMF Team Member The public participation model that was adopted did not allow for maximum participation of stakeholders outside of Government. The open days were held in central locations; however, a lack of transportation may have deterred people from attending.
	KI. 4 EMF Team Member Data for rural areas was not available, Lack of integration between the EMF and spatial planning tools, Team did not interact with respect for each other discipline involved (there was no natural integration).
Opportunities	KI. 2 EMF Team Member Promotion of sustainable development.
	KI. 4 EMF Team Member

	Compliance in terms of the Municipal Systems Act.
Constraints	KI. 2 EMF Team Member The study is done at a district or regional level, therefore it is unable provide sufficient details of key environmental features at a local level.
	KI. 4 EMF Team Member Lack of a personality driving the process.
Potential threats	KI. 2 EMF Team Member Not enough focus on geological features of the district, which may hamper the decision making process in future.
	KI. 4 EMF Team Member Lack of integration in the product, Timeframes, as it was running parallel with the IRSDP.

5.4 Planning and Stakeholder Theory

Table 5.12 presents the recommendations offered by respondents to municipal officials with regards to community planning. As this was an open ended question, numerous responses were received and are presented here.

Table 5.12: Respondents recommendation to municipal officials regarding community planning (multiple responses, in %)

Respondents' recommendation	Percent (n = 388)
Transparency	0.8
Involvement in Decision Making	1.5
Improve Public Participation	3.0
Service delivery is poor	27.5
Infrastructure is needed	20.0
Information is provided	1.5
Leaders should come to community	1.3
Job creation	11.0
Platform to speak is provided	2.5
Commendation	2.5
Lack in community planning	6.8
Community to be involved in planning	4.5
Service delivery has improved	5.5
Implementation of plans	4.3
Integrated planning	1.3
Improve security	0.5
Community is unappreciative	0.3
Concerns /voices are heard	0.5
Municipals should accept responsibility to provide	2.0
Empower the community	1.0

The table above indicates that 1% recommend greater transparency in community planning, 2% would like to see the community involved in more decision-making, 3% recommend an improvement in public participation, 28% state that service delivery is poor and lacking, 20% state that infrastructure is needed, 2% commend officials in that it is stated that information is provided to the community. Leaders should come out to the community was recommended by 1%, job creation was recommended by 11%, 3% stated that there is a platform for them to speak and they feel that their voices are heard. A commendation was offered by 3% of the respondents, stating that the municipality is doing a good job in fulfilling their role. A lack in community planning was stated by 7% of the respondents, 5% recommended that the community should be involved in planning, 6% stated that service delivery has improved, 4% recommended the integration of planning, 1% recommended that there be an improvement in security, 1% stated that the community does not appreciate the services provided by the municipality, 1% stated that their voices and concerns are heard, 2% stated that the municipal officials should accept their responsibility to provide for the community and 1% recommended that the community be empowered through education, facilitation in small businesses and job provision.

This data shows that there are various aspects lacking in public participation. This could be attributed to the fact that it is still common for public participation to be as limited as is possible, with many tools in the planning discipline having no mandatory public participation (Redman, 2014). Public participation, while emphasized in planning policies, is not considered a key determining factor for planning decisions (Aitken, 2010: 251). For example, ground level assessments such Local Area Plans (LAPs) do not stipulate minimum requirements for public participation and if conducted it therefore becomes a "nice-to-have" (Redman, 2014). Within the broader structure, this may be the case due to the fact that the aspect of public participation is linked to the constitutional requirement to involve communities in the matters of local government, and through participation to identify community needs at the IDP level (Booysen, 2009: 13) and not necessarily at the implementation level of the LAP. Zuern (2002 cited in Booysen, 2009; 6) argues that this development of top-down autocratic processes obscured the attention on mechanisms for bottom-up grassroots participation. This however, contradicts the idea of John Friedman's "Good Society" as discussed in section 2. Transparency or lack thereof is a commonly identified shortfall of the public participation process (Aregbeshola *et al,* 2011: 1277). Participation may be limited if the process is not transparent. Openness in the participation process helps to improve project standards, reduce corruption and promotes trust and open

governance (Aregbeshola *et al,* 2011: 1277). With reference to the recommendation that officials must accept their responsibility, it is important that government policymakers be held accountable by citizens (Ackerman, 2008: 602) and public participation is an essential means to accomplish this (Draai and Taylor, 2009: 112).

When considering the response for the community to be included in decision making, one must note that 'participatory governance' complements representative democracy (the regular election of members of parliament, provincial legislatures, or metropolitan councils), which is probably the most common mode of public participation. Participatory governance refers to the manner in which the elected govern between elections. It also refers to a set of structural and procedural requirements to realise community participation in the operation of local government in particular (Booysen, 2009: 4). Considering that South Africa is a democracy, such practices should be the norm. A more participatory approach enables the public to contribute to decisions by providing pragmatic support and substantive information to professional managers as well as enhancing social goals (Mohammed, 2013: 120). Booysen (2009: 4) goes on to state that there are debates on whether the legitimacy of participatory democracy is found in the participation process itself, or in the results thereof. Participation in democracy is more a process in social learning and engagement than a means to an end, as it encourages a reflection of views, deliberation and the consideration of other viewpoints, and generally supports a platform for the development of political and social strategies (Booysen, 2009: 4). Fung (2006: 69 cited in Booysen, 2009: 4) posits a tri-axial mapping of participatory mechanisms in modern and complex democratic systems. According to Fung (2006: 69 cited in Booysen, 2009: 4), these comprise 'who participates,' 'how participants exchange information and take decisions,' and 'the link between discussions and public or policy action.' The process has to be inclusive to reflect the preferences of the broad segment of the population and to win legitimacy. In his explanation the latter refers the link between what participants say and what the authorities actually do (Booysen, 2009:4). Direct power is exerted in one of two forms: (a) co-governing partnerships with government, or (b) on a higher level, direct authority over public decisions or resources (Booysen, 2009: 4). Booysen (2009: 4) further states that "participatory democracy is a community in which every citizen is recognized as both enabled and encouraged to participate directly and actively in the dialogues and practice which define, build, and sustain the life." Booysen (2009: 6) summarises this in stating that the practice of public participation needs to be assessed in terms of the creation of opportunities for participation, the ways it links with relations of

power and authority, and the extent to which this link engenders results. This means all relevant stakeholders should be involved in the processes of its development, implementation, and evaluation (Mohammed, 2013: 123).

Participatory policy making is a process that approaches citizens more as a group to share in decision making in which there is explicit connection between citizens' input and policy decisions. This connection is potentially realizable because citizens and stakeholders are called upon to advise government (Michels 2011 cited in Mohammed, 2013: 123). The objective is to solicit opinions or to involve people in policy making before taking decisions; and usually a large group of people is involved. The weight given to public concern as a material consideration in decision making, should be based on the relevance of the planning issues raised (Aitken, 2010: 251), and in this scenario has direct implications for the livelihoods of the community affected and hence the community should be afforded inclusion in the decision making process.

When examining how civil society engages with policy processes, many NGOs and other representatives such as councillors claim that they are speaking on behalf of the 'voiceless' and representing their interests in the government decision-making process. It is, however, rightful that government agencies are asking on what basis such representation can be claimed. It is seldom the case that opportunities are created for affected groups to obtain to engage in the full cycle of projects and policy development, with measures created for accountability and feedback (Buccus and Hicks, 2008; 107).

Of the respondents, 1% recommended integrated planning be implemented. Todes, (2010: 219) explains that there are tensions in the form of planning between a strategic and a comprehensive approach, and between the objectives of a plan to direct land use management and those related to development and to inter-sectoral integration. While there is considerable emphasis on 'integrated planning', in effect 'integrated' equates with comprehensiveness, which is likely to be difficult to achieve. Mechanisms to achieve integration are not well developed. Although the forms of integration anticipated here might be possible in specific cases and around particular projects (Todes, 2010: 219). Lawrence (2000: 618) recommends the design and adaptation of planning theories to suit different context types. Simply matching theories to contextual characteristics overlooks the negative tendencies associated with each theory. These negative tendencies need to be offset, possibly through theory

combinations. Environmental conditions, moreover, rarely fall within simple categories and often change rapidly (Lawrence, 2000: 618).

Lawrence (2000: 620) identified the need to address political and economic concerns, inequities, and implications have been a recurrent theme in environmental assessment. The view of EIA as a critical socio-political process (rather than a rational, analytic process) has contributed to the more explicit consideration of conflict, social and environmental justice, and equity and community empowerment. Lawrence (2000: 619) goes on to describe planning theory as not being limited to major planning theories, but rather having subsets, variations, and middle-ground concepts. The author states that considerable attention has been devoted to the role of values and ethics in planning. The relationship of facts and values, the public interest in planning, the relationship of values and planning roles, the relationship of values and planning, and the values of planners are examples of value-related concerns addressed in planning theory literature (Lawrence, 2000: 619). Furthermore, Ferreira *et al*. (2009: 32) argue that planning is quite different from natural sciences because it integrates concerns that form part of the social sciences realm. However, planning is also different from general social sciences. These arguments for the integrated nature of planning then raises the question of whether planning theory translates to practice, if results show that there is still a lack of integrated and inclusive planning. Alexander (2010: 99) is of the opinion that planning theory does affect planning practice, but the way this happens rarely conforms to practitioners' expectations hence recurring complaints about the 'theory-practice gap.' However, Alexander (2010: 99) explains that there are instances where this can become more difficult. For example, the term 'secondary knowledge' means new knowledge and information that are specific and case-related, which are generated in practice, such as what will be generated in the case of engaging with communities as part of the public participation process of the EMF, that is, through the application of theoretical concepts and basic methods to particular issues and problems. For this to be relevant and useful, it must be context-contingent (Alexander, 2010: 99). Examples of this form of knowledge diffusion from theory to practice are methods for geographic analysis, demographic and economic projection, to modelling contingent policy simulations (Alexander, 2010: 99). Its relevance to practice seems remote, not because it is not good theory or because its knowledge base is any less 'true' than other but rather because of its abstraction (Alexander, 2010: 99). The recognition of the need for an integrated approach to land use planning was one of the most salient (Ferreira *et al*., 2009: 30). However, in practice, the desire to achieve policy coherence

through strategic spatial planning by using space as the reference point for policy not infrequently met opposition (Ferreira *et al*., 2009: 30).

With reference to community empowerment, Aitken (2010: 249) states that within the planning theory literature public participation is a much debated topic. Advocates of participatory planning have argued that from a modernist reliance on state-directed futures and top-down processes, there needs to be a to move to more community-based planning, from the ground up, which is most importantly geared to facilitate community empowerment (Aitken, 2010: 249).

The KIs offered the following mechanisms to overcome identified challenges in public consultation during the development of the iLembe EMF. Further to the pre-identified challenges in table 5.12, Key Informant No. 3 (NLM PP Officer) identified resistance to change, political interventions and the need for public education on the importance of public participation as major challenges in the consultative process. To overcome these, the KI suggests educating the public. Furthermore, more public meetings, to be held on public holidays and weekends were recommended (Key Informant No.2, EMF Team Member). Informant No. 4 (EMF Team Member) was not satisfied with the level of public consultation undertaken for the iLembe EMF, stating that as much as the legal requirement was met and noting the financial constraints, the level of feedback obtained was insufficient. This posed the risk of the iLembe EMF becoming a desktop assessment. The public participation process took on a check box methodology.

Table 5.13: Methods to overcome public consultation challenges

Challenge	Key Informant No. 4 EMF Team Member	Key Informant No. 2 EMF Team Member
Language barriers	Translation of municipal documents into the languages that are widely spoken into the District, i.e. English and isiZulu.	Translators are used.
Use of jargon	Whilst most projects relating to Planning are academic exercises, it is crucial to compile abbreviated versions of the final documents that are written in a manner that can be easily understood by the general public.	Deconstruction of academic or political language and translate this to the community. This may not be possible for a professional to undertake, and a social specialist with the correct body language is needed.
Lack of sharing of	The advertisement of documents for	Educational awareness

Challenge	Key Informant No. 4 EMF Team Member	Key Informant No. 2 EMF Team Member
information and transparency	comments, prior to adoption, will allow the general public to participate in the process and provide comments prior to adoption.	programmes should be initiated, particularly at schools. This was done previously albeit in KwaDukuza but was halted due to a lack of funding.
Absence of key personnel or officials at public meetings	Ensure that all identified role players understand the importance of public engagements and their roles clearly specified.	This is should be identified as part of a job description and should not be a negotiable matter and form part of their performance review.
Poor attendance to public meetings	Utilizing different platforms for participation e.g. the IDP or Ward Committees	Newspaper articles should be published, as well as radio announcements be made and loud speakers used.
	Further to the recommendations offered by the KII, the consultant or government providing a stipend to compensate transport costs could also encourage attendance to meetings as some respondents did indicate that it was too costly to travel to the meeting venues.	
Lessons learned	There is a general lack of understanding of the implications of the EMF. As indicated above, the manner in which documents are disseminated to the public needs to be revised to suit the circumstances of the target audience.	The timing of the public consultation must be seriously considered as well as the format for engagement, perhaps a Saturday is not the best day to hold a public meeting. A broader platform must be established and possible run throughout the year. Other mechanisms must be used, over and above advertisements in the newspaper.

Table 5.14 denotes the respondent's responses to whether their community is active in public participation and speaking about their concerns to their councillor. Furthermore, the respondent was asked whether the community unites in speaking out about their problems.

Table 5.14: Respondents response to community unity and mobilisation (in %)

Response	Percent (n = 400)
Yes	81.5
No	9.0
No response	9.5

The table above depicts that 82% believe that their community is united and active in public participation whereas 9% believe the community is not. Of the respondents, 10% chose not to respond.

During data collection, the respect shown among community members was evident and the results echo this unity among community members. Watson (2012: 90) states that the idea of the 'community' contributing information (about their needs, local resources and conditions etc.) has been turned into an empowerment strategy. Indeed the mobilisation of a community united acts as a strategy of empowerment for the community. Watson (2012: 90) goes on to provide examples dating back as far as the 1980s of poor urban communities in informal settlements in increasingly adopted the tactic of self-enumeration and mapping in order to reinforce and specify their demands for land and services and to increase their 'visibility' to the state. Furthermore, the scaling up of NGOs has spread these tactics from their origin in India to informal settlements in other parts of the world (Watson, 2012: 90) though the strong presence of NGOs in Ndwedwe was no evident. It is the finding of the author of this research that the reason for this is that within the iLembe region; NGOs are concentrated along the coastal zones. Sometimes these strategies have been followed by 're-blocking' in which shelters have been reorganized by their occupants to make more orderly spaces for the insertion of claimed basic services (Watson, 2012: 90). These processes are most often met with contest and conflict (Watson, 2012: 90). According to Watson (2012: 90) Coproduction has more often been a struggle between marginalized community members, property developers and the state.

The following is a graphical representation of the environmental issues which the respondents believe require more attention.
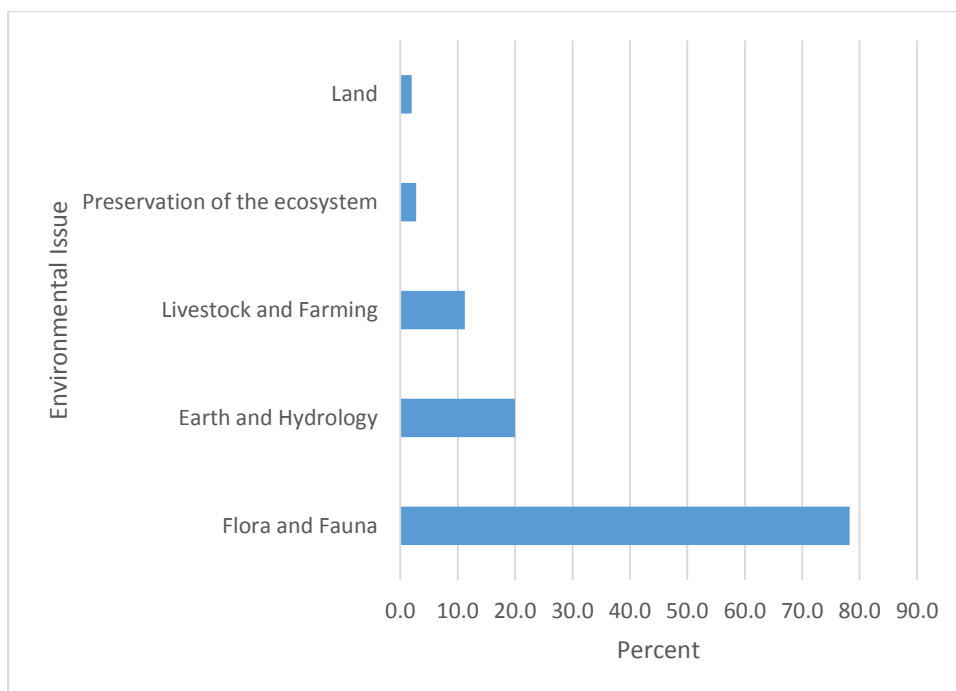
Figure 5.7: Environmental issues which require attention (multiple responses, n = 400)

Figure 5.7 illustrates that 2% of the respondents identified land as an environmental issue requiring attention; this is with regard to land needed for agricultural purposes. Preservation of the ecosystem was identified by 3%, whereas 11% stated livestock and farming as a critical environmental issue, and 20% identified earth and hydrology as important where specifically water as resource was mentioned. Lastly, 78% stated flora and fauna as important environmental issues.

Once again, these responses illustrate the inherent relationship of reliance and appreciation that the people on Ndwedwe have with their environment.

The following table depicts whether the respondents are satisfied with the extent to which they are able to voice their concerns and issues. The respondents were asked to select dissatisfied, satisfied or very satisfied.

Table 5.15: Level of respondent satisfaction with voicing concerns (in %)

Level of satisfaction	Percent (n = 325)
Dissatisfied	43.8
Satisfied	34.8
Very satisfied	2.8

Table 5.15 shows that the majority of the respondents are dissatisfied with the level to which they are able to voice their concerns and issues, with 35% stating that they are satisfied and 3% stating they are very satisfied. When considering this in conjunction with data provided in table 5.3, it was evident that there was a willingness to impart the indigenous knowledge when given an opportunity, yet it is apparent, as is shown in Table 5.14, that in planning literature that indigenous cultures and knowledge systems have been ignored by planning theory and practice (Hardy and Patterson, 2012: 75). Indigenous peoples live in challenging environments and engage in complex negotiations to access their rights, as became apparent in the conversations with the respondents as they often made reference to traditional leaders (Coombes *et al*., 2011: 810). The use of indigenous knowledge has been seen by many as an alternative way of promoting development in poor rural communities in many parts of the world (Briggs, 2005: 2). The notion that the community voice is not heard has further implication such as decreasing the opportunity for appreciative knowledge (Alexander, 2010: 210). To further support this discussion, table 5.16 presents a correlation between indigenous people and voicing concerns.

Key Informant No. 1 (participating stakeholder) states that he has participated in several EMF assignments at District Municipality level. As the only member of the public present who had this experience, he states that he was given unlimited time to express his views (Key Informant No. 1, Participating Stakeholder).

Table 5.16: Correlation between indigenous peoples and voicing concerns

		Recommendation to Officials to Include the Community in Decision Making and to Hear their Opinions		Total
		Did not select this option	Yes	
Indigenous Peoples	Yes	183	53	236
	No	142	15	157
	No response	7	0	7
Total		332	68	400

Table 5.16 illustrates that of the 236 persons who are indigenous to Ndwedwe, 53 made the recommendation when asked, that officials should pay attention to their opinions, hear their voice and include them in decision making. Despite efforts to avoid government officials

making science-based decisions over resource management while ignoring highly relevant indigenous knowledge (Aikenhead and Ogawa, 2007: 541), these results highlight the exclusion of indigenous knowledge in the decision making process as reported on by the respondents. In this regard, in an effort to rectify this or to avoid the occurrence of such a scenario in the iLembe EMF, specialists were requested to include public consultation and stakeholder engagement in their studies. Vigar, (2013: 363) stated that more recent literature on planning professions suggests that they need to be seen in the context of increasing specialisations within domains of practice; increases in the flow of available information that challenging notions of exclusivity to areas of knowledge. Campbell (2012: 135) agrees with this stating that few contest that planning operates at the interface of knowledge and action. In his research, Vigar (2014: 365) goes on to postulate that knowledge is gained in action within communities, which may be small task-oriented work groups as in the original idea of communities of practice or in larger networks of practice. Thus, the knowledge that planners might profess to have lies in an epistemology of action, centred as planning is on knowledge generation in the context of action or intervention (Vigar, 2013: 365).

Lane (2003: 62) argues that the direct engagement of citizens and non-governmental associations enables the incorporation of indigenous knowledge which in turn can be considered a central determinant of successful project planning. It remains a case of highlighting the benefits of the involvement of stakeholders (Desai, 2010: 98). It is further important to note that a key component of the stakeholder theory is that people will protect what they perceive to be valuable, therefore local communities are considered key stakeholders and should be afforded the opportunity to be involved in decision making processes to uplift the sometimes poverty stricken communities in which they live. Identifying and engaging stakeholders are vital for sustainability (Desai, 2010: 99). Within science studies, there has been an emphasis on exploring how scientific knowledge needs to engage with lay knowledge (Rydin, 2007: 54). The environmental domain has demonstrated the numerous benefits of engaging with local people, who live and work in close relationship with their physical environment and thereby have developed knowledge of that environment through their everyday experience. This is indigenous knowledge, describes by Rydin (2007: 54) as local, experiential and contextualized knowledge, as compared to the non-local, objectified and generalized knowledge of scientific institutions. Still there are some who argue against the automatic prioritization of local over scientific knowledge (Rydin, 2007: 54), however, it is now generally accepted that the knowledge embedded in local

relationships needs to be drawn upon in local policy practice, in order to guide the contextualization of conventional scientific knowledge. Rydin (2007: 54) distinguishes this from more general calls for the involvement of the public in debating scientific issues and their public policy applications, where the aim is to engage scientific communities with social values and thereby engender greater public acceptance of and trust in particular policy approaches.

Those considered to have a significant voice are able to negotiate on various and varying matters for the benefit of themselves and for those with whom they are concerned (Brocklesby *et al.*, 2010: 19), and therefore it pays testament to the urban-rural and inland-coastal bias that the people of Ndwedwe do not have a voice, with little to negotiate with. Brocklesby *et al.* (2010: 19) state that "effective voice means that people of all social groups, including the poorest and most marginal, are listened to and feel their views are being satisfactorily represented by, or acted upon, by others. Effective voice also implies that the channels to which people have access are socially and institutionally recognised."

The study conducted by Lane (2003, 365) highlights three issues regarding indigenous knowledge: the absence of civility in the struggle for indigenous justice, the limited degree of social learning that occurred as a result of participation, and the tendency for indigenous participation to reproduce rather than transform the practice and institutions of planning. Lane (2003: 365) goes on to elaborate on the necessity to observe that the tough politics in which indigenous peoples participate to secure and defend their rights bears a stark contrast to the role of civil society in planning. In the tough politics of land and resource planning, civil society might also, connive, manipulate, and conspire as ways of attracting attention to certain possibilities for action (Lane, 2003: 365).

The following table presents the salient points that the respondents stated as important to inform the municipal officials with regards to public participation. Multiple responses were permitted for this question.

Table 5.17: Respondents key issues to inform the municipal officials (multiple responses, in %)

Salient point	Percent (n = 316)
Information is provided to the community	0.5
Youth are not given a voice	0.5
Community is united and supportive	0.8
Community is divided and unsupportive	1.0
New and educated councillors who can better execute PP	1.5
Officials role must be improved	1.5
Better notification is needed	1.5
Commendation on good service	2.0
Infrastructure is needed	2.0
Promises are not upheld	2.3
Voices / concerns are heard	3.0
Community opinion should be prioritised	3.0
Need houses / shelter	3.5
Transparency is needed	4.0
More information sharing and exchange is needed	4.0
Social development in needed	4.5
Inequalities do exist	5.3
Satisfied with level of participation	5.5
Service delivery is very slow	6.0
More public meetings and fora are needed	7.0
Community should be involved in development allocation	11.8
More public participation is needed	12.3
Include community in decision making and hear opinions of the community	17.0

The table above depicts that 1% of the respondents stated that information is provided to the community, 1% stated that youth are not given a voice, 1% are of the opinion that the community is united and supportive, whereas, 1% believe that the community is divided and unsupportive. New and educated councillors who are effective in executing their role were requested by 2% of the respondents. The role of officials to be improved was stated by 2%, while 2% stated that better notification prior to meetings is needed, 2% commended the provision of good service, 2% stated that infrastructure is needed and 2% stated that promises are not upheld. Of the total respondents, 3% felt that their concerns and voices are heard, 3% said that the community opinion should be prioritised, 4% stated that houses are needed, despite the latter not relating to public participation, it is indicative of the extreme need for shelter. A further 4% stated that transparency is needed, 4% stated that more information sharing and exchange is needed, 5% stated that social development is needed and 5% stated that inequalities do exist in the public participation process. Of the respondents, 6% were

satisfied with the level of public participation and consultation, 6% said that service delivery is slow, once again stating an aspect that it not related to public participation, yet very important to them. More public meetings and fora were requested by 7%, 12% stated that the community should be involved in development allocation, alluding to the fact that they felt development allocation is unequal and possible biased. Furthermore, 12% stated that more public participation is needed and 17% stated that it is imperative that the community is included in decision making and that their voices and opinions are heard.

Current developments in environmental policy increasingly emphasize public participation (Beierle and Konisky, 2000: 587), yet it seems to persist as a nice to have unless legislated, in which case, it takes the form of a check box exercise. A recurring theme in the responses from the respondents was inequality and corruption, particularly with reference to service delivery and community development, therefore, public participation presents a useful platform to rectify this as political participation is one of the primary avenues by which citizens influence the direction of public policy (Flavin and Griffin, 2009: 544).

The respondents who requested more information sharing and exchange, greater involvement in development allocation and decision making talk directly to the purpose of planning is to handle multiple knowledge, in that the process of planning should be one which integrates knowledge (Rydin, 2007: 55), and as can be seen from the results, the feeling of exclusion from this process still exists in Ndwedwe. Rydin (2007: 55) places the emphasis is on listening to unheard voices and hence previously unheard knowledges variously categorized as lay, local, experiential or intuitive. Notwithstanding that a challenge arises with regard to methods to handle the multiple sources of knowledge, how to engage different knowledges with each other and how to change decision-making as a result (Rydin, 2007: 55). Rydin (2007: 55) suggests that a greater reliance be places on deliberative and collaborative approaches (Rydin, 2007: 55). Some concerns are general to the use of deliberative and collaborative processes within planning. These have been summarized by Rydin (2007: 55) as: "a lack of specificity as to how the theory of these processes should be put into practice; doubts as to the abilities of planners to undertake such processes successfully; the potential for powerful interests to subvert the processes; and the inability of such processes to handle conflicts of interests and generate a consensus or agreement in the face of such conflicts." Mohammed (2013: 122) states that if participation stresses information exchange, then its focus is on "engagement" rather than on the power differences among participants, which may restrict the quality or results of the engagement.

The call for inclusion in the decision making process by the respondents supports the literature exploration grounded in the belief that ordinary people have the right to participate in the decision-making processes that affect their lives, and that informed policy-making leads to better policy, that is more responsive to community's needs (Buccus and Hicks, 2008: 95). Greater legitimacy is ensured for decisions which incorporate the views of members of the public (Aitken, 2010: 249). Changes in the context for decision making may, according to Bryson *et al*. (2012: 31) demand a concurrent change in the scope or timeline for the participation process. In addition, if previous [public participation] design decisions have been made to share authority for the participation process, then participants may coproduce the design of the process as it unfolds (Bovaird 2007 cited in Bryson *et al*., 2012: 31). The emphasis on the desirability of public involvement forms part of a tradition with the aim to avail the planning processes to democratic inspection and to expand the scope of public involvement as an important part of improvements in the planning process and policy (Rydin and Pennington, 2010: 153). However, Aitken (2010: 249) argues that tension exists between commitments to public participation and desires to control decision-making processes and outcomes. To feed the two-way relationship, the desire to be involved in decision making exists, therefore what is needed in is for government to provide the space in which civil society might influence policy making (Booysen, 2009: 5). General observation found that it is the youngest and the oldest who experience most difficulty in being able to speak out and be heard (Brocklesby *et al.*, 2010: 42). In this regard, poverty and vulnerability are critical to their exclusion and disconnection from customary and government systems (Brocklesby *et al.*, 2010: 42). The correlation, provided in table 5.18, between respondents' ages and their level of satisfaction with their voices being heard demonstrates the statement above.

Table 5.18: Correlation between respondent age and ability to voice concerns

Age Category of Respondent	Level to which Respondents are Satisfied with Ability to Voice Concerns				Total
	Dissatisfied	Satisfied	Very satisfied	No response	
18 -20	26	15	0	8	49
21 - 30	52	53	1	28	134
31 - 40	33	30	2	10	75
41 - 50	19	14	3	13	49
51 - 60	16	18	1	10	45
61 - 70	15	4	3	4	26
71 - 80	12	4	1	2	19
Older	2	1	0	0	3
Total	175	139	11	75	400

It can be seen from the table above that dissatisfaction with ability to voice concerns decreases as the age increases, supporting the view that the youth face significant difficulty in expressing their concerns and having their voices heard. The age group that is most dissatisfied with their ability to raise their voice is between 21 and 30 years of age.

Further to the inland-coastal and urban-rural bias, there exists inequalities within the local municipality of Ndwedwe, and this penetrates to the ward level. The data collection process surfaced a literal corridor between the developed and undeveloped. Many respondents complained of the families across the road receiving houses whereas they were left with "empty promises." (Anonymous, 2014). The requests for more public participation and community engagement through public meetings and for strategic fora are warranted in that effectual engagement between stakeholders and the public alike contributes to the identification of key issues of concern, possible solutions, and relevant local or traditional knowledge (DEAT, 2002: 12). Furthermore, this helps to ensure that environmental considerations are taken into account in the planning process (DEAT, 2002: 12). Booysen (2009: 2) states, however, that the integration of public participation into the daily operation of government and multiple phases of the policy processes proves more challenging than principled endorsement. By involving citizens in the greater process of governing, there might be less resistance to proposed policies and greater legitimacy of the policy process (Booysen, 2009: 5). A trend can be seen within planning theory where there has been on a journey over the last century from the exposition of an essentially modernist conception of planning to a more fragmented theoretical field, and within this new trend is the idea that the

core of planning should be an engagement with a range of stakeholders, giving them voice and seeking to achieve a planning consensus (Rydin, 2007: 54).

The community needs to be afforded an opportunity to influence "the manner in which people are treated, levels and direction of investment, design and delivery of projects, details of policies, accountability of leaders and the definition and implementation of law" (Brocklesby *et al.*, 2010: 19), which from the responses stated above is what the respondents are requesting. This leads to a consideration of power, in terms of who possesses it and how is it exercised within participatory processes (Aitken, 2010: 253). Those for the rise of a diverse civil society argue that enhancing the participation of communities in planning processes has the potential to transform the practice and institutions of planning such that the spaces for democracy are enlarged (Lane, 2003: 361).

While 12%, 12% and 17% of the respondents advocated for community involvement in planning, decision making and the need for more public participation, there was 1% of the respondents who recognized that the community did not mobilise and unite. Booysen (2009: 6) also found that community participation is hampered by the lack of sufficient community organisations. It appears that this scenario sits in what Buccus and Hicks (2008: 99) describe as the "middle ground," where citizens are invited on board as stakeholders to share control of development initiatives and participate in implementation, to broaden ownership. The shortfall may be in the execution of the methods used to implement this approach. The progressive end of this spectrum reflects a rights-based approach, which recognises participation as a right in itself, and as an entry point to realising all other rights (Buccus and Hicks, 2008: 99). This is perhaps the direction in which public representation and participation should be led. The complexity of decision-making processes in planning is nowadays greater than ever before (Ferreira *et al*., 2009: 50). Planners should not believe that what defines their identity is the commitment to a specific planning theory but rather be flexible to adapt to the study area's needs (Ferreira *et al*., 2009: 50).

Further to the responses of the household surveys conducted, the key informants stated these EMF exercises are funded with public money authorized by the MEC. It is incumbent on municipal officials, and even more particularly, elected councillors to take an interest and be present. Instances such as this should be reported to the MEC or the Provincial Legislature Portfolio Committee on Local Government. If the iLembe Mayor and Municipal Manager

cannot be held accountable, who will then discipline the councillors and lesser officials? (Key Informant No. 1, Participating Stakeholder, 2014). The attitude of the officials suggests that there is little probability of the Implementation Recommendations for the Desired State ever being implemented (Key Informant No. 1, Participating Stakeholder, 2014).

Attendance at similar meetings in the Uthukela, Uthungula and Umkhanyakude District Municipalities elicited attendance of between 25 and 40 I&APs, most of whom were officials or representatives of private sector conservation entities (Key Informant No. 1, Participating Stakeholder, 2014). Furthermore, Key Informant No. 1 (Participating Stakeholder) was of the opinion that the process of the iLembe EMF was a transparent one, but that the municipality failed to commit to the process. The KI furthermore, was of the opinion that it was easy to correspond with the EMF team, obtain information regarding the EMF and the information provided was sufficient to comment on as part of the public consultation process. However, Key Informant No. 1 (Participating Stakeholder) did express distrust in community leaders. For the purposes of this research, it is important to note that Key Informant No. 1 (Participating Stakeholder) did submit detailed comment on the Status Quo of the iLembe EMF. These comments were carried forward for consideration by the relevant specialist as well as in the issues trail document (Royal HaskoningDHV, 2013c) of the iLembe EMF. Key Informant No. 3 (NLM PP Officer) stated limited access to information and lack of education or literacy as common issues with public participation and further stated that the mechanisms employed to engage with the community by local government are to engage via *Amakhosi* (local traditional leaders) and hold ward committee meetings. The mechanisms used have not changed in the past five years. Additionally, Key Informant No. 4 (EMF Team Member) stated that the IDP roadshows, legislation public participation processes and committee fora such as the coastal management meetings (local government representation is required), as mechanisms employed by IDM.

As recommendations put forward for the public participation process, Key Informants offered the following:

Table 5.19: Key informant recommendations for public participation (n = 4)

Key Informant	Recommendation for Public Participation
No. 1 Participating Stakeholder	Environmental concerns are virtually a middle class community concern. I have yet to see anyone toy-toying for nature conservation. To a person whose first thought on waking up is 'How will I and my family survive this day?' environmental issues are not a priority. Official attendance might be improved by holding meetings during weekday office hours.
No. 4 EMF Team Member	A community strategy needs to be developed over and above the IDP process, because the IDP is seen as the only platform. The community strategy needs to develop on a regular basis. A social facilitator must be utilised. A strategy needs to be developed to ensure a better level of feedback.

Table 5.20 depicts the level of satisfaction with the information the respondents receive regarding planning in the local community. The respondents were asked to respond either dissatisfied, satisfied, very satisfied or no response.

Table 5.20 Respondent level of satisfaction with information received on community planning (in %).

Respondent level of satisfaction	Percent (n = 400)
Dissatisfied	55.5
Satisfied	34.8
Very Satisfied	2.3
No response	7.5

Table 5.20 shows that 56% are dissatisfied with the information they receive on planning in their community, whereas 35% were satisfied and 2% were very satisfied and 8% declined to respond.

The findings of the research support the notion and the existence of the monopoly of participatory processes by elite forces and the exclusion of the indigent, termed 'downsized' democracy by Buccus and Hicks (2008: 97). It enforces what Buccus and Hicks (2008: 97) go on to explain of participation mechanisms that are established to channel citizen input yet are not accessible to the majority population in societies such as Ndwedwe which are characterised by inequality, particularly marginalized communities and sectors. The systems in place typically do not 'automatically benefit poor people and groups that have long faced social exclusion' (Buccus and Hicks, 2008: 97).

When asked whether the respondent felt well represented in their community and whether there was a level of trust in community leaders, the following responses were received as depicted in table 5.21. The respondents were asked to select either yes, no or no response.

Table 5.21: Respondent level of satisfaction with representation in community and level of trust in leaders (in %).

Respondent satisfaction	Percent (n = 400)
Yes	38.8
No	55.5
No response	5.8

The table above shows that the majority of the respondents (56%) are not satisfied with the representation they receive in their community and they do not trust their community leaders, while 39% are satisfied with their level of representation and do trust their leaders. Of the respondents, 6% did not respond. During the data collection process the community were vocal about their conditions, stating that when they attend meetings they are made to feel like they should not voice their concerns. To a certain degree, there is a fear of speaking of their concerns.

These results are discussed in detail as representation and trust are instrumental in addressing the research question. Leadership, according to Bryson *et al.* (2012: 28) can be exercised by one or many individuals associated with a public participation process, but the authors indicate that three leadership roles are particularly important: sponsors, champions, and facilitators. Sponsors are people with formal authority that can be used to legitimize and underwrite participation efforts. Champions, in contrast to sponsors, have positions with considerable responsibility for managing the day-to-day work of the participation effort. Facilitators structure participation processes, maintain neutrality toward outcomes, and help groups work together productively. In many ways, the consultant in the iLembe EMF was the Facilitator, whereas the IDM played the role of Sponsor and Champion, with the latter role also played to a certain extent, by the local municipalities.

Further to the respondents not identifying the benefit of engaging with their leaders, distrust can also arise from conflict. Bryson *et al.* (2012: 30) posit that effective conflict management also can enhance trusting relationships by ensuring that disagreements are problem centred rather than person centred. Effective management of power differences can help less

powerful stakeholders, such as the rural communities of Ndwedwe; trust the process and other participants more. Buccus and Hicks (2008: 99) posit that if the public find that what at first appears to be an opportunity for greater influence turns out, in practice, to be a cosmetic exercise then this results in a feeling of betrayal and seems to be the case with Ndwedwe. According to Beierle and Konisky, 2000: 589), trust in government has declined dramatically over the last 30 years. The decline in trust may be representative of a healthy public scepticism as a result of government scandals and mismanagement. But as trust in the institutions responsible for solving complex environmental problems decreases, the ability to resolve those same problems is seriously constrained (Beierle and Konisky, 2000: 258). However, as trust grows, there lies the possibility that it may substitute for formal structure in the ways in which it can control and standardize behaviour because trust facilitates the sharing and diffusion of values and norms about standards of behaviour (Bryson *et al.*, 2012: 30). Buccus and Hicks (2008: 96) found in their investigations that, typically, with growth in poverty and inequality, and as citizens become increasingly sceptical and distrustful of political parties and institutions, and of corruption, there is declining political participation.

This widening gap between citizens and state institutions is what is manifesting in Ndwedwe and is resulting in a 'diminished democracy' (Skocpol 2003:11 cited in Buccus and Hicks, 2008: 96). According to Buccus and Hicks (2008; 97), some would argue that representative democracy is the only truly legitimate means of representing the interests of the marginalised and unorganised. However, this becomes questionable in the contexts of corruption and domination by elites, and political funding by wealthy interest groups, as in the case of Ndwedwe. Arguments against representative democracy and for participatory democracy (participation in decision-making processes outside the structures of elected government institutions), state that representative systems will inevitably reproduce social, economic and political inequities when exercised in an inequitable society, whereas participatory democracy provides the opportunity to break this mould (Buccus and Hicks, 2008: 98). Being responsive to public values, resolving conflict, and building trust are remain, according to Beierle and Konisky (2000: 589), some of the most important and challenging aspects of participation.

Table 5.22 illustrates the respondents' level of satisfaction with service delivery. As can be seen, it demonstrates a high level of dissatisfaction.

Table 5.22: Respondent level of satisfaction with service delivery (in %).

Respondent level of satisfaction	Percent (n = 400)
Dissatisfied	69.8
Satisfied	24.8
Very Satisfied	3.3
No response	2.3

Table 5.22 shows that 70% are dissatisfied with service delivery, whereas 25% are satisfied. Of the respondents, 3.3 were very satisfied and 2.3 declined to respond.

Service delivery, either the lack thereof, or the slow pace at which it takes place was a recurring response in the surveys and stated at every opportunity. This is testament to the indigent nature of the Ndwedwe area (Hulley, 2014), and is primarily the reason why the service backlogged areas of Ndwedwe and Maphumulo were repeatedly raised as areas of focus for the iLembe EMF at the project steering meetings (Hulley, 2014).

Within the framework of environmental justice, the recurring statement of lack of service delivery reinforces the case for the unfair and disadvantaged position the people of Ndwedwe find themselves, partly which extends from planning policies in the pre-apartheid and apartheid eras (Scott *et al*., 2003: 50). In this regard, it is imperative to confront the underlying power structures, social relations, and institutional arrangements which caused and perpetuate this scenario (Scott *et al*., 2003: 50).

5.5 Conclusion

This chapter presented and discussed the primary data collected for this research. It highlighted that the issues common to public participation processes persist, particularly in the marginalised communities, such as the case study community. The data show that the community of Ndwedwe are closely linked with their environment, as they are dependent on it and the majority of the respondents see value in preserving and conserving their natural environment as their livelihood. The most common reasons noted for the argument to conserve nature, are that it provides resources for use, it provides protection and it is needed for survival and life.

As the literature indicates, the primary data show that the voices of the disadvantaged and indigenous persons are still hindered. The majority of the community members surveyed stated that they felt their voices were not heard and added that they felt there was no outcome or response when they speak of their concerns, and hence do not see the purpose of raising

their voice. The data confirms that the Ndwedwe people are in dire need of development and service delivery, with the two responses recurring at every opportunity. Furthermore, the data indicated that the community is left having to rely on natural resources, grants and family members in order to survive.

This raises questions of how the situation can be remedied through careful and responsive planning, and in studying the case of the iLembe EMF; it seems likely that planning is taking place in a top down approach, underlined by scientific and academic knowledge, and in the absence of indigenous knowledge. This however, was identified to be the case for several reasons, as depicted by the results. Firstly it is likely that there is a lack of interest or fatigue on the part of the community, secondly it is evident that the level of representation, notification and information exchange for the iLembe EMF was insufficient and thirdly it appears that the conditions and methods employed for information exchange has proved unsuccessful.

The household respondents and key informants provided recommendations for improvement of the above, albeit in the case of the former, focus was again placed on infrastructure, job, and service needs.

CHAPTER SIX: CONCLUSION

6.1 Introduction

Applying a case study approach to the public consultation undertaken in EMFs yields expected insights into the state of public consultation and participation in environmental planning at present, as preconceived by the literature review undertaken. This study aimed to to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study. The study area included wards three, twelve and seventeen of the Ndwedwe Local Municipality, within the iLembe District Municipality, KwaZulu-Natal. This chapter provides a detailed summary of the research findings as it addresses the aim and objectives of the study. It does so by first discussing salient research findings and then specifically addresses each objective, including providing recommendations.

6.2 Salient Research Findings

Using the frameworks of Stakeholder Theory and Planning Theory, a research design involving 400 household surveys and four KIIs was used to obtain the opinions of the respondents with regards to planning and public consultation. It is imperative to note that the research findings are therefore based on the perceptions of the respondents, and furthermore, while it was intended to obtain the opinions and perceptions of all who were involved, that is the public at large, the EMF team, the Officials of local government, NGOs and the authorities, it must be noted that for various reasons, some of these identified respresentatives declined to respond or participate in the research, thereby creating a limitation to the study.

NLM is a municipality dominated by rural areas predominantly making use of the land through subsistence agricultural processes. It is an area with service delivery backlogs, particularly with reference to electricity, water and sanitation. This study highlights that the issues common to public participation processes persist, particularly in the marginalised communities, such as the case study community. Literature on the topic of public participation indicate that there is sound legislation and policies in South Africa pertaining to this, however, there is also literature to support that there still exists a significant gap in the implementation of such and the integration of the outcomes of public consultation. This is demonstrated by the results of this study. Decision making systems are still to a certain extent flawed as this point is reiterated in its recurrence as an issue raised by the respondents in this study. The study implies that that planning is taking place in a top down approach. However,

it is likely that this is occurring for several reasons, such as stakeholder fatigue, lack of trust and poor implementation of public participation exercises.

In examining the mechanisms of public consultation of the EMF (objective one of this study) using the iLembe EMF case study, it appears that the public consultation practiced as part of the iLembe EMF does conform to the mandatory requirements. By law, the practitioner has to advertise, invite comments from interested and affected parties on draft reports and furthermore avail the document for perusal, and lastly take the necessary steps to provide alternative means of participation for those unable to participate due to either illiteracy, disability or any other disadvantage. Moreove, the iLembe EMF process included public and stakeholder consultation be carried out by each of the specialists forming part of the team, and also conducted local municipal workshops, providing an opportunity for councillors to present the concerns of the communities they represent (Royal HaskoningDHV, 2013c: 20). One of the issues highlighted by a KI was that public consultation is hindered by the undercapacity and lack of skills of resources of the local municipalities, and this is echoed in the iLembe EMF.

When considering the extent to which rural communities of the geographical area applicable to the EMF were given the opportunity to voice their concerns or opinions or local knowledge (objective two of this study), the data reflect a significantly low level of contribution from the rural communities, and even goes as far as to indicate that there was a significantly low level of awareness. In using the iLembe EMF as a case study, as the literature indicates, the primary data show that the voices of the disadvantaged and indigenous persons are still hindered. The majority of the community members surveyed stated that they felt their voices were not heard and added that they felt there was no outcome or response when they speak of their concerns, and hence do not see the purpose of raising their voice. The data confirms that the Ndwedwe people are in dire need of development and service delivery, with these two responses recurring at every opportunity. The data presented a 34% level of satisfaction with being able to voice their concerns, yet it was evident that the locals are willing to impact their indigenous knowledge when probed. The notion that the community voice is not heard has further implication such as decreasing the opportunity for appreciative knowledge in the discipline of planning. Respondents were of the opinion that officials should pay attention to their opinions, hear their voice and include them in decision making. These results highlight the exclusion of indigenous knowledge in the decision making process as reported on by the respondents. The finding that there is a significantly

low level of opportunity for rural communities to voice their concerns, has implications for knowledge transfer and in this sense, and in the case of Ndwedwe, is leading to a perpetuation of indigent circumstances. Literature supports the direct engagement of citizens, and non-governmental associations enables the incorporation of indigenous knowledge which in turn can be considered a central determinant of successful project planning. While literature creates a case for identifying and engaging stakeholders being vital for sustainability (Desai, 2010: 99), the research findings of this study, albeit confined to the iLembe EMF and a case study of Ndwedwe, indicate that theory is not translating to practice. In the case of Ndwedwe, it is the researchers assumption, as supported by literature, that the voices of the Ndwedwe people are hindered due to the hypothesis that those considered to have a significant voice are able to negotiate on various and varying matters for the benefit of themselves and for those with whom they are concerned and are often reserved for the elite and those with power. This, therefore pays testament to the urban-rural and coastal - inland bias that the people of Ndwedwe face and endure. The research findings indicate that the people of Ndwedwe do not have a voice, and have little to negotiate with. Such a scenario contradicts "effective voice" and furthermore, democracy. Of the respondents, 17% stated that they wish to be included in decision making and that they wish for their voices and opinions to be heard, when asked what they would like to bring to the attention of the municipal officials.

The findings of the research indicate that the community needs and concerns are to a certain extent reflected in the EMF (objective three of this study). The findings which state that the Ndwedwe region is indigent, is reflected in the EMF. The data reflect that service delivery, job opportunties and the need for infrastructure and housing were recurring responses, with 28% indicating that service delivery is poor, 20% indicating that infrastructure is required and 11% stating that job creation is needed (Table 5.11) when asked what they would recommend to the municipal officials regarding planning for the community. The iLembe EMF identifies Northern areas of Ndwedwe as a commercial farming hub, which could be considered a true reflection, as 2% of the respondents in ward three stated commercial farming as their livelihood. The iLembe EMF Status Quo, in correlation with the literature review and data presented in this study, states that most of the Ndwedwe Municipality represents the former KwaZulu homeland, consisting of traditional settlement areas. According to the iLembe EMF, the area has remained substantially underdeveloped, disadvantaged and poor (NLM, 2011 cited in Royal Haskoning DHV, 2013b: 6). The Status Quo identified numerous

challenges faced by Ndwedwe people, including lack of infrastructure, commercial and tourism opportunities, unemployment rates, low level of economic activity, restricton to semi-skilled or unskilled labour, securing education, job and business opportunities, lack of community empowerment, steep landscapes which hinder housing development, and service backlogs, as echoed in the research findings of this study. The Status Quo goes on to identify opportunities arising from these challenges. The iLembe EMF illustrates areas of massive potential for growth in agriculture and agri-processing, an initiative which the research findings indicate would be highly supported. However, it states that Ndwedwe municipality, being further away from the coast, is generally of lower agricultural potential due to steep slopes and shallow soils. These areas are therfore more suited to subsistence agriculture, forestry and grazing. The report also confirms the service backlog raised in the research findings. Furthermore, in correlation with the research findings, the iLembe EMF states that Small Micro and Medium Enterprises (SMMEs) found in the rural hinterland of Ndwedwe are survivalist in nature and not diversified. The iLembe EMF Zones, however, go on to state that based on the specialist interrogations conducted, there is limited large scale commercial cultivation potential Ndwedwe.

The iLembe EMF does refelect the community concerns in that it states that there is lack of or poor community planning in Ndwedwe. The iLembe EMF recognises the following threats in Ndwedwe, identified as part of developing the desired state for the region,:

- Need to improve water and sanitation service, as well as significant backlogs (interrupted service with scattered distribution cover to communities);
- River corridor protection measures in the form of an open space plan;
- Need to maintain all those river resources classified as fair to good; and
- Need to prioritise the Mdloti River ecosystem as a Freshwater Ecosystem Priority Area (FEPA) from major and cumulative development impacts.

These significantly align to the findings of the research, where service delivery was repeatedly raised as a concern or recommendation and when asked what aspects of the environment should be conserved, hyrdology or water systems ranked high at 20%. The iLembe EMF proceeds to identify that rural communities of Ndwedwe remain vulnerable as there are few job opportunities, little entrepreneurial development, high unemployment, low income and high incidence of Human Immuno-deficiency Virus (HIV) and Acute Immune Deficiency Syndrome (AIDS). This depicts that the iLembe EMF does reflect the concerns of the community.

As the main product of the iLembe EMF, the management zones were developed (Figure 6.1). The product identified the majority of Ndwedwe as terrestrial biodiversity mangement zones, provided in the SEMP where it is intended that caution should be exercised when considering development in this area. Secondly a significant portion of Ndwedwe has been declared commercial agriculture zone, where areas of lower slope have been identified. These zones are interspersed with urban settlement zones, rural support zones stewardship zones, with an infrastructure zone buffering the roads. This allocation of management zones attempts to address the needs of the communities while taking cognisance of what the environment can sustain (Royal HaskoningDHV, 2013d).
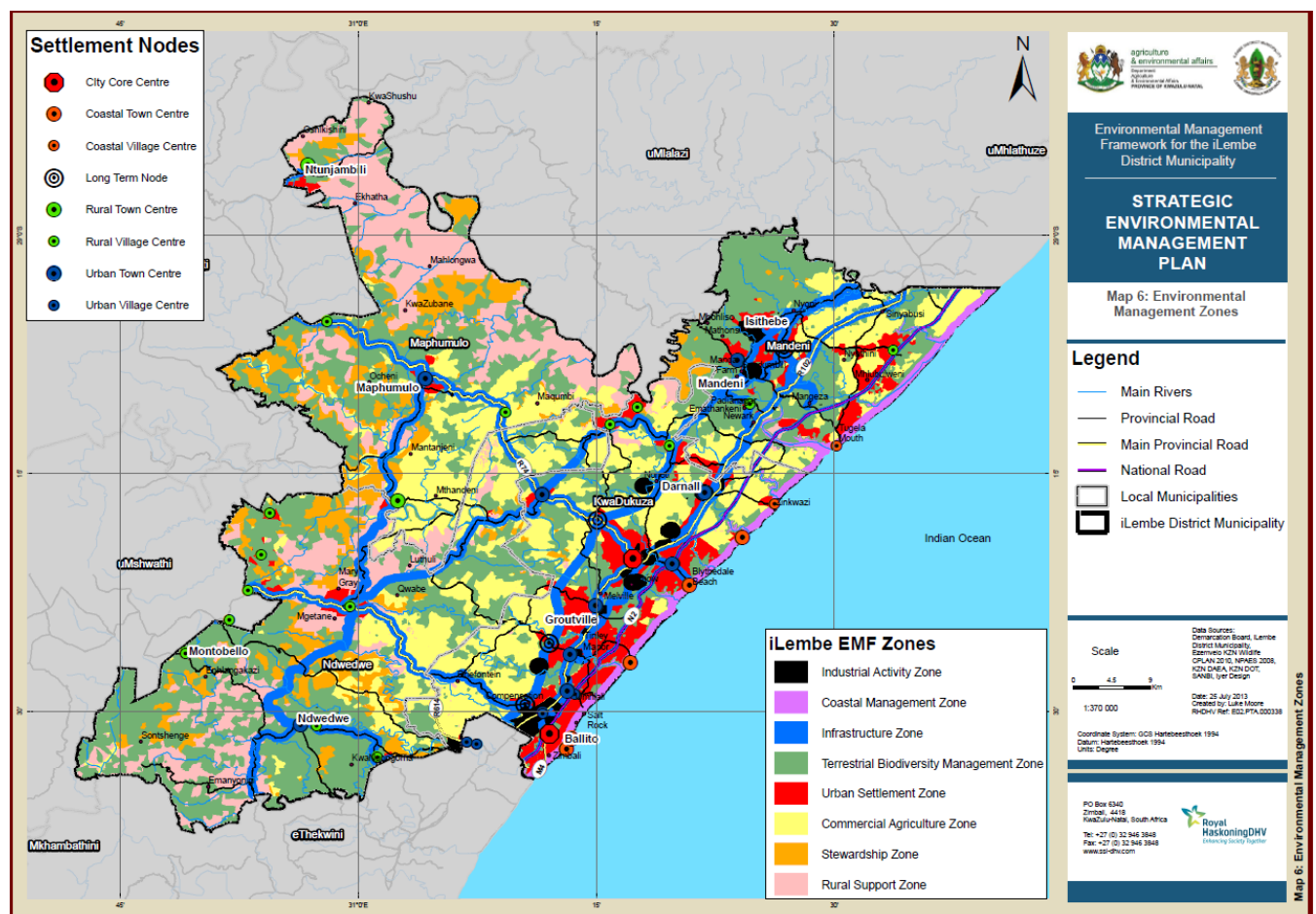
Figure 6.1: The iLembe SEMP (Source: Royal HaskoningDHV, 2013a, Appendix A).

Objective four of the research was to determine the level of local awareness and views of environmental planning with a specific focus on the EMF tool. The research findings clearly depicts that the majority of the respondents did not receive notification of the EMF and were

therefore unaware of the iLembe EMF. Of the respondents, only 17% were aware of the iLembe EMF and 79% were not. Word of mouth was indicated as the most effective method of creating awareness, followed by advertisements in the newspapers. Various aspects can be attributed to the shortcomings of the public participation process of the iLembe EMF. It is imperative to note that the iLembe EMF was a regional assessment and therefore did not drill down to ward level and hence was heavily reliant on officials and councillors. This was thereby impacted on factors such as staff turnover, limited effort to attend meetings (both project steering and public meetings). The study findings correlate with the findings of the studies conducted by Thambu (2012: 76) and Mtolo (2010: 133) which also found staff turnover and lack of attendance at meetings to hinder the process. Literature echoes concerns of capacity-related implementation problems. A myriad of studies explore the problems of implementing participation. In policy processes from both national and provincial government it was found that there was a lack of support and resources for implementation . Furthermore, literature states that that the democratic government often lacked clarity on the operationalisation of consultation, or left the role of public participation in the hands of consultants, as is the case with the iLembe EMF.

6.3 Recommendations

Objective five of the study was to forward recommendations for improved public participation in rural areas in relation to the EMF. These have been developed from research on Australian public participation methods, as well as, makes use of the recommendations offered by households respondents and key informants. In most cases, the recommendations suggest focus being placed on improved logistics and effort to engage, with real intent.

Recommendation 1: Overcoming language barriers

- Translation of municipal documents into the languages that are widely spoken into the District, that is English and isiZulu
- Translators should be used during cosultation

Recommendation 2: Overcoming barrier posed by use of jargon

- It is crucial to compile abbreviated versions of the final documents that are written in a manner that can be easily understood by the general public

- Deconstruction of academic or political language and translate this to the community. This may not be possible for a professional to undertake, and a social specialist with the correct body language is needed

Recommendation 3: Transparency and information sharing

- The advertisement of documents for comments, prior to adoption, will allow the general public to participate in the process and provide comments prior to adoption
- Educational awareness programmes should be initiated, particularly at schools

Recommendation 4: Rectifying the absence of key personnel at meetings

- Ensure that all identified role players understand the importance of public engagements and their roles clearly specified
- This is should be identified as part of a job description and should not be a negotiable matter and form part of their performance review
- Official attendance might be improved by holding meetings during weekday office hours

Recommendation 5: Rectifying Poor attendance at public meetings

- Utilizing different platforms for participation e.g. the IDP Representation Forum or Ward Committees
- Newspaper articles should be published, as well as radio announcements be made and loud speakers used
- Use IDP structures and other structures (such as the Presidential *Izimbizo* Programme, the ward committee system, the CDW initiative, and the Thusong service centres) to avoid stakeholder fatigue but ensure participation

Recommendation 6: A strategic approach

- A community strategy needs to be developed over and above the IDP process, because the IDP is seen as the only platform. The community strategy needs to develop on a regular basis
- A social facilitator must be utilised
- A strategy needs to be developed to ensure a better level of feed back

A radical recommendation is offered here, as extracted from the Australian example. In Australia, the current and most important land and resource management initiative is the

Natural Heritage Trust (NHT). It can best be characterized as an example of community-based environmental management with a borrowed design from the Land care soil conservation movement of the 1980s and early 1990s. The essence of the community-based model of land management is (1) government decentralization, (2) devolution to local communities of responsibility for natural resources, and (3) community participation (Lane, 2003: 367). This is sometimes expressed as "co-management," and is the appropriate sharing of responsibilities for natural resource management between national and local governments, civic organizations, and local communities. Most NHT programs involve a process of providing financial grants to community groups that are thereby enabled to respond effectively to land management problems that they have defined. A system such as this, could potentially work well in the context of Ndwedwe, where the indigenous knowledge is rife, and there exists a close relationship between people and their environment. Notwithstanding, that the implementation of this must still guard against possible challenges, such as those which currently arise in South Africa's democratic system. The problems of this bottom-up approach must be managed and mitigated if implemented.

6.3.1 Recommendations for further study

The research is based on the extant literature covering public participation, planning and environmental planning, but additional work needs to be done to strengthen the foundations of this study. Nonetheless, the field has advanced enough that the findings can be offered with some reasonable confidence in their soundness.

The data collected, did not depict a gender bias as a near equal number of males and females were surveyed, hence it is a recommendation put forward, that within the stakeholder and planning theories, the role of vulnerable and disadvantaged groups are explored.

The problems with public participation suggests the need to revisit the institutions and processes of participation to ensure functionality, articulation with effective representation, and the capacity to deal with deficits in delivery and the general outcomes of governance. While this research explains the mechanisms for public consultation employed in the EMF, it would be interesting to determine the exact cause for decreased effectiveness in the methods of public participation with a focus placed on how and why there is a disjuncture between South Africa's sound legislation and what takes place in practice.

6.4 Conclusion

The results are by no description astounding, and do correlate with literature on the topic. The results indicate that the level of public consultation as reflected in that of the iLembe EMF, is insuffient for enviromental planning through the application of the EMF tool in South Africa. These results reflect the findings of the study conducted by Mtolo which found that stakeholders considered meetings to be unproductive since there was little progress made at these forums. It is difficult to state whether modernist planning approaches leads to sustainability from the outcomes of this study, but it is evident that despite the modernist planning approaches aiming to move from technocratic stance to a more inclusive and consultative one, the theory does not seem to meet practice. The literature review indicates that planning theory has evolved and continues to evolve over the past century forming into a more fragmented theoretical field. Within this current theoretical fragmentation emerges acceptance of stakeholder engagement. A major theme in the literature review is that there exists a gap in planning theory and practice and this relates to the involvement and engagement of stakeholders. In the South African situation, many municipalities continue to struggle with institutional capacity to carry out effective environmental planning. Modernist planning leads to the concepts of sustainability science, environmental justice and sustainable livelihoods approach, but the study reflects that there are a myriad of challenges in the quest to achieve this in practice.

In an ideal system environmental justice will be achieved when "everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work" (Neimanis *et al*., 2012: 349). The EMF is a management tool which geographically provides a framework for the management of land in the study area which will support sustainability and controlled development. Its objectives are to guide land use and decision making. While there are many arguments for the benefit of strategic planning, the EIA and strategic planning in form of the IDP and its suite of plans cannot be separated, it should not be seen as separated, and it is the researchers opinion, that should it be recognised as closely related, then perhaps better outcomes could be achieved. From the literature review and the research findings it is evident that the voice of many in South Africa is still repressed. The impact and value of voice in rural areas is vital to planning and environmental planning. Marginalised groups such as those of the people in Ndwedwe are still excluded. It is imperative that planners and

environmental planners in particular recognise that participation processes must fit the context in which they are taking place (Bryson *et al*, 2012: 24).

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Appendix A

Consent Form

UNIVERSITY OF KWAZULU-NATAL
COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE
SCHOOL OF AGRICULTURAL EARTH & ENVIRONMENTAL SCIENCES

Consent to Participate in Masters Research Project

I Novashni Moodley, am a currently registered Masters student at the University of KwaZulu-Natal, School of Agricultural, Earth & Environmental Sciences. I am conducting a research entitled: "A Study of Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF".

The objectives of the research are:
- To examine the mechanisms of public consultation of the EMF using the iLembe EMF case study.
- To analyse to what extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge.
- To examine to which extent community needs and concerns are reflected in the EMF.
- To interpret local awareness and views of environmental planning with a specific focus on the EMF tool.
- To forward recommendations for improved public participation in rural areas in relation to the EMF.

You have been chosen to participate in this project based on:

- You being a part of the targeted rural community whose views I wish to obtain as part of my research.

Participation in this study is undertaken with the understanding that:

1. All information provided will be treated with the strictest confidence.
2. Participation is voluntary and you have the right to choose **NOT** to participate in this survey at any point. Should you decide not to participate, you will not be in any way disadvantaged.
3. All information that you provide will be used for research purposes only.
4. All responses provided will be recorded in writing however no names will be attached to any particular response.
5. Please feel free to raise questions should you require more information on these questions.
6. The entire questionnaire is expected to last approximately half an hour to one hour.
7. Your responses will aid in informing this research on how rural communities are afforded, if so, the opportunity to voice issues, concerns or knowledge.
8. The data obtained from this exercise will be stored with the research supervisor, in a secure location at the University of KwaZulu-Natal for a period of five (5) years, after which it will be shredded.
9. Should you have further queries regarding this survey, or would like more information about the topic, please contact Novashni Moodley:

1

205509875@stu.ukzn.ac.za; Supervisor, Dr Fathima Ahmed (PhD): ahmedf1@ukzn.ac.za

Household Questionnaire: Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF.

The aim of the research is to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study.

The EMF maps environmental sensitivity and geographically determines where certain types of development may be suitable or unsuitable (Marais, 2010: 2). It promotes sustainability, environmental protection and cooperative environmental governance (Government Notice- GN 547, 2010: 191), and is defined as:

> *A study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land.*

(GN 547, 2010: 190)

DECLARATION

I……………………………………………………………(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   **DATE**

………………………………………………………………………………………

You are given time to read (should you want, out of the presence of the investigator and time to consult friends and/or family), understand and question the information given before giving consent.

3

Appendix B

Example of Household Questionnaires

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COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE
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5. Please feel free to raise questions should you require more information on these questions.
6. The entire questionnaire is expected to last approximately half an hour to one hour.
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The EMF maps environmental sensitivity and geographically determines where certain types of development may be suitable or unsuitable (Marais, 2010: 2). It promotes sustainability, environmental protection and cooperative environmental governance (Government Notice-GN 547, 2010: 191), and is defined as:

> *A study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land.*

(GN 547, 2010: 190)

DECLARATION

I……………………………………………………………………(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

……………………………………………………………………………………………

You are given time to read (should you want, out of the presence of the investigator and time to consult friends and/or family), understand and question the information given before giving consent.

3

Please cross your answer where options are provided.

Section A: Social Profile

1. **Please state your age?**

18 – 20	21 – 30	31 – 40	41 – 50
51 – 60	61 – 70	71 – 80	Older

2. **Please state the highest level of education that you have attained. If other, please state.**

Primary ☐ Secondary ☐ Tertiary ☐ Diploma ☐

Honours ☐ Masters ☐ PhD ☐ Other: ☐

3. **Did your Ancestors/ Forefathers live where you live now?**

Yes ☐ No ☐ No Response ☐

4. **What is your first language?**

English ☐ IsiZulu ☐ Xhosa ☐ Other: Please Specify ☐

5. **Are you employed?**

Yes ☐ No ☐ Other ☐

Section B: Environmental Management Framework

This section uses the planning theory to formulate the questions.

6. **What do you feel are the development needs of your community?**

Infrastructure	
Conserving nature	
Job opportunities	

Other:

7. **What is your livelihood? (A livelihood is that which sustains a community or society and in the rural community, livelihoods are often agriculture, livestock raising and small scale fresh produce selling).**

8. **Were you notified of the iLembe District Municipality EMF?**

Yes [ ]   No [ ]   No Response [ ]

9. **If you answered yes to question 8, how did you become aware of the iLembe District Municipality EMF?**

Advertisement	
Background Information Document	

Email ☐

Site Notice ☐

Other ☐

10. Did you attend the Public Open Days held?

Yes ☐   No ☐   If not, why?

Time constraints ☐

Travel costs ☐

Not enough publicity of the event ☐

Other, please specify ☐

☐

11. Do public participation meetings benefit you?

Yes ☐   No ☐   No Response ☐

12. Has your councilor informed you of the EMF?

Yes ☐   No ☐   No Response ☐

13. Do you believe that it is important to conserve the natural environment?

Yes ☐   No ☐

Please explain

☐

Section C: Planning and Public Participation

This section uses the planning and stakeholder theory to formulate the questions.

14. What would you like to recommend to municipal officials about community planning?

15. Is your community active in public participation and speaking about the problems to your councilor, and does the community come together in speaking about problems to the authorities?

Yes

No

Not sure

16. What are some of the environmental issues you believe require more attention?

17. Are you satisfied with the level to which you are able to voice your concerns or issues?

Dissatisfied   Satisfied   Very satisfied   No response

18. What would you like to inform the municipal officials about public participation?

19. Are you satisfied with the information you receive regarding planning in your local community?

Dissatisfied ☐   Satisfied ☐   Very satisfied ☐   No response ☐

20. Do you feel well represented in your community and do you trust your community leaders?

Yes ☐   No ☐   No Response ☐

21. Are you satisfied with your level of service delivery?

Dissatisfied ☐   Satisfied ☐   Very satisfied ☐   No response ☐

Please explain

Thank you for your time.

IKOLISHI LEZOLIMO, EZOBUNJINIYELA NESAYENSI

ISIKOLE SEZOLIMO NEZEMVELO YOBUSAYENSI

Imvume yokubamba iqhaza ocwaningweni olusezingeni oluphakame (Masters)

Mina Novashni Moodley, umfundi weMfundo ephakeme eNyuvesi yaKwaZulu Natali, isikole seZolimo, Umhlaba neZemvelo yobuSayensi. Ngenza ucwaningo oluthi "Ukufunda ngokuxhumana nomphakathi ohlelweni lokuphathwa kohlelo lweZemvelo. Ukuzwakalisa uvo kwezasemakhaya kululuhlelo lweLembe"

Izinhloso zalolucwaningo :

- Ukuhlola ithuluzi lokuxhumana nomphakathi kusetshenziswa loluhlelo lweLembe.
- Ukucwaninga ukuthi imiphakathi yasemakhaya ngokwezindawo zabo bakwazi kangakanani ukuzwakalisa uvo lwabo nemibono yabo.
- Ukuhlola ukuthi izidingo nokuxakeka kwabo kuluthinta kangakanani loluhlelo lweLembe.
- Ukuhumusha izixhwayiso zendawo nemibono yezinhlelo zeZemvelo kokuqondene ngqo nalelithulizi lweLembe.
- Ukudlulisa izincomo ngokwemvume yomphakathi ekubambeni iqhaza kululuhlelo.

Ukhethiwe ukubamba iqhaza kululuhlelo ngenxa yalokhu :

Njengalokhu uyinxenye yomphakathi wasemakhaya okuqondenwe nalo ukuze ungazise ngezimvo zakho kululucwaningo lwami.

Iqhaza kululucwaningo luveza lomqondo olandelayo :

1. Ulwazi oluzotholakala luzoba imfihlo.
2. Ukuhlanganyela kululucwaningo kungukuzikhethela futhi kuyilungelo lakho ukuthi qha uma ungathandi ukuzimbandakanya nalo. Lokho ngeke kwenze ukuba ubandlululeke ngalutho.
3. Lonke ulwazi oluzotholakala luzosetshenziswa ocwaningweni kuphela.
4. Zonke izimpendulo zizobhalwa phansi kodwa awekho amagama ayombandakanywa nalezozimpendulo.
5. Ukhululekile ukubuza imibuzo uma unesifiso esinjalo.
6. Lemibuzo ingathatha cishe isigamu sehora kuya ehoreni.
7. Lolucwaningo luqonde ekutholeni ukuthi umphakathi wasemakhaya uphatheke kanjani ekuvezeni izimvo nolwazi lwayo.
8. Ulwazi oluzotholakala kululucwaningo luzobekwa ngumcwaningi omkhulu, endaweni ephephile eNyuvesi yaKwaZulu Natali iminyaka emihlanu emva kwalokho bese idatshulwa.
9. Uma unombuzo ngalolucwaningo noma ufuna ukwazi kabanzi ngaloluhlelo, ungathintana noNovashni Moodley kuleminininingwane elandelayo : 205509875@ukzn.ac.za ; uMcwaningi omkhulu, Fathima Ahmed (PhD), ahmedf1@ukzn.ac.za

Imibuzo ngokwenzeka emphakathini : Ukuthintana nomphakathi kuloluhlelo lokuphathwa kweZemvelo : Ucwaningo lokuzwakalisa uvo lomphakathi wasemakhaya kuloluhlelo

Inhloso yalolucwaningo ukuhlola ukuxhumana nomphakathi kuloluhlelo ekuqondeni ngqo izimvo zomphakathi necala abalithathayo ekusebenziseni loluhlelo lweLembe njengesifundo.

Ukuphathwa kwaloluhleo lwezemvelo olubucayi nokuhlalisana komphakathi kuveza ukuthi kulaphi lapho kudingeka khona intuthuko nalapho ingadingeki khona (Marais, 2010:2). Lokhu kugqugquzela ukuzimela nokuvikelwa kwemvelo namandla okunakekelwa kwayo (Government Notice –GN 547, 2010 : 191), lokhu kuchazwa kanje :

Ucwaningo lwezomhlaba nezokuphatheka kwabantu ngokwezindayo abahlala kuzo kuveza ngokusobala ukuthi abasebenzisi balezozindawo bangazisebenzisa kanjani futhi beyenze ibe sezingeni elinjani leyondawo ngokuyisebenzisa.

(GN 547, 2010 : 190)

ISIQINISEKO

Mina………………………………………………………………(amagama aphelele obambe iqhaza) ngiyaqinisa ukuthi ngiyaqonda ngokubhalwe kulelidokodo futhi nasesimweni saloluhlelo, ngiyazibophezela ekuhlanganyeleni nalolucwaningo.

Ngiyaqonda ukuthi nginelungelo lokuziqhelelanisa nalolucwaningo noma inini uma ngifisa.

Kusayina obambe iqhaza   **Usuku**

Unikezwa ithuba ukuba ufunde (uma uthanda, ngaphandle komnwaningi noma uthintane nabangane noma abomndeni wakho), qonda kahle futhi ubuze imibuso uma uzonikeza ulwazi kulolucwaningo.

Ngicela ufake isiphambano empendulweni yakho ukhethe kulezo ezinikeziwe.

Isigaba A : Kwezokuhlalisana

1. **Iminyaka yakho**

18 – 20 [ ]   21 – 30 [ ]   31 – 40 [ ]   41 – 50 [ ]

51 – 60 [ ]   61 – 70 [ ]   71 – 80 [ ]   Engaphezu
                                                kwale [ ]

2. **Amazinga aphakeme emfundo yakho. Uma kukhona okunye ukwaveze**

Primary [ ]   Secondary [ ]   Tertiary [ ]   Diploma [ ]

Honours [ ]   Masters [ ]   PhD [ ]   Okunye: [   ]

3. **Isizukulwane sakho sihlala lawuhlala khona manje?**

Yebo [ ]   Qha [ ]   Anginampendulo [ ]

4. **Ulimi lwakho olukhulumayo**

IsiNgisi [ ]   IsiZulu [ ]   IsiXhosa [ ]   Olunye ulimi [   ]

5. **Uyasebenza na?**

Yebo [ ]   Qha [ ]   Okunye [   ]

6. **Yini ocabanga ukuthi iyisidingo sokuthuthukisa indawo yomphakathi wakho?**

Ingqalasizinda	
Ukugcinwa kwemvelo	
Amathuba omsebenzi	

Okunye:

7. **Yini oziphilisa ngayo? (Oziphilisa ngakho kusho lokho okwenza umphakathi noma abantu basimame, emaphandleni kusho ezolimo, imfuyo noma izindawo ezincane abazitshalela kuzo bese bedayisa)**

8. **Wazisiwe ngaloluhlelo lukaMasipala weLembe?**

Yebo ☐   Qha ☐   Awunampendulo ☐

9. **Uma impendulo yakho ithi yebo kumbuzo 8, wazi kanjani ngohlelo lukaMasipala weLembe?**

Isikhangiso	
Ibhukwana lolwazi	
Umyalezo we-computer	
Isazisi esibekwa emigwaqeni	

Okunye

10. Waphumelela osukwini lomhlangano womphakathi ?

Yebo [ ]   Qha [ ]   Uma ungayanga, kungani?

Imigomo yesikhathi [ ]

Izindleko zokuhamba [ ]

Awaziswanga ngokwanele
umhlangano [ ]

Okunye [ ]

11. Lomhlangano womphakathi kukhona lapho ukusiza khona?

Yebo [ ]   Qha [ ]   Awunampendulo [ ]

12. Ikhansela lakho lanazisa ngaloluhlelo?

Yebo [ ]   Qha [ ]   Awunampendulo [ ]

13. Uyakholwa ukuthi kubalulekile ukugcina imvelo ejwayelekile?

Yebo [ ]   Qha [ ]

Chaza

Isigaba C : Ukuhlela nokuzimbandakanya nomphakathi

14. Yini othanda ukuyincoma kwiziphathimandla zikaMasipala ngokufanele kuhlelwe umphakathi?

15. Uzimisela kangakanani umphakathi wakho kulemihlangano njengokukhuluma ngezinkinga zawo kwiKhansela, umphakathi uyakhuluma ngezinkinga obhekene nazo nabaphethe ngokuhlanganyela na?

Yebo

Qha

Anginasiqiniseko

16. Yiziphi izinto zemvelo okholelwa ukuthi zidinga ukunakekelwa?

17. Wanelisekile ngezinga okwazi ngalo ukuveza uvo lwakho ngalo?

Awanelisekile ☐ Wanelisekile ☐ Waneliseke kakhulu ☐ Awunampendulo ☐

18. Yini othanda ukuyazisa iziphathimandla zikaMasipala maqondana nokuzimbandakanya komphakathi?

19. Wanelisekile ngolwazi olutholile ngezinhlelo zomphakathi wangakini?

Awanelisekile ☐ Wanelisekile ☐ Waneliseke kakhulu ☐ Awunampendulo ☐

20. Uzizwela umelelekile ngokwanele/ngokufanele emphakathini wakho futhi uyamethemba yini lowo ohola umphakathi?

Yebo ☐ Qha ☐ Anginampendulo ☐

21. Wanelisekile ngezinga lezinsiza sidingo?

Awanelisekile ☐ Wanelisekile ☐ Waneliseke kakhulu ☐ Awunampendulo ☐

Chaza

Ngiyabonga ngesikhathi sakho

Appendix C

Example of Key Informant Questionnaires

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- To forward recommendations for improved public participation in rural areas in relation to the EMF.

You have been chosen to participate in this project based on:

- You being a part of the technical team of the iLembe EMF.

Participation in this study is undertaken with the understanding that:

1. All information provided will be treated with the strictest confidence.
2. Participation is voluntary and you have the right to choose **NOT** to participate in this survey at any point. Should you decide not to participate, you will not be in any way disadvantaged.
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DECLARATION

I…………………………………………………………………(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

………………………………………………………………………………………

You are given time to read (should you want, out of the presence of the investigator and time to consult friends and/or family), understand and question the information given before giving consent.

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(GN 547, 2010: 190)

3

Section A: Social Profile

1. Please state your profession.

2. Please state the highest level of education that you have attained. If other, please state.

Primary ☐   Secondary ☐   Tertiary ☐   Diploma ☐

Honours ☐   Masters ☐   PhD ☐   Other: _____

3. Please indicate your affiliation.

IDM official ☐   National Gov. ☐   Prov. Gov ☐
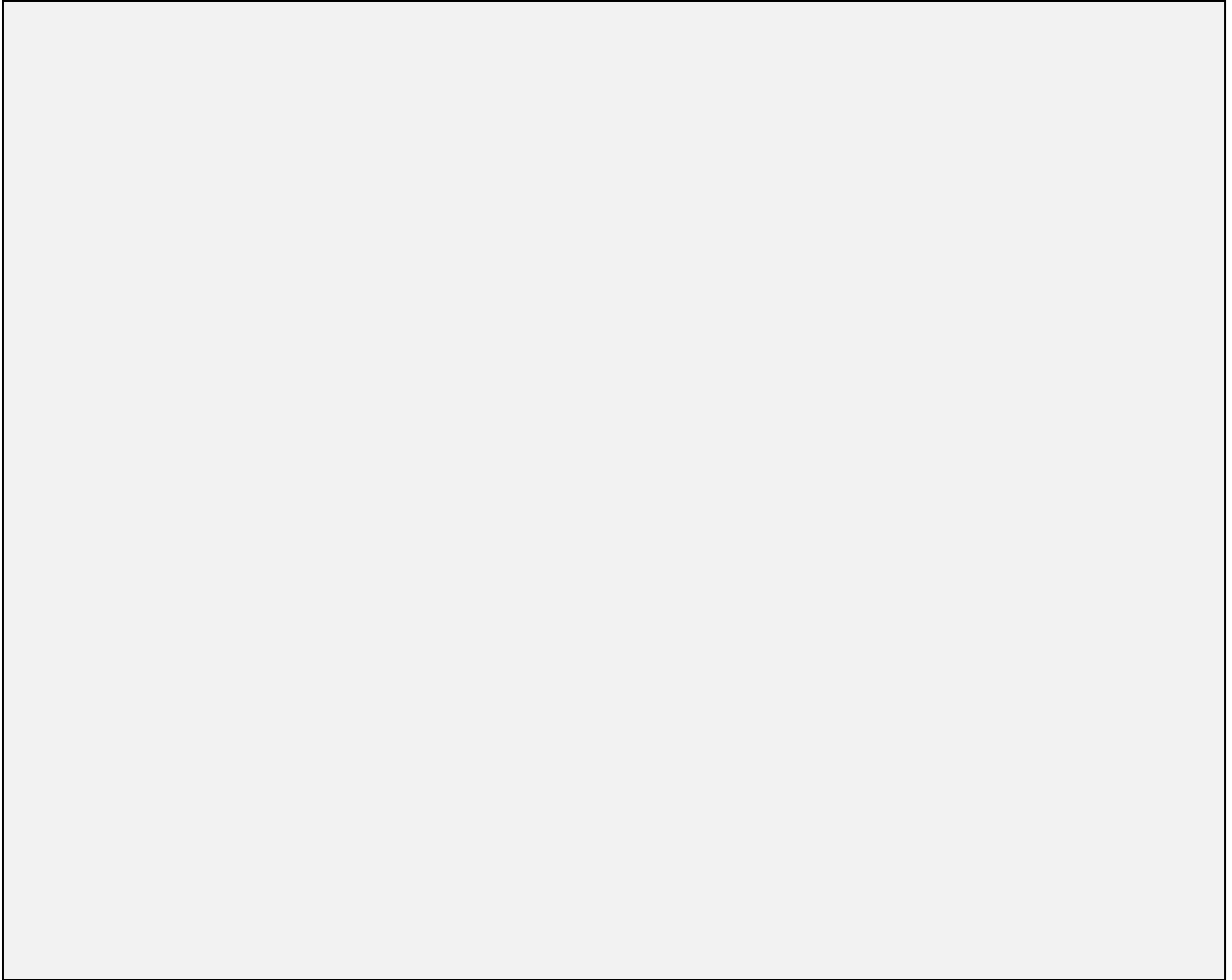
LM official ☐   Consultant ☐

Other, please specify _____

Section B: Environmental Management Framework

This section uses the planning theory to formulate these questions.
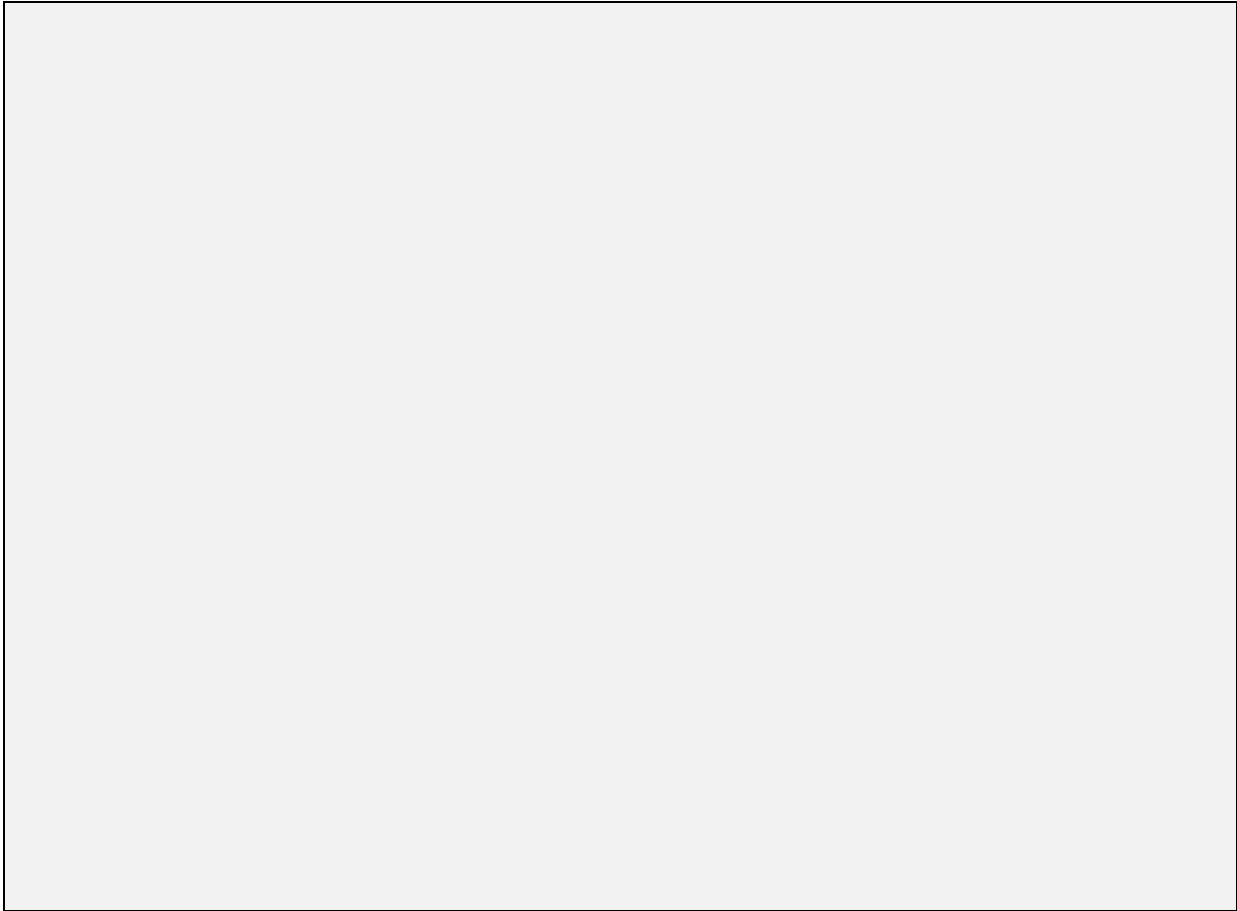
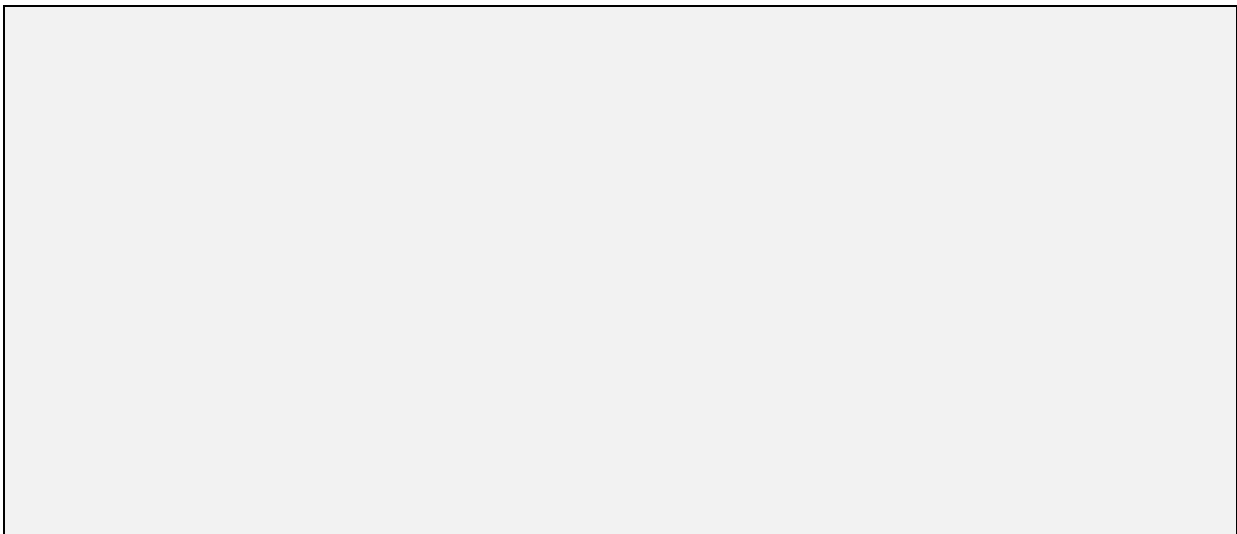**4. What to you understand about sustainability?**

5. Are you of the opinion that the EMF as a tool is aligned with the objectives of integrated environmental management and that it is efficient in the realization of the objectives of integrated environmental management? Please elaborate.

6. **How were you involved in the EMF? (In what capacity, at what stage and what was your area of contribution?)**

7. **Did you attend the Public Open Days held? If not, then why? Furthermore, do you believe that a public open day is an effective platform with which to achieve the consultation objectives of the EMF?**

8. Please state what strengths, weaknesses, opportunities, constraints and potential threats you identified in the EMF process?

Strengths

Weaknesses

Opportunities

Constraints

Potential threats

7

Section C: Planning and Public Participation

This section uses the stakeholder and planning theories to formulate the questions.

9. How would you rate the importance of public participation processes?

10. What are the mechanisms or procedures in place that your department/company utilizes, to facilitate public participation processes? Have these changed over the last 5 years, and if so, please describe both how and why these changes have taken place.

11. What are the mechanisms in place to overcome the following challenges/ issues in the public participation process?

Language barriers

Use of jargon

[   ]

Lack of sharing of information and transparency

[   ]

Absence of key personnel or officials at public meetings

[   ]

Poor attendance to public meetings

[   ]

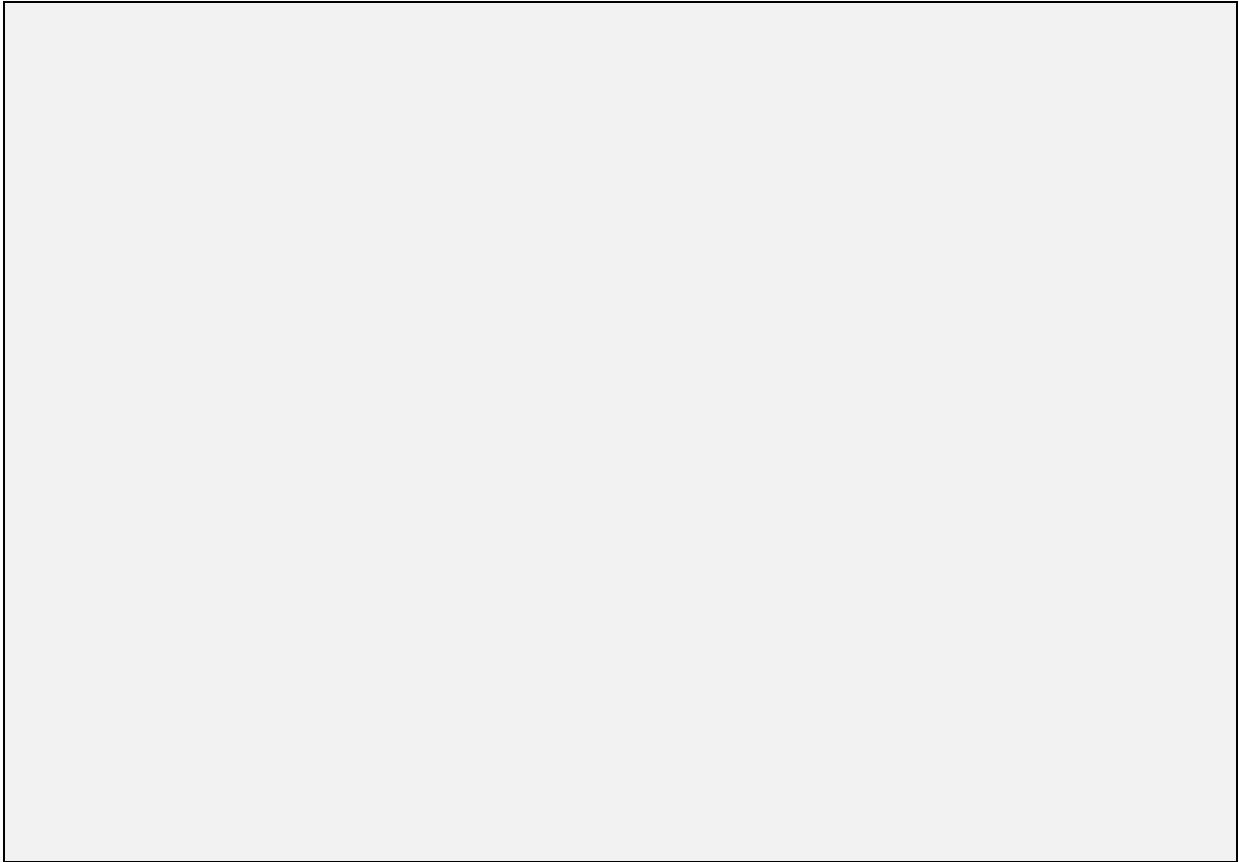Other: Please specify_____

[   ]
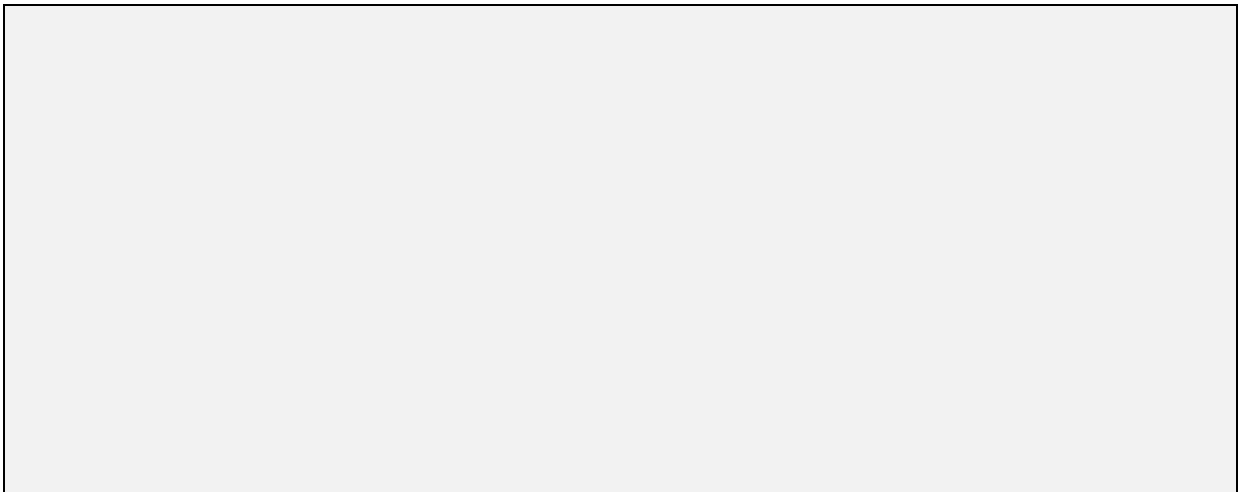
12. Were you satisfied with the level of public participation or stakeholder engagement during the EMF process and why?

[   ]

13. **What are the challenges encountered in the EMF process? What would you recommend to overcome these challenges?**

14. **What are the key lessons learned during the public participation process of the iLembe District Municipality EMF?**

15 What would you recommend to facilitate the co-production of knowledge with academics and non-academic stakeholders?

Thank you for your time.

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The objectives of the research are:
- To examine the mechanisms of public consultation of the EMF using the iLembe EMF case study.
- To analyse to what extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge.
- To examine to which extent community needs and concerns are reflected in the EMF.
- To interpret local awareness and views of environmental planning with a specific focus on the EMF tool.
- To forward recommendations for improved public participation in rural areas in relation to the EMF.

You have been chosen to participate in this project based on:

1. You form part of identified key informants or officials in the iLembe district whom can provide knowledge on planning and environmental planning processes for the district.

Participation in this study is undertaken with the understanding that:

1. All information provided will be treated with the strictest confidence.
2. Participation is voluntary and you have the right to choose **NOT** to participate in this survey at any point. Should you decide not to participate, you will not be in any way disadvantaged.
3. All information that you provide will be used for research purposes only.
4. All responses provided will be recorded in writing however no names will be attached to any particular response.
5. Please feel free to raise questions should you require more information on these questions.
6. The entire questionnaire is expected to last approximately half an hour to one hour.
7. Your responses will aid in informing this research on how rural communities are afforded, if so, the opportunity to voice issues, concerns or knowledge.
8. The data obtained from this exercise will be stored with the research supervisor, in a secure location at the University of KwaZulu-Natal for a period of five (5) years, after which it will be shredded.
9. Should you have further queries regarding this survey, or would like more information about the topic, please contact Novashni Moodley:

205509875@stu.ukzn.ac.za;   Supervisor,   Dr   Fathima   Ahmed   (PhD):
ahmedf1@ukzn.ac.za

DECLARATION

I…………………………………………………………………………(full names of participant)
hereby confirm that I understand the contents of this document and the nature of the research
project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

………………………………………………………………………………………………

You are given time to read (should you want, out of the presence of the investigator and time to
consult friends and/or family), understand and question the information given before giving consent.

Public Participation or Communications Department Questionnaire: Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF.

The aim of the research is to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study.

The EMF maps environmental sensitivity and geographically determines where certain types of development may be suitable or unsuitable (Marais, 2010: 2). It promotes sustainability, environmental protection and cooperative environmental governance (Government Notice- GN 547, 2010: 191), and is defined as:

> *A study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land*.

(GN 547, 2010: 190)

Section A: Social Profile

1. Please state the highest level of education that you have attained. If other, please state.

Primary ☐ Secondary ☐ Tertiary ☐ Diploma ☐

Honours ☐ Masters ☐ PhD ☐ Other: ☐

2. Do you reside in the study area (i.e. the iLembe District)?

Yes ☐ No ☐

Section B: Environmental Management Framework

This section uses the planning theory to formulate the questions.

3. What to you understand about sustainability? You may choose more than one.

Taking care of the environment ☐

Managing environmental, social and economic needs ☐

Development which meets the needs of our current generation while not compromising future generations ☐

Other:

4. Were you involved in the iLembe District Municipality EMF process and if so, how? (What capacity, stage and area of contribution).

Capacity		Stage	
Contribution		None	

5. In your opinion are the public open days a good platform to engage with stakeholders? Please elaborate.

Yes ☐ No ☐ No Answer ☐

6. How important, in your opinion, are a community's or society's livelihood when developing an EMF? (A livelihood is that which sustains a community or society and in the rural community, livelihoods are often agriculture, livestock raising and small scale fresh produce selling).

Very Important ☐ Important ☐ Relevant ☐ Slightly important ☐ Not important ☐

Section C: Planning and Public Participation

This section uses both the planning and stakeholder theory to formulate the questions.

7. Please tick which group environmental justice is applicable to. You may select more than one

Vulnerable populations ☐ Law ☐

Biophysical environment ☐ Procedural justice ☐

Economy ☐ Autonomy ☐

Gender ☐ Restorative justice ☐

Distributive justice ☐ Environmental health ☐

Human health ☐ ☐

8. Is consultation with the public important in your opinion?

Very Important ☐ Important ☐ Relevant ☐ Slightly important ☐ Not important ☐
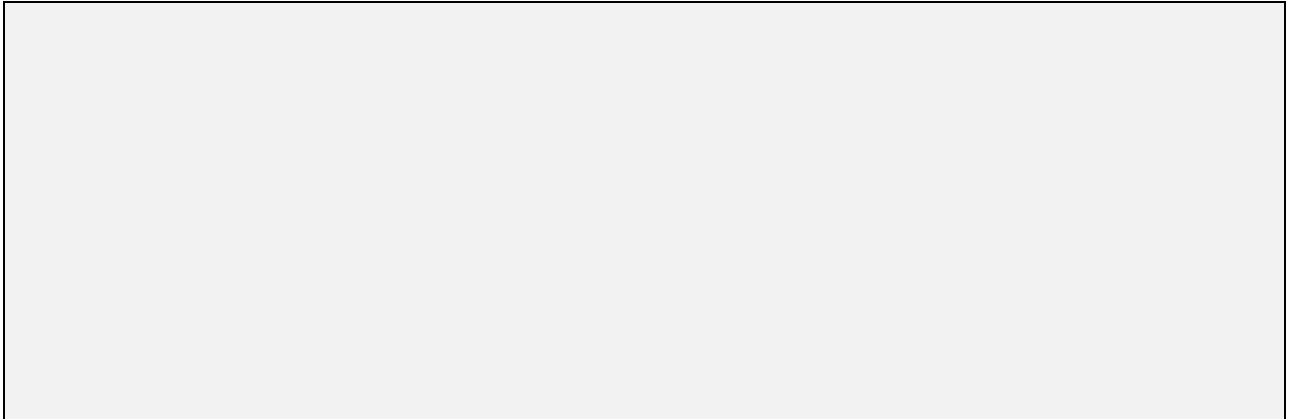
9. **Please tick what you believe are common issues with public participation? You may select more than one.**

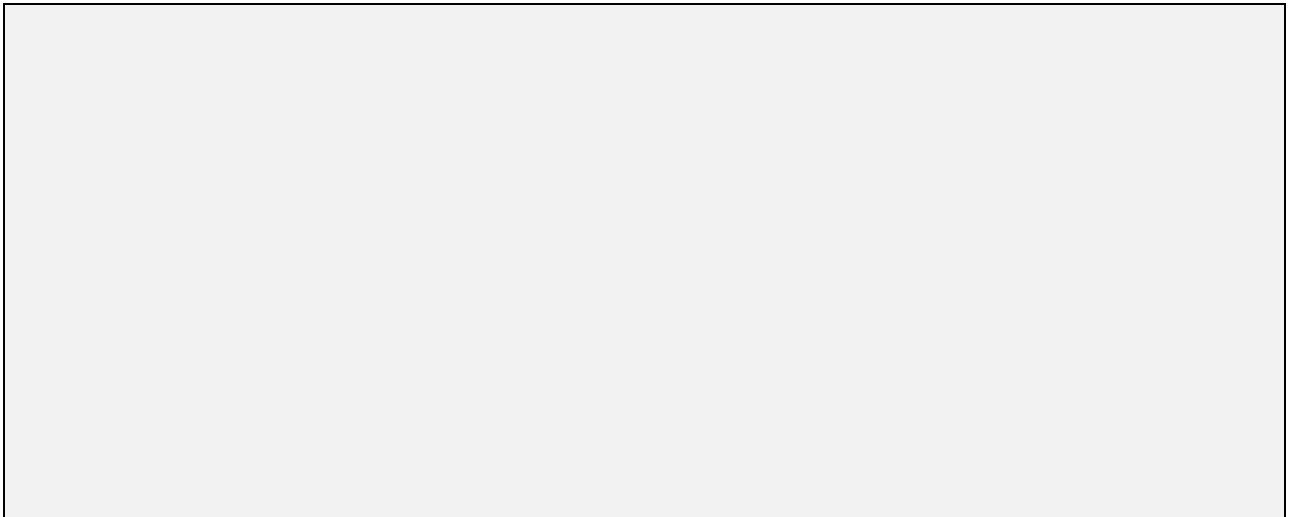|			
Limited access to information	☐	Time and financial constraints	☐
Inequity	☐	Undermining of goals	☐
Lack of transparency	☐	Late consultation	☐
Internal and external constraints	☐	Lack of education or literacy	☐

10. **What are the structures and processes employed by your department to engage with the public, and in your opinion, what is the effectiveness of these structures? (Please indicate in your answer any mechanisms used to overcome challenges such as language barriers, use of technical jargon, transparency etcetera).**

11. **Have these changed over the last 5 years, and if so, please describe both how and why these changes have taken place.**

12. What are the challenges encountered in the public participation process and what can be done, in your opinion, to overcome these challenges?

13. What would you recommend to improve the public participation processes currently employed?

Thank you for your time.

UNIVERSITY OF KWAZULU-NATAL
COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE
SCHOOL OF AGRICULTURAL EARTH & ENVIRONMENTAL SCIENCES

Consent to Participate in Masters Research Project

I Novashni Moodley, am a currently registered Masters student at the University of KwaZulu-Natal, School of Agricultural, Earth & Environmental Sciences. I am conducting a research entitled: "A Study of Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF".

The objectives of the research are:
- To examine the mechanisms of public consultation of the EMF using the iLembe EMF case study.
- To analyse to what extent rural communities of the geographical area applicable to the EMF are given the opportunity to voice their concerns or opinions or local knowledge.
- To examine to which extent community needs and concerns are reflected in the EMF.
- To interpret local awareness and views of environmental planning with a specific focus on the EMF tool.
- To forward recommendations for improved public participation in rural areas in relation to the EMF.

You have been chosen to participate in this project based on:

- You being a stakeholder and having participated in the public consultation process of the iLembe EMF and wish to impact the process.

Participation in this study is undertaken with the understanding that:

1. All information provided will be treated with the strictest confidence.
2. Participation is voluntary and you have the right to choose **NOT** to participate in this survey at any point. Should you decide not to participate, you will not be in any way disadvantaged.
3. All information that you provide will be used for research purposes only.
4. All responses provided will be recorded in writing however no names will be attached to any particular response.
5. Please feel free to raise questions should you require more information on these questions.
6. The entire questionnaire is expected to last approximately half an hour to one hour.
7. Your responses will aid in informing this research on how rural communities are afforded, if so, the opportunity to voice issues, concerns or knowledge.
8. The data obtained from this exercise will be stored with the research supervisor, in a secure location at the University of KwaZulu-Natal for a period of five (5) years, after which it will be shredded.
9. Should you have further queries regarding this survey, or would like more information about the topic, please contact Novashni Moodley: 205509875@stu.ukzn.ac.za;   Supervisor,   Dr   Fathima   Ahmed   (PhD): ahmedf1@ukzn.ac.za

DECLARATION

I……………………………………………………………………(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

………………………………………………………………………………………………

You are given time to read (should you want, out of the presence of the investigator and time to consult friends and/or family), understand and question the information given before giving consent.

Household Questionnaire: Public Consultation in the Environmental Management Framework (EMF) Process: A Case Study of the Rural Voice in the iLembe EMF.

The aim of the research is to examine the public consultation undertaken in the EMF process, with particular focus on rural concerns and perspectives using the iLembe EMF as a case study.

The EMF maps environmental sensitivity and geographically determines where certain types of development may be suitable or unsuitable (Marais, 2010: 2). It promotes sustainability, environmental protection and cooperative environmental governance (Government Notice-GN 547, 2010: 191), and is defined as:

> *A study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land*.

<div align="right">(GN 547, 2010: 190)</div>

Kindly complete and return this survey to _____ by: _____

Please cross your answer where options are provided.

Section A: Social Profile

1. **Please state your profession.**

_____

2. **Please state the highest level of education that you have attained. If other, please state.**

    Primary ☐   Secondary ☐   Tertiary ☐   Diploma ☐

    Honours ☐   Masters ☐   PhD ☐   Other: ☐

3. **Which best describes your language proficiency. (You may choose more that one).**

    English

    Understand ☐   Speak ☐   Write ☐   Read ☐

    IsiZulu

    Understand ☐   Speak ☐   Write ☐   Read ☐

4. **What is your first language?**

    English ☐   IsiZulu ☐   Xhosa ☐   Other: Please Specify ☐

5. **Do you reside in the study area (i.e. the iLembe District)?**

    Yes ☐   No ☐

6. Did your forefathers reside in the study area?

Yes [ ]   No [ ]

7. Please indicate your affiliation.

Government official [ ]   NGO [ ]   CBO [ ]

Interested and Affected Party [ ]   Councilor [ ]

Other, please specify [   ]

Section B: Environmental Management Framework

8. What to you understand about sustainability? You may choose more than one.

Taking care of the environment [ ]

Managing environmental, social and economic needs [ ]

Development which meets the needs of our current generation while not compromising future generations [ ]

Other: [   ]

9. How did you become aware of the iLembe District Municipality EMF?

Advertisement [ ]

Background Information Document [ ]

Email [ ]

Site Notice [ ]

Other [   ]

10. Did you attend the Public Open Days held?

Yes ▢ No ▢   If not, why?

Time constraints	
Travel costs	
Not enough publicity of the event	

Other, please specify:

11. If you answered 'Yes' to question 9, in your opinion were the public open days a good platform to engage with stakeholders?

Yes ▢   No ▢   No Response ▢

12. What do you understand about EMF's?

A strategic planning tool	
A planning decision making tool	
An environmental management tool	

Other, please specify:

Section C: Planning and Public Participation

This section uses the planning and stakeholder theories to formulate the questions.

13. Do you feel you were adequately given the opportunity to voice your concerns or issues?

Yes ▢   No ▢

Please explain

14. What would you like to recommend to municipal officials and the EMF team regarding public participation?

15. Are you satisfied with the transparency and process followed in the public participation?

Dissatisfied [ ]   Satisfied [ ]   Very satisfied [ ]   No response [ ]

16. Was it easy to correspond with the EMF team?

Yes [ ]   No [ ]   No Response [ ]

17. Did you find that the information provided to you was sufficient to comment on?

Yes [ ]   No [ ]   No Response [ ]

18. Was it easy to access the information you required on the EMF?

Yes [ ]   No [ ]   No Response [ ]

19. What would you recommend for an improved public participation process?

20. Do you trust the leaders of your community?

Yes ☐   No ☐   No Response ☐

Thank you for your time.