



**MUNICIPAL PLANNING IN DENSE RURAL
SETTLEMENTS: A CASE OF MZINYATHI IN
ETHEKWINI METROPOLITAN MUNICIPALITY**

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2022

DECLARATION

With this, I declare and confirm that: -

- I am the sole author of the written work herein;
- I have compiled the work in my own words and where other people's work has been used, their work has been acknowledged and referenced as per the University referencing guideline;
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31 March 2023

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Abstract

Municipal planning during the Apartheid era in South Africa was rooted in planning policies and legislation that largely excluded the black population group. It was mostly focused on urban centres and suburbs and largely ignored peripheral areas, especially rural settlements. After 1994, a democratic South Africa emerged, inheriting these difficulties, and attempting to ameliorate the dispersed settlement pattern. This reform was aimed at providing a significant role for local government in planning matters. The Constitution of the Republic of South Africa as the supreme law of the country, promotes a developmental role for local government is where with municipal planning being one of its main functions. Municipal planning must be used as a tool to transform the spatial structure created by past planning, by incorporating previously neglected and disadvantaged areas situated on the periphery of city centres into municipal plans.

This study presents the findings from an investigation on the role and impact of municipal planning in dense rural settlements. The case study was used as the methodological approach for this research study with Mzinyathi in eThekweni Metropolitan as the chosen case. In the literature review, the concepts and classifications of municipal planning and dense rural settlements are discussed. The literature review also presents international experience and cross references in terms of municipal planning. A mixed method approach which entails both qualitative and quantitative methods and techniques of data collection was used for the empirical data collection. This formed the basis of primary and secondary data that was analysed and synthesized.

Based on the findings, it can be deduced that municipal planning has not been effective in improving the conditions of people living in densely populated rural areas. The study has made a reasonable attempt to provide the different aspects of municipal planning which include strategic spatial planning and statutory planning. At the centre of this discussion is whether the effects of municipal plans are reaching their intended recipients and the impact this has made in dense rural settlements. The impact of municipal planning has been affected at a policy level by local government restructuring and planning approaches, and at an institutional level by the dual governance of local government and traditional authorities. Increasing population densities in rural areas due to past planning and current migration trends in eThekweni municipality must be taken into account, and public participation is critical in the process of developing municipal plans to heighten the awareness of municipalities and to ensure that the aspirations of the communities are reflected in the plans.

The study concludes with recommendations based on the literature review and empirical findings from the Mzinyathi study area in eThekweni Municipality. Recommendations include (1) the development of detailed plans for densely populated rural areas; (2) the harmonization and coordination of institutions, especially between management structures and traditional authorities; (3) the strengthening of cooperative forms of planning to ensure a common development vision; (4) strengthening of the relationship between the municipality and traditional leaders through continued engagement; (5) developing flexible planning methods in traditional areas; and (6) involving marginalized groups in urban planning processes.

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ACRONYMS AND ABBREVIATIONS

ABM	Area Based Management
ASGISA	Accelerated and Shared Growth Initiative for South Africa
CBD	Central Business District
DFA	Development Facilitation Act, 67 of 1995
DGDP	District Growth Development Plan
DU/HA	Dwelling Units per hectare
D'MOSS	Durban Metropolitan Open Space System
DUT	Durban University of Technology
EDTEA	KwaZulu Natal Economic Development, Tourism, and Environmental Affairs
EPCPD	Environmental Planning and Climate Protection Department
HIV	Human Immunodeficiency Virus
GIS	Geographic Information Systems
GEAR	Growth, Employment and Redistribution
IDP	Integrated Development Plan
INK	Inanda, Ntuzuma KwaMashu
ITB	Ingonyama Trust Board
KZN COGTA	KwaZulu Natal Cooperative Governance and Traditional Affairs
KZN PDA	KwaZulu Natal Planning and Development Act, 6 of 2008
LAP	Local Area Plan
LED	Local Economic Development
LDO	Land Development Objectives
LUMS	Land Use Management System
MDB	Municipal Demarcation Board
MSA	Municipal Systems Act, 32 of 2000
NDP	National Development Plan
NGO	Non-Governmental Organization
NSDF	National Spatial Development Framework
PTO	Permission to Occupy
RDF	Rural Development Framework
RDP	Reconstruction and Development Programme
PGDS	Provincial Growth Development Strategy
PGDP	Provincial Growth Development Plan
PSDF	Provincial Spatial Development Framework
RSA	Republic of South Africa

SACN	South African Cities Network
SDF	Spatial Development Framework
SDP	Spatial Development Plan
SMME	Small, Medium and Micro Enterprises
SPLUMA	Spatial Planning and Land Use Management Act, 16. of 2013
TA	Traditional Authority
TC	Traditional Council
UDF	Urban Development Framework
UDL	Urban Development Line
USA	United States of America
VD	Voting District

Chapter 1: Introduction

1.1. Background

Municipal planning and dense rural settlements in South Africa must be understood in the context of the country's past planning system. During the Apartheid era, planning was not solely a municipal function, as cities and towns were administered by a combination of regional, tribal, and homeland institutions (Van Wyk, 2013). The role of planning in municipalities was not significant and it did not make a great impact even though globally recognized concepts such as land use controls, zoning and structure planning were used. This is because planning as a function was used to enforce and promote separate and fragmented urban areas (Coetzee, 2012). The result has been an uneven spatial and ownership pattern wherein a minority group controls about 86% of the land at the expense of the black/African population group who are the majority, that resides in the overcrowded former homelands that are characterized by low levels of economic development and extremely high levels of poverty (Karriem and Hoskins, 2016). Furthermore, South African cities are characterized by unequal distribution of infrastructural services, amenities, and accessibility which has exacerbated poverty and inequality, often because of the distance, where settlements of the majority of the people (mainly black Africans) are far from the main economic centres (Pillay, 2008).

After 1994, municipal planning began to play a bigger role and had a greater impact on the development agenda. Through legislation, the structures and systems that had to perform planning at the local level were put in place. The Constitution of the Republic of South Africa (Republic of 1996) is the supreme law of the Republic that sets out the structures responsible for planning. Schedule 4B sets out that municipal planning is the legislative competence of local or municipal government (Berrisford, 2011). Through policy, there has been a significant shift in the spatial approach, with more focus on the promotion of a compact and integrated city form that maximizes the use of limited resources while also protecting the natural environment (Markewicz, Linders and Moodley, 2011). The White Paper on Local Government (RSA, 1998a) is the most notable national policy that contributed towards this policy shift because it introduced a new model for government in the form of developmental local government focused on integrated development planning (Pycroft, 1998). This gave birth to two key pieces of legislation on local government which include the Local Government: Municipal Structures Act (117 of 1998) (RSA, 1998b) and the Local Government: Municipal Systems Act (32 of 2000) (RSA, 2000). Subsequently, local municipalities were established, and the legislated structures and systems were put in place to ensure proper governance and to achieve their developmental mandate enshrined in the Constitution of the Republic. Integrated development planning was introduced as a new approach to planning in order to

assist municipalities to fulfil their developmental role (Tsatsire, Raga, Taylor and Nealer, 2009). The Local Government: Municipal Demarcation Act 27 of 1998 was also instrumental in structuring local municipalities because it set new boundaries and reduced the number of local municipalities and their geographical sizes, which has implications for the scope of municipal planning within municipalities (Lehman, 2007). More recently, municipal planning has found more expression through the Spatial Planning and Land Use Management Act (Act No. of 2016) which aims to provide a framework for spatial planning and land use management in the country, with the ultimate intention of developing a single land use programme that will incorporate all previously excluded areas in the formal areas with town planning schemes that include rural areas. The Act also reinforces the directive that municipalities must develop integrated development plans that include a spatial development framework as a core component (Nel, 2016).

Municipal planning as a function of local municipalities is divided into two separate and independent processes, namely, forward planning and development control. This entails integrated development plans, spatial development frameworks, and town planning schemes wherein the responsibility of local municipalities would be coordination and management of these processes through public participation, also allowing local communities to provide their input during the preparation of these plans (Van Wyk, 2007). The process of integrated development planning was intended to integrate the actions of line function departments and the different spheres of government, which includes municipal planning and links these to budgeting, implementation, and monitoring (Watson, 2009: 17). Integrated development plans (IDPs) are critical in achieving redistribution of financial resources but rely on processes that have become more focused on compliance as opposed to addressing poverty and inequality, conservation of natural resources for future generations, and consultation of marginalized groups. (Cashdan, 2002)

Dense rural settlements are a result of past planning policies and contemporary issues of urbanization which have seen a growing trend of people moving away from the crowded townships within the city to rural areas because of a desire for a rural lifestyle, and the availability of land through the traditional land system (Sim, Sutherland and Scott, 2016). The challenges that confront local municipalities in dense rural settlements relate to a huge infrastructure service backlog, uncoordinated land use management approaches and uneven distribution of social and institutional infrastructure (Todes, Karam, Klug and Malaza, 2010). Increasing densities in rural areas also pose a threat to the natural environment due to unplanned settlements encroaching on environmentally sensitive areas. Extreme weather conditions such as floods tend to affect these settlements which becomes a problem for the

municipality to manage (Mokwena, 2009). In the case of eThekweni Metropolitan Municipality, municipal planning operates within a dual governance structure of local government and traditional leadership, where the former is responsible for planning as a function and the latter is the custodian of the land where this function must be performed (Ray, Quinlan, Sharma and Clarke, 2011). The tenure arrangement in rural areas is that land is communally owned and governed by the local traditional leaders who issue Permission to Occupy (PTO) certificates as evidence for the occupation of land. Accordingly, the introduction of the scheme into rural areas presents a different dimension in the role of municipal planning and its impact on redressing past imbalances (Dlamini and Musakwa, 2014)

In exploring these territories, local municipalities must therefore adopt a multidisciplinary approach that will marry planning concepts with existing indigenous knowledge systems. Participatory and collaborative forms of planning become critical in this process because the needs and aspirations of the community are reflected in municipal plans ensuring representativeness. It is against this background that this study has assessed the role and impact of municipal planning in dense rural settlements in post-Apartheid South Africa, using the case of Mzinyathi in eThekweni Metropolitan Municipality as a case study.

1.2. Problem statement

Mostly because of Apartheid, spatial segregation has resulted in the majority of the black/African population group residing on the periphery of cities and towns in locations where basic services and economic opportunities are not easily accessible (Beinart and Dubow, 1995). The planning and legislative reform introduced by the democratic government established different spheres of government, where local or municipal government has to play a developmental role with municipal planning as a key function (Tsatsire et al., 2009). The impact of these reforms on municipal planning as a function of municipalities was that they had to adopt integration and compact city approaches to address issues of sprawling settlements, such as prioritizing development along mobility routes and centres where people interact for the effects to trickle down to the surrounding hinterland (Smith, 2003). Some of the tools that have been introduced through national policy and legislation to ensure the effectiveness of municipal planning include integrated development planning, spatial development frameworks, and land use schemes (South African Cities Network, 2015).

According to Schoeman (2015), planning policy and legislation has inadvertently promoted or enhanced misalignment, lack of integration, subjective application of planning principles and planning tools, and non-delivery in terms of roles and functions. Stemming from this, it can be argued that municipal planning has not played a significant role or made much impact in the

transformation of the spatial structure to create equal opportunities for all people (Görgens and Denoon-Stevens, 2013). Cash (2014) argues that population growth, rising income, and increased mobility and accessibility on the periphery of the city has contributed to an increase in the cost of transport and public infrastructure, encroachment on environmental areas and significant losses of prime farmland as new developments absorb arable land. The result is dense rural settlements of former homeland areas characterized by underdevelopment, lack of viable institutions, and huge service backlogs (RSA, 1998b).

Mzinyathi, the area chosen for the case study, is located within eThekweni municipality, north of the Durban CBD. By 2024, the population of eThekweni Municipality is projected to increase to 4 1645 03 million from 3 9470 20 million in 2020. This is an average annual growth rate of 1.13%, with the northern region representing approximately 26% of the total extent of the municipality and accommodating about .15 million, which represents 33% of eThekweni's total population (eThekweni Municipality, 2020). The population growth trends of eThekweni Municipality can be attributed to the in-migration of people with the majority of this growth visible on the urban periphery where it is easier to access land. The largest source of migrants to eThekweni Municipality has been from the province of KwaZulu Natal (eThekweni Spatial Development Framework, 2020).

Mzinyathi is a densely populated rural area consisting of formal and informal housing, administered through a dual governance system by eThekweni Municipality and the Qadi Traditional Authority, with their different land allocation and planning systems, laws, rules, and practices. The head of the Qadi Traditional Council was officially inaugurated on 29 October 2015 (Sim, Sutherland and Scott, 2016). A rural area such as Mzinyathi falls beyond the Urban Development Line (UDL) of the city and is characterized by (1) its geospatial features such as hilly, rugged terrain, dispersed settlement patterns in traditional dwellings, and communal land holdings registered under the Ingonyama Trust; (2) extreme poverty and unemployment where many households rely on localized social assets such as community networks and organizations; (3) environmental vulnerability with a heavy reliance of households on the natural resource base; and (4) fragmented service delivery, unresolved land tenure, a shortage of substantive information and legacy of planning (eThekweni Municipality Area Based Management Experiences, 2011). Figure 1 shows that Mzinyathi is identified as a Rural Service Node and a settlement that is outside the UDL in terms of the spatial concept of eThekweni Metropolitan Municipality.

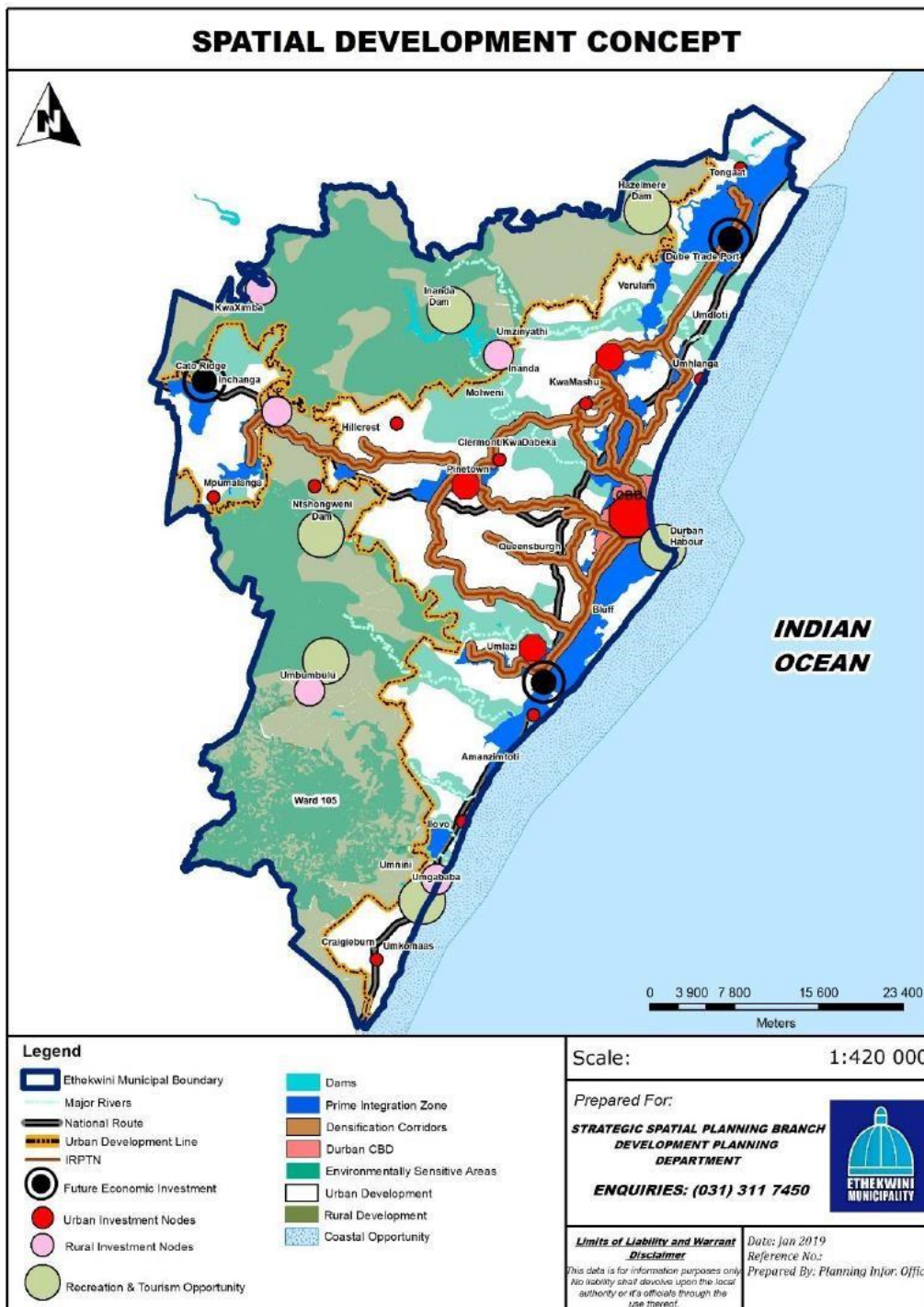


Figure 1: eThekweni Municipality spatial concept (Source: eThekweni Integrated Development Plan, 2020-2021)

eThekweni Municipality has developed numerous plans as part of its Package of Plans system, which consists of four levels guided by the integrated development plan and long-term development framework at a broad level which includes: the Spatial Development Framework, the Spatial Development Plan (SDP), the Local Area Plans (LAPs) and the Land-Use Management System (LUMS)/Precinct Plans (Sutcliffe, 2015). It is against this background that the role and impact of municipal planning and subsequent plans are examined: first, the

role and impact of municipal planning in terms of the communities they are created for; second, the relationship between the implementation of municipal plans and increased population growth due to migration; third, public participation and representation of the community in the planning processes; and lastly, the interplay of municipal planning in rural areas under traditional leadership.

1.3. Main objective

The study aims to establish the role and impact of municipal planning in dense rural settlements in post-democratic South Africa using the case study of Mzinyathi, eThekweni Metropolitan Municipality.

1.3.1. Sub-objectives

The following are the sub-objectives:

- To determine the implications of municipal planning on the spatial characteristics and infrastructure provision in the Mzinyathi area.
- To investigate the perceptions of the community on the various planning initiatives by the Municipality.
- To interrogate the challenges being faced by the Municipality to execute its planning role.
- To provide recommendations that contribute to the effectiveness of municipal planning in dense rural settlements.

1.4. Main question

The main question of the study is stated below:

What has the role and impact of municipal planning been on dense rural settlements in post-democratic South Africa? From this, the sub-questions below were raised.

1.4.1. Sub-questions

The following are the sub-questions raised from the main question.

- What are the municipal planning implications on the spatial characteristics and infrastructure provision in the Mzinyathi area?
- What are the perceptions of the community on the various planning initiatives and interventions developed by the Municipality to address the challenges in the area?

- What are the shortcomings that hamper the Municipality in executing its planning role?
- What are the conclusions drawn from the case study of Mzinyathi and recommendations for the effectiveness of municipal planning in dense rural settlements?

1.5. Hypothesis

The hypothesis is stated as follows:

Municipal planning has not been effective in improving the conditions of people living in densely populated rural areas.

1.6. The structure of the dissertation

The purpose of structuring the dissertation is to ensure that the study is clearly defined. This dissertation was structured based on the following chapters: -

1.6.1. Chapter 1

Introduction: This chapter provides the background of the research study, the research problem, the main and sub-objectives of the study, the main question and sub-questions, and the hypothesis.

1.6.2. Chapter 2

Conceptual and theoretical framework: This chapter presents the conceptual and theoretical framework of the research study, which entails definitions and classifications of concepts and theories that support each other. The concepts that will be discussed in this study include municipal planning and dense rural settlements, rural-urban migration, and community development. This discussion will be supported by an assessment of the theories that inform these concepts which include modernist planning and collaborative planning approaches.

1.6.3. Chapter 3

International and local precedents on municipal planning: This chapter outlines the international precedents of municipal planning in dense rural settlements, zooming in on certain developed and developing nations. Examples of developed nations include the Netherlands, the case of Amsterdam, and the United States of America, the case of New York. The examples used for developing nations are China, the case of Guangzhou, and Rwanda, the case of Kigali. The chapter concludes with the South African experience of municipal planning, the case of eThekweni Metropolitan Municipality.

1.6.4. Chapter 4

Research methodology: This chapter summarizes the research methods that were used to collect data. The study used a mixed method approach which entailed both qualitative and quantitative methods. The techniques, instruments, and tools that were utilized will also be explored. The chapter concludes with a discussion of methods used for data analysis and a summary of the limitations of the study.

1.6.5. Chapter 5

Background to the case study of Mzinyathi: This chapter highlights the background and local context of the study, provides a demographic and an environmental analysis, and outlines existing services and facilities.

1.6.6. Chapter 6

Findings, results, and analysis: This chapter presents the findings of the research and provides analysis through cross-tabulations. The data is presented in the form of tables, graphs, and images.

1.6.7. Chapter 7

Conclusion and recommendations: This chapter provides the closing summary of the dissertation based on the previous chapters, and highlights areas that require further research. Furthermore, it recommends some initiatives that can be considered for municipal planning to be effective in the development of dense rural settlements.

1.7. Conclusion

This chapter has presented the background of the study and the research problem. The main objective, main question, and hypothesis have been discussed which provide the focus areas to be examined in the research study. The following chapter presents the literature review of the research study.

Chapter 2: Conceptual and Theoretical Framework

This chapter focuses on the conceptual and theoretical framework of the research study. It will provide definitions and classifications of concepts and theories that support each other. There are various planning concepts and theories which inform the research study. The concepts include municipal planning, dense rural settlements, rural-urban migration, and community development. The theories include modernist planning and collaborative planning. These will be discussed further in the following sub-sections.

2.1. Conceptual framework

2.1.1. Municipal planning

The concept of municipal planning is characterized by two components, namely 'municipal' (institutional or structural) and 'planning' (spatial and land use management tool). The Oxford Dictionary (2018) defines 'municipal' as a town or district that has a local government. The term originated in the mid-16th century, initially referring to the internal affairs of a state as distinct from its foreign relations. According to Van Der Walt et al. (2014), municipality (which is a term that emanates from the word municipal) refers to an area of jurisdiction of a local or municipal government. A municipality could also be a sphere or structure of government at the local level exercising legislative and executive authority. Meligrana (2004) describes the role of local or municipal government as subordinate to that of a central government, and that it functions as an autonomous structure.

'Planning' is defined as the process of making plans for something (Oxford Dictionary, 2018). Greed (1996: 5) indicates that planning is:

the art and science of ordering land use, siting the buildings and communication routes to secure the maximum level of the economy, convenience, and beauty.

Municipal planning as a concept thus comprises different aspects such as policies, plans, programmes, processes, and results (Oliveira and Pinho, 2010). There are role players involved in municipal planning, with the public sector assumed to take the lead role and the private sector playing a supporting role (Parker and Doak, 2012). According to Ratcliffe (1981), the components of municipal planning entail (a) an understanding of both social and economic aims to achieve objectives set out by private and public sector; (b) the distribution of resources, particularly land, in such a manner that will maximize efficiency, while paying attention to the nature of the built environment and the wellbeing of the community; (c) the skill of foreseeing change and determining between the economic, social, political, and physical forces that determine the location, form, and effect of urban development; and (d)

in a democracy, it is the practical and technical implementation of the community's desires operating within a legal framework, permitting the control of the various urban components such as transport, power, housing, and employment in such a way that it benefits the broader society.

In different parts of the world, local municipalities are required to develop and review municipal plans periodically and continuously. The legislative framework also requires municipal plans to be developed in consultation with various stakeholders from ministries, public and private institutions, commercial and non-profit organizations, as well as private citizens. The plan pronounces abstract goals for the development of a municipality (Bohøj Borchorst, Bødker, Korn and Zander, 2011).

Municipal planning can be broadly divided into two categories, namely statutory planning and strategic spatial planning. Statutory planning is focused on development control and involves the production of city-wide development plans that determine where development is permissible. These plans cover all types and aspects of land use and development, both urban and rural (Greed, 1996). Statutory planning as blueprint planning, adopts a comprehensive approach towards planning that relies on technical expertise to produce solutions to urban problems that are mainly physical, such as land use maps, zoning, density controls, building regulations and planning standards (Ratcliffe, 1981). Effective land use and management controls are therefore necessary for the realization of sustainable city development, and the safety and health needs of societies (Boamah et al., 2012). Comprehensive land use drawn up by local governments is based on five principles. The first principle is to protect farmland and control non-agricultural purposes. The second principle is to increase the utilization rate of land. The third is to make an overall plan and arrangements in various areas. The fourth is to protect and improve the ecological environmental land. The fifth is to keep a balance between cultivated land occupied, developed, and reclaimed (Meligrana, Ren, Zhang, and Anderson, 2008).

Strategic planning can be broadly defined in two ways. Firstly, as a well-organized system to produce fundamental decisions and actions that shape an organization's mission, actions and objectives. Secondly, as a systematic process for gathering information about the overall situation and using it to establish a long-term direction and then translating that direction into specific goals, objectives, and actions. This blends with future ideas, objective analysis, and subjective evaluation of goals and priorities to chart a future course of action that will ensure the organization's vitality and effectiveness in the long run (Poister and Streib, 2005). In addition, Healy (2006: 10) substantiates spatial planning as:

physical development of towns which promotes health, economy, convenience and beauty in urban settings; and management of public administration and policy analysis, which aims to achieve both effectiveness and efficiency in meeting explicit goals set for public agencies.

Strategic spatial planning therefore seeks to consciously plan for the spatial development of a territory by using the location, timing, nature and scale of infrastructure investment and development spending to stimulate, support, strengthen and discourage growth and development in specific spaces/places (Orange, 2010). It therefore follows that strategic spatial planning is rooted in socio-political landscapes due to its highly political processes which involve the engagement of a wide range of role players (Davoudi and Strange, 2009). Spatial strategic planning goes beyond traditional land use planning, to bring together and integrate policies for the development and use of land with other policies and programmes that influence the nature of places and their functionality (Allmendinger and Haughton, 2010). The importance of linking planning and municipal management leads to integration of vision, goals, strategies, human and financial resources and institutional structures and processes (Coetzee, 2012).

A critical factor that has shaped the impact of municipal planning on city development is the devolution of powers or decentralization of planning in decision-making to become a key function of local municipalities (Beard, 2008). This has transformed municipal planning in various ways. Firstly, municipal planning has generally been implemented through a top-down approach that relied heavily on technical expertise (including architects, engineers, and urban designers) and often overlooked the recipients or beneficiaries of that intended plan (Hardy, 2011). This approach to planning is more focused on the output and tends to ignore the inputs from all the role players in the process (Fainstein and DeFillipis, 2015). The growing role of civil society in planning and decision-making processes has contributed to efforts by local municipalities to create more sustainable cities (Madanipour, 2015). It has been established through world summits that the challenges facing local municipalities are common across the globe. Consequently, it can be argued that municipal planning has ascended to more collaborative forms of planning which are not solely reliant on the expertise of technocrats as was the common practice at the turn of the 19th century (Allmendinger, Prior and Raemakers, 2000).

Secondly, the devolution of powers has also led to the political process at the local level where representatives are elected to champion developmental issues on behalf of local communities through democratic processes (Fainstein and DeFillipis, 2015). These elected representatives are mandated by their constituency and operate within their respective local government boundaries. Initially, local government boundaries were drawn in such a way that they

distinguish between town and the countryside. However, with urbanization, and the development of towns and cities, it has become difficult to distinguish between urban and rural as boundaries are frequently adjusted (Meligrana, 2004). Some scholars believe that the rapid pace of urbanization will result in the world's population residing in metropolitan regions and large cities, which is leading to the historic transformation of the world from a rural setting to an urban one. This coincides with unprecedented trends in human history which include global climate change, rising of the sea level, deforestation, the accelerated extinction of species, food insecurity, and the alienation of human society from the natural world (Angotti, 2013). The role of municipal plans has become even more important in terms of containing urban areas and regulating urbanization through land use management (Padeiro, 2016)

Against this background, it can be concluded that municipal planning: (a) is the responsibility of the local municipality or local government; (b) involves a system or process of developing municipal plans; (c) can be broadly divided into two categories, those of statutory and spatial strategic planning; And (d) lastly, the role of civil society is critical for municipal planning to ensure the representativeness of the plans.

2.1.2. Dense rural settlements

The term 'dense' in municipal planning can be loosely defined as the relationship between population and density. Density refers to the quality of being dense; the degree to which something is dense namely population density (Oxford Dictionary, 2018). Ayoob and Ibrahim (2013) suggest that population density is an important tool in geography that forms a crucial link between human populations and their physical environments. In terms of the eThekweni Density Strategy (eThekweni Municipality, 2013), density is defined as a measure to describe, forecast, and control land usage. It is part of a set of tools for a city to manage the population thresholds, efficiencies in the built-up areas, and the intensity of residential development. According to Clark and Moir (2015), density is the relationship between a geographic area and the number of people living in or making use of that area. It is usually articulated as a ratio of population size or the sum of dwelling units, equated to area units.

The measurements of density include dwelling units per land area; habitable rooms per land area; people or bed spaces per land area; or stand ratios with floor area multiplied by the number of stories/areas of the site, commonly referred to as the floor area ratio (FAR). All these definitions have three things in common: these are the threshold population, the space they occupy, and the number of dwelling houses in which the population resides. Density is therefore an important analytical tool in municipal planning for measurement and monitoring

of population changes to devise plans and solutions for the better management of space for residential purposes (Lategan and Cilliers, 2016).

There are different definitions and methods of calculation that can produce wide-ranging conclusions and statistics (Clark and Moir, 2015). Churchman (1999) indicates that this is because there is no particular or universally recognised measure of density between or within countries or even within metropolitan regions. Density measures are important because they can be used: (a) to calculate the intensity of a built form on a particular site or a place; (b) to mould the impacts of development standards; (c) to keep track of the development performance of the city against its original vision; and (d) to estimate population densities (eThekweni Municipality, 2013).

Densification as a concept is derived from the term density. Literature in support of densification views it as an important pillar in ensuring ecological and social sustainability. Comprehensive plans use densification as a tool to connect different parts of the city, reduce segregation and increase security (Normamn Bjarsell, 2017). Todes (2008) argues that spatial concepts such as densification have diverted attention from the need to understand the location and movement of different groups within the city, what underpins these choices and the implications of these patterns for survival. Turok (2011) identifies three approaches to densification. Firstly, it can be achieved through state-led actions such as obtaining and making land available for development, or provision of low-income housing. Secondly, through the encouragement of market producers by the state using incentives or regulations that promote new housing developers to build at higher densities. Thirdly, through fiscal measures that influence options such as household and location choices. For example, more intensity of the existing residential use in the city centre can be encouraged for higher densities by imposing more tax on detached houses as opposed to a block of flats, for example, or through the reduction of private car usage by increasing the cost of parking fees, fuel duties or road user charges.

There are different definitions, classifications, and interpretations of what constitutes a rural settlement. A rural settlement is defined and classified in many ways in different parts of the world. While there is no agreement among scholars on a definition of what constitutes 'rural', most methods of classifying territory along an urban-rural continuum refer to population size and density, level of urbanization, and small settlements. By default, agricultural and forestry areas are classified as rural (eThekweni Rural Development Strategy, 2016). A rural area can be defined as any place with a population of fewer than 2,500 and a density of fewer than 500 people per square kilometre. Three factors set rural areas apart, namely a) agriculture as an activity; b) migration of young people from rural areas due to lack of job opportunities and lack

of facilities; and c) poor accessibility to basic services for inhabitants, due to the low population density of rural areas (Perlín, 2010). The term 'settlement' can be described as a geographical concept for a built-up area of land occupied by people for shelter and other socio-economic activities (Sulyman, 2014). According to Dalal-Clayton, Dent and Du Bois (2003), some of the characteristics of rural settlements include large tracts of commercial farming land area that usually surround a municipal urban area; villages that operate within traditional systems where people still live; all areas outside of municipal boundaries (therefore mostly including farmland); small towns surrounded by hinterlands where the economic base is mostly agriculture-related, where people practise subsistence farming, e.g., commonage and back yards; and areas not having an agricultural context but close enough to services or isolated from large cities.

The population is an important aspect of density and rural settlements. Population shifts are shaped by primary and secondary key drivers of density in cities. Primary drivers include population growth in cities; the expansion of business, knowledge, and innovation; and environment and sustainability; while secondary drivers include digitization and technology development; the links between density and infrastructure investment; the urbanization trend in capital investment; and new preferences in architecture and urban design (Clark and Moir, 2015). In most traditional cities with market-orientated economies, the level of population density tends to decline from the city centre. Kerselaers (2013) suggests that dense rural settlements have resulted in an increased demand for land where urbanization is encroaching upon open spaces in rural areas. Dense rural populations are usually located around certain pockets on urban fringes (around the metropolitan centres) within the country which presents multiple problems, both theoretically and practically, for the rural policymakers and developers (Ayoob and Ibrahim, 2013). Some commentators have questioned whether the classification of some settlements can be restricted to being termed 'rural'. Several of these settlements have a low agricultural base, and households are reliant on a variety of commuter income types, remittances, pensions, and other sources. Industrial reorganization policies intended to create manufacturing employment in some of these areas, but in many such places, industrial development never took off, and in some of them (particularly the more spatially remote areas) manufacturing growth that did occur has since failed (Harrison et al., 2007). Atkinson (2014) indicates that dense rural settlements, on the one hand, could be referred to as urban due to their population density, while on the other hand they could be classified as rural due to their strong links with surrounding villages and farms and their lack of an existing urban economic core. According to Todes (2008), people choose to locate themselves in areas on the periphery of the city because they have larger sites that provide flexibility in terms of changing lifestyles, maintaining social networks, and diversifying income sources through sub-letting and urban

agriculture. The advantages of living in these areas are that daily living costs are lower than in more centrally located areas, and households manage by sending one person to work in town, limiting the impact of transport costs.

From this perspective, the population is an important aspect of dense rural settlements. It can be concluded that dense rural settlement as a concept, incorporates (a) population density which is an important analytical tool in municipal planning for measuring and monitoring population changes within a geographic area, and is critical to the formulation of municipal plans which assist local municipalities in better managing land uses; and (b) the transformation of the broad classification of rural settlements as peripheral areas which are influenced by population changes.

2.1.3. Rural-urban migration

Rural migration is linked to municipal planning and dense rural areas. People move for a variety of reasons, including seeking better jobs and education, or following family members who have moved. It is often argued that the decision to relocate produces positive results by improving the conditions of migrants (Grau and Aide, 2007). Overbeek and Terluin (2006) offer manifestations related to migration from rural areas to cities, i.e., suburbanization and counter-urbanization. Some people move from big cities to the suburbs to live in the countryside while keeping their jobs in the city. Although some people move for both residential and economic purposes, where people move from large, urban or metropolitan areas to smaller, rural or non-metropolitan areas, this is often in search of a more rural lifestyle.

Greiner and Sakdapolrak (2013) argue that there is a clear connection between migration and the environment, especially regarding agricultural change, land use patterns and soil conservation. This relationship is mediated in varying degrees by remittances, attrition, socioeconomic stratification, gender dynamics, and cultural variables. A more general explanation of rural migration involves two factors: the demand-driven type and the supply driven type. The pull of demand is associated with modern production sectors that are usually located in urban areas and attract urban-rural migrants because productivity and financial rewards are higher than the traditional rural agricultural sector. This can happen despite persistent unemployment in urban areas, as potential migrants make decisions based on their expected income. Thus, urbanization in developing countries can be caused by market failure, which leads to the perception of over-urbanization (Grau and Aide, 2007). In contrast, the supply push relates essentially to the possibility that other factors that directly affect the rural sector have encouraged the movement of residents to cities, but they may

not lead to improved productivity. These may include population displacement due to civil conflict or other factors more directly affecting agricultural production (Barrios et al., 2006: 358). The inability of local governments to manage urbanization through migration policy also increases rural-urban migration (Ray et al., 2011).

Dalal-Clayton et al. (2003) point out that rural-urban migration has always been considered a trend where people move from rural areas to cities (big cities) in search of better economic opportunities and services. However, the spread of industry from large cities to new or small towns has provided opportunities for income growth in rural areas, and such growth patterns must be understood, considered and planned for accordingly. The right services and facilities are needed to support such growth. This trend is expected to have contributed immensely to the fact that rural settlements have become denser and require a more sustainable and holistic approach to development. Barrios et al. (2006) argue that rural-urban migration is also influenced by factors related to climate change. Long-term climate change scenarios usually indicate extreme climate fluctuations and especially water scarcity. Political tensions, marginalization of ethnic minorities, civil war and ecological degradation also increase migration (Todes et al., 2007).

Given this background, rural-urban migration is an important concept in municipal planning because it relates to the movement of people between spaces. Firstly, rural-urban migration has an impact on municipal planning because the development of municipal plans relies on information that relates to the population. Rural-urban migration influences population changes because people migrate within the local municipality, between local municipalities, and between provinces. Therefore, the measurement of the population might not be sufficiently accurate for local municipalities to plan properly for their areas. Secondly, the change in population lifestyles has meant that rural-urban migration is no longer a one-way trajectory where people migrate to cities and settle in urban areas to be closer to economic opportunities. People settling in the rural countryside are doing so because of the decentralization of economic opportunities, and this requires local municipalities to provide basic infrastructure services which have not been prioritized in municipal plans.

2.1.4. Community development

The concept of community development as municipal planning can be divided into two areas, which are public participation and sustainability. Very few institutions interested in development oppose the idea of public participation, but the interpretation of public participation could be questionable (Robinson and Green, 2011). The term 'community' has evolved, and its meaning varies widely, with some utilizing the term to refer to specific

groups, others to represent whole populations, or otherwise as a shorthand for an intervention that will benefit 'the community at an undefined scale or type' (Parker and Doak, 2012: 172). Phillips and Pittman (2009) argue that there is a connectedness between people and their geographic locations. Thus, community development involves a community arrangement where problems are addressed by group decision-making and all citizens are involved in a process of achieving improvement within their neighbourhood.

Swanepoel and De Beer (2006) argue that communities are not homogenous entities that will share a common goal, but that generally, they consist of spatially separated people who share common needs and values. Hence, community development requires the involvement of different stakeholders who need to work together to pursue a united front in tackling their problems. Residents of a particular geographical locality may be viewed as part of an area-based community and are sometimes referred to as propinquity communities. Such communities may be conceived at various scales from streets to neighbourhoods, villages, towns, or districts (Parker and Doak, 2012).

Community development has long been largely based on top-down control systems that are inefficient, prone to corruption, and take responsibility away from residents. Plans are usually made by outsiders who have little or no regard for the priorities of those who must implement the plans. The lack of involvement of the local population often leads to the neglect of projects after the end of financial support. The stakeholders of the participation process can be divided into four main groups or sections: the public sector, the private sector, the non-governmental sector and the popular or community sector. A stakeholder or role player of poverty alleviation is a person or group (institution) that performs a specific task. An interest group may be actively doing something or may have missed opportunities to accomplish a task (Swanepoel and De Beer, 2006)

Emphasizing sustainability in planning was helped by a report published by the World Commission on Environment and Development in 1987 (United Nations, 1987), which included sustainability in the global political debate. This was followed by the establishment of a strong foundation for the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992. The standard definition of sustainable development is:

development that meets the needs of the present without jeopardizing the ability of future generations to meet their own needs (Wheeler and Beatley, 2009: 59).

Planning for sustainability first appeared in the form of climate change plans (for climate action), usually at the city or state level. Sustainability came as a critique of accepted

conventional understandings of continuous economic growth as a way to improve human well-being. Habitat change, which causes unwanted effects on the atmosphere, soil, plants and animals, is also rapidly exceeding the capacity of the professions and our current assessment and advisory capabilities, according to Wheeler and Beatley (2009). In municipal planning, sustainability means incorporating strategies into plans that typically include: (a) renewable energy portfolio standards for utilities, which typically means transitioning from coal-based power generation to solar and wind power, and (b) higher vehicle emissions standards (Chapple, 2015). Space-creating communities that participate in the design, development, and implementation of projects in their neighbourhood have become critical to building a sustainable settlement. Effective neighbourhood planning and decision-making is a key mechanism through which state interventions could become more integrated and sustainable (Cirolia, Gorgenes, Van Donk, Smit. and Drimie, 2016). Sustainability has challenged the traditional model of hierarchical and centralized decision-making, as a group of people is excluded from decision-making processes. Sustainability supports the promotion of participatory democratic decision-making for both procedural and substantive reasons (Watson and Zetter, 2006).

The challenges of the community development process are that it can be complex, time consuming and expensive. Difficulties can arise, for example, when many different interests cannot find a common tone for individual actions or even for the general direction the community should take. It may therefore take time to reach an agreement. However, it is difficult to maintain commitment and interest (Phillips and Pittman: 2009). For community development to be sustainable, the micro-politics of planning and public engagement, and the connections between resulting theories and practices, must be considered. In addition, public dispute resolution work and its implications for democratic processing and management, especially a better understanding of differences in dialogue, discussion and negotiation, and the corresponding promotion of dialogue, discussion moderation and actual negotiation are necessary (Fainstein, 2005). Integration in community development has two elements. The first is that the problems are multifaceted and should be addressed together in a coordinated manner. This emphasizes the fact that social, political and cultural aspects should be considered together with economic aspects because they are all interrelated. The other element of integration is that participants in different roles must coordinate their activities. Government agencies, non-governmental organizations (NGOs) and community-based organizations (CBOs) should work hand-in-hand to optimize the impact of their efforts to avoid duplication and conflict. In South Africa, the principles of sustainability are embodied in the integrated development plan (IDP), which, under the Municipal Systems Act (2000) (RSA, 2000), obliges all municipalities to prepare to receive government funding for

infrastructure, service improvement and delivery processes. This is a budget-oriented strategic plan upon which the development of the entire municipal region is based. The plan is developed in collaboration with community stakeholders and provincial and national governments. It aims to eliminate poverty, accelerate local economic development, eliminate unemployment, and advance the process of reconstruction and development. Therefore, IDPs address both substantive and procedural aspects of design (Watson and Zetter, 2006).

2.2. Theoretical framework

2.2.1. Modernist planning

Modernist planning emerged from several movements at the beginning of the 20th century as a response to the challenges of industrialization. Arguably, contemporary practices in municipal planning are largely influenced by the modernist planning school of thought (Hardy, 201). The negative effects of industrialization and mass urbanization gave rise to the application of a scientific approach that would take control of cities and rationally organize them (Calderon, 2017). Modernist planning is based on the Enlightenment model which gave birth to movements such as the 'Garden City', inspired by Ebenezer Howard, which argues the case for a planned decentralization from the congested Victorian industrial city, by moving away to the countryside (Freestone, 2000). The principles of the garden city promote a strong community, ordered development and environmental quality (Angotti, 2013). Howard propagates the concept of a marriage between urban and rural life. Howard also borrowed ideas from Patrick Geddes, who developed the Geddesian theory. Geddes' understanding of the process of mass urbanization, the development of modern technology, and rapid transmission offer an opportunity for modern planning to explore the relationship between history, culture, and the physical environment (Meller, 2001). Another instrumental idea was - David Burnham's 'City Beautiful', which draws parallels with the Garden City and postulates the inverse solution to urban problems, which is to bring the countryside to the city (Hall, 2014). Modernist planning is idealistic in its approach as it places focus on the physical aspect of the city and puts much dedication into producing the desired effect while putting less emphasis on the process (Fainstein and DeFillipis 2015). In an ideal world, modernist planning could work in its current form; however, for the planner, its impact revolves around a whole range of circumstances, especially the political economy. An approach towards 'bounded rationality' is suggested, which maintains both professional expertise and centrality of politics and power (Glasson and Marshall, 2007).

Jurgen Habermas, a German social theorist, argues that modernist planning is inspired by the reform movements of the Enlightenment period and is rooted in rationality and democracy (Deflem, 2013). Modernist planning entails:

a belief in linear progress; positivist, technocratic, rational planning of social and geographical space; 'standardized conditions of knowledge and production'; and a firm faith in the rational ordering of urban space as one of the prerequisites for enhancing individual liberty and human welfare (Irving, 1993: 2).

The primary characteristic that sets modernist planning apart is the assumption that all activities, values, and patterns of human behaviour must be based on scientific knowledge (Scott, 2003). This broke from tradition and meant that the improvement of cities is to be informed by modernist planning practices (Madanipour, 2015). Coupled with this was the increased importance of democracy through Individual rights and freedom. The traditional and cultural belief systems are substituted by democratic processes and governance structures which then assume the role of decision-making in planning. The relationship between scientific knowledge, democracy, and governance in modernist planning promotes a prominent role in municipal planning to address development challenges (Healey, 2006). Several scholars critique modernist planning for its reliance on rationality. The level of knowledge, analysis, organization, and coordination required is impossibly complex which does not render it an avenue for public participation. The presumption of common public interest benefits the powerful elite at the expense of the impoverished and poor (Fainstein and Campbell, 2011). While some scholars believe that planning and rationality are inseparable, others have concluded that this relationship doesn't work. Hardy (2011) argues that Modernist planning adopts a top-down approach to decision-making which is spearheaded by the private sector and relies upon technical experts including architects, engineers, and urban designers. This means that the political role of state and government intervention is limited. Modernist planning prospers under bureaucratic organization, based on being purely technical, precise, and cheaper (Madanipour, 2015). This is rooted in hierarchical and centralized decision-making processes which however tend to exclude an array of people from the decision-making processes (Zetter and Watson, 2006). A plan-led system requires a comprehensive and up-to-date hierarchy of national policy, regional strategies, and local plans. Vertical integration is deemed to be instrumentally necessary as the legitimacy, viability, and legibility of planning policies and goals would be threatened without such a decision-making process (Parker and Doak, 2012).

The functional role of planning as a process to regulate the use and development of land is emphasized through legislation and policy. Unregulated land development leads to a host of

urban problems including haphazard development, neighbourhood blight, automobile congestion, and environmental degradation (Boamah et al., 2012). The focus on enhancing safety and efficiency ensured that there was a distance and buffers between activities considered to be incompatible. One could argue that the separation of land uses associated with modernist planning contributed to spatial segregation of land uses which has led to increasing calls for mixed uses to create sustainable cities (Stiftel, Watson and Acselrad, 2006). Developments influenced by modernist planning are often interwoven with the invention of vehicle mobility, which has impacted on the culture of walking from one place to another. Moreover, money-oriented development has often occurred within the context of development controls being overlooked, based on the need of the project within the community which has produced building forms and monotonous housing which are not sustainable; and office parks far from where people reside (Salingaros, 2010). Such challenges also contributed to decentralization of businesses, banks, and factories where modernist planning tools such as zoning, traffic segregation of cars and pedestrians in shopping centres and local neighbourhoods applied (Hall, 2014). The stark contrast of trying to solve urban problems at the turn of the 20th century, is that overcrowding and sprawling of cities continue to this day unabated (Alexander, 2005). Neo-traditional communities have become suburban enclaves which perpetuate the pattern of low-rise, low-density development (Angotti, 2013). The impact of modernist planning has been felt on the rural landscape which has changed considerably. New towns have been created outside large cities with the view that there is no space in traditionally old cities. It is much easier to create a new settlement on rural land because it is unoccupied and there will not be much opposition (Hobson, 1999). These new towns were to be expected to have a collection of urban areas with green spaces between them. However, this has contributed to the suburbanization of the countryside, wherein rural areas are experiencing the same problems relating to settlement sprawl (Dovendas et al., 2007).

2.2.2. Collaborative planning

Collaborative planning, or an inclusive approach to planning, requires the participation of local communities in the design, development, and implementation of a project in their neighbourhood. This has become critical in building sustainable settlements (Cirolia, Gorgenes, Van Donk, Smit and Drimie, 2016). According to Healey (2006), collaborative design is based on communicative design theory and gained momentum in the early 1980s. Collaborative planning emerged in response to civil society protests against the costs of fragmentation, market and demographic pressures for smarter growth, and frustration with the lack of planning and coordination in transport, environment, economics and politics (Chapple, 2015).

Collaborative planning as an approach to planning theory also coincided with the period of globalisation, which brought with it technological changes and technological advancements (Innes and Booher, 2010). The result was that rational planning lost its prominence in the theoretical discourse as it was individualistic and narrow in its approach and relied solely on scientific inquiry or hierarchical organization (Healey, 2006). The rise of collaborative planning prompted a change of direction in planning theory, where proponents who subscribe to communicative planning theory have suggested that a reorientation towards interactive understandings of planning activity is necessary (Allmendinger and Tewdwr-Jones, 2002). There has been much emphasis in recent times placed on the recognition of the link between knowledge, action, and planning. Cities are now characterized as having diverse interest groups which require a form of collaboration when devising plans and engaging in face-to-face interaction rather than merely the preparation of abstract strategies and plans (Baycan-Levent, Batey, Button and Nijkamp 2008). According to Healey (2006), this is due to the knowledge that people share across the globe about the importance of global sustainability. On a global scale, this has given rise to global pressure groups to protect endangered species and prevent global pollution. At a local level, this promotes robust debate across different communication platforms in the media and amongst individuals (Healey, 2006).

According to Healey (2006: xiii),

Collaborative planning is about urban regions and their importance to social, economic and environmental policy and how political communities may organize to improve the quality of their places.

Collaborative planning theory is derived from a mixture of several broader sociological and economic theories. Collaborative planning is the result of two related but separate theoretical works, namely plantation theory and the communicative approach of institutional sociology and regional economic geography. Communicative design theory provides the main foundations and underlying principles of collaborative design in terms of developing proposed styles and approaches to design, while the institutional and spatial dimensions complete this through a normative framework (Allmendinger and Tewdwr-Jones, 2002). Collaborative planning and capacity building can be achieved through top-down and bottom-up policy alignment, which mediates negotiation and agreement based on policy goals and their meaningful actions (Parker and Doak, 2012).

Fainstein and DeFillipis (2015) argue that the success of collaborative planning requires the commitment of city-wide organizations due to the pluralism of this approach. These include

local political organizations that would ideally establish strategy forums and overall community growth plans. Both the majority and minority parties in the parliament would use such plans as one basis for evaluating individual legislative proposals. Other organizations include special interest groups, such as chambers of commerce, real estate agencies, labour organizations, civil rights and anti-civil rights groups, and anti-poverty councils, which often participated in community development plans but were restricted from submitting their plans; ad hoc protest associations that may arise against any proposed policy. Such organizations may try to develop alternative plans that would be implemented to better serve their interests (Fainstein and DeFillipis, 2015).

According to Healey (2006:29), collaborative design is based on seven elements, namely:

- (1) knowledge such as social construction and practical reasoning is as important as knowledge of science and technical expertise;
- (2) The development and transmission of knowledge and reasoning takes many forms, from rational systematic analysis to storytelling and expressive statements in words, images, or voice;
- (3) the process of an individual determining preferences is through communication;
- (4) people have different interests and expectations, and power relations have the potential to suppress and dominate not only through the distribution of material resources, but also through assumptions and practices considered;
- (5) public policies that are related to managing the coexistence of common spaces and aiming to be efficient, effective and accountable to all participants in the place, must use and spread ownership of the said choice and knowledge and rationale; competitive advantage not efforts to reach a common consensus name from and that such consensus-building practices can be used to develop and share lasting organizational ideas, with order the activities of different actors, and change organizational practices and knowledge. Important ways of building cultures;
- (6) design work is embedded in the context of social relations through its everyday practices and can challenge and change those relations by accessing those practices. and
- (7) context and practice are not separate but are socially the same.

Dalal-Clayton et al. (2003: 91) states that the benefits of bottom-up planning (collaborative planning) include –

Strengthening the community's trust in the management of land resources and strengthening local institutions to take additional responsibility; increasing public awareness of land use

issues and opportunities; enthusiasm for a broad-based owned plan; taking full advantage of and taking local knowledge and skills into account; full utilization of local knowledge and skills and careful consideration of local goals and local limits – whether they relate to natural resources or socio-economic issues; better knowledge fed into higher level planning. ; and, training senior administrators in the realities of the situation on the ground. Fainstein and DeFillipis (2015) link collaborative planning and the involvement of interest groups in planning and policy processes with effective democracy. These processes seek to achieve a balance between demands for increased concern for the unique requirements of local specialized interests and central bureaucratic control. The involvement of communities in the planning, development, and project implementation of their neighbourhoods has become critical for building sustainable settlements (Cirolia et al, 2016). Participatory decision-making is critical in that local people are seen as the experts in their situation and local skills should be used throughout the processes (Swanepoel, 2017).

There are various criticisms of cooperative planning which were developed in the second half of the 1990s. Allmendinger and Tewdwr-Jones (2002: 23) argues that collaborative planning was not developed as a theory by its proponents and must form the parameters within which debate and critique should take place. Some have argued that collaborative planning is not just a theory, but a worldview. Still, others have called collaborative planning a practical theory (Allmendinger and Tewdwr-Jones, 2002). Collaborative planning was largely shaped by social and communication theory.

According to Healey (2006), there are differences between social theorists and practitioners, but both are inspired and learn from the same context. This may be due to the apparent gap between social theory and practice. Theory assesses how practices are done and why they do not work in certain ways; it provides a critical distance that helps reveal unexamined assumptions and puts actions into perspective; it lays the foundation for an evaluation framework and creates insights that lead to new ideas and directions. Theory can help practitioners and researchers understand why cooperation is increasing at this time in history, what its social consequences are, whether it is fair, how it relates to power, and whether and how it is changing our institutions. Theoretical collaboration can advance social theory itself. The theory helps one to see how the cooperation is transformed into a cooperative rational outcome, the results of which can be considered both legitimate and informed (Innes and Booher, 2015). Collaborative planning tends to ignore the fundamental causes of systemic bias and relies on promoting institutions that promote open exchange and impartiality. The idea that 'peoples' opinions should be respectfully heard and that no particular group should be privileged in communication is an important normative argument.

But that is not enough, and it does not adequately address the classic problem of democracy. This includes the problems of ensuring adequate representation of all interests in a large, socially fragmented group; protection against demagoguery; more than merely audience participation; preventing economically or institutionally powerful interests from defining the agenda; and preserving minority rights (Fainstein, 2005).

According to Parker and Doak (2012), the problem with previous approaches to planning has been (a) that policy and plan formulation generally had no definitive measurement or evaluation of their goals; and (b) that actors or interested affected parties have their understandings and timeframes which would not necessarily align with the policy and plan objectives and organizational divisions through which the process takes place, where one party relies on the other to implement policy and deliver on outcomes.

In South Africa, collaborative planning is enshrined in the Constitution, which encourages the participation of communities and community groups in matters of local government. Lack of participation in planning and implementation leads to extended costs, political unrest, lack of progress, and tensions within the community (Swanepoel, 2017). There is sufficient evidence in the wave of so-called service delivery protests that have increased year after year in South Africa. This is linked to deep levels of community dissatisfaction with existing governance processes rather than the delivery of services where individuals and communities want to have an influence and impact on processes of planning and decision-making (Cirolia et al., 2016).

2.3. Conclusion

This chapter concludes with the conceptual and theoretical framework for this research study. The definition of concepts related to municipal planning have been discussed. The chapter provides an understanding of the different aspects of the concept, as well as showing how the concept applies within the context of dense rural settlements. The theoretical approaches as outlined have influenced planning policy over a period, and this has implications for municipal planning. The next chapter deals with municipal planning in different countries using the international and local experiences of developed and developing nations.

Chapter 3: International and Local Precedents on Municipal Planning

This chapter presents the international precedents of municipal planning in dense rural settlements and how it applies in the local context. The chapter will deal with the impact of municipal planning in the developed world and will make use two case studies, namely the Netherlands, the case of Amsterdam, and the United States of America, the case of New York. The impact of municipal planning in developing nations will also be discussed using the example of China, the case of Guangzhou, and Rwanda, the case of Kigali. The case studies that have been chosen aim to demonstrate that municipal planning has different levels of impact under different planning systems and in different environments. In the case of South Africa, this chapter will explore the history of municipal planning and will provide details on the factors that have contributed to its evolution and impact. Finally, in eThekweni municipality, the case of Mzinyathi will be presented and evaluated as the main case study of this research.

3.1. Introduction

The impact of municipal planning in developed and developing nations must be understood within the context of the modernist planning paradigm which has undergone significant changes over time. In the late eighteenth century, the comprehensive-rational planning model gained prominence in the developed world as it became evident that planning was needed to address the challenges that compounded European and American towns/cities. The concentrations of people and factories in major towns necessitated the formulation of policies and detailed plans for municipalities to manage the growing densities (Allmendinger et al., 2000). It is argued that the origins of this approach to planning came as a general critique of the 'industrial city', informed by the desire to re-create cities according to enlightened design principles (Fainstein, 2005). The problems emanating from the industrial city led many comprehensive-rational planning theorists to develop concepts based on idealism and utopia, which were critical in planning policy and legislation (Angotti, 2013). Several movements inspired planning during this era. The 'Garden City' inspired by Ebenezer Howard is one of the key ideas which became effective in western urban planning. The Garden City argued the case for a planned decentralization from the congested Victorian industrial city, by moving away to the countryside (Freestone, 2000). Another instrumental idea was David Burnham's 'City Beautiful', which draws parallels with the Garden City and suggests the inverse solution to urban problems by bringing the countryside to the city (Hall, 2014). Meller (2001) argues that these ideas were instrumental in highlighting the relationship between society and the environment. Angotti (2013: 31) explains that the success of these ideas is borne in modern architecture and design which:

sought to integrate and balance physical form and socio-economic functions in ways that created new opportunities for the production of buildings on a large scale, using industrialized building methods.

Criticisms of these concepts indicate that on the one hand they recommended low-density greenfield planning and tried to limit people to small towns isolated deep in the countryside, while on the other hand, they planned municipalities of perhaps hundreds of thousands, or even Millions of people (Hall, 2014). Hardy (2011) argues that the holistic-rational planning model was introduced as a top-down approach to decision-making, driven largely by the private sector and relying on technical experts including architects, engineers and urban planners. This meant that the political role of the state and government intervention was limited. The design process did not necessarily involve all the role players and focused more on the final product (Fainstein and Campbell, 2011). Madainpour (2015) highlights those concepts of the urban development process, which are considered politically naive technical solutions that reflect their protestant middle-class vision of urban life, aim to promote a collective public interest, which, as it turns out, mainly serves the needs of citizens and the business elite, and this turned out to be organizationally and politically impossible.

The mid-twentieth century witnessed a shift in the planning paradigm which adopted a more incremental approach to planning which was largely state-driven. The incremental planning model is underpinned by the idea of the state playing a more fundamental role in planning which saw little involvement either from the private developer, or from the ordinary citizens (Freestone, 2000). This approach became more recognized within local responses to the modern city which was characterized by massive immigration, large scale manufacturing, and the lack of controls over the built environment (Madanipour, 2015: 88). This period marked a phase where planning was institutionalized and used as a state intervention tool. The assumption was that planning serves the needs of all social groups represented by the state and that the bureaucratic organization/top-down approach was serving the common social interest (Hobson, 1999). Much of the focus on planning during this period was the emphasis on the separation of land uses by putting distance and buffers between incompatible land uses as means of enhancing safety and efficiency (Stiftel et al., 2006).

The passage of Laws passed during this period focused on the acquisition and development of land with minimal consideration of the amenities (Punter and Carmona, 2011). Unregulated land development leads to a host of urban problems including haphazard development, neighbourhood blight, automobile congestion, and environmental degradation (Boamah et al., 2012). The state guides local governments to implement development control initiatives such

as covering daylight-measuring techniques, having floor space indices to control density, land use segregation, functional circulation including road hierarchies and parking, and open planning including plot ratios, daylight, and sunlight priority (Punter and Carmona, 2011). Some of the ideas that were significant for this model include pedestrian town centres, mixed high-rise/low-rise housing schemes, and satellite or new town communities (Freestone, 2000). Madanipour (2015) argues that government actions should not focus on long-term planning or cross-firm coordination, but on greater reliance on existing political negotiation processes. Underlying these arguments is a political analogue to the economists' perfectly competitive market in which competition between formal and informal groups pursuing a range of divergent goals and interests is assumed to place all important issues on the public agenda, guarantee that no group dominates the public arena, maintain political stability, and improve individual's intellectual and deliberative skills. Municipal planning has moved into a new era that seeks to build sustainable cities. A separate movement called 'New Urbanism' emerged, promoting a revitalizing vision of high-density, transit- and pedestrian-friendly neighbourhoods as an antidote to sprawl. The movement prefers communicative/collaborative planning and mediated community discourse rather than creating a technically sound plan (Fainstein, 2005).

This has coincided with other trends which occurred during this era. Meller (2001: 2) succinctly outlines three significant influences in this regard, namely:

rapid development of a global multilateral economy pioneered by European economies which have resulted in a globalized world which views European cities as supreme; population migration from country to town has culminated in urbanisation, and space has been increasingly under pressure causing the defined city boundaries to be extended.

The deindustrialization of major cities in the developed nations, deregulation at the national level accompanied by re-regulation of the economy at an international level introduced a new approach to planning policies in response to economic trends and the decentralization of planning responsibilities to local governments (Newman and Thornley, 1996). Civil society has increasingly put pressure on the state to create more sustainable cities (Madanipour, 2015). The devolution of powers at the local level has meant that the democratic planning process has enabled experts to plan under the guidance of the public through elected representatives (Fainstein and Campbell, 2011). Urbanisation in developed nations has contributed to the transformation of suburban sprawl from the core city and has been largely due to the transition from mass transit to individual car ownership which contributed to much of the outward growth from the main core of cities (Tzaninis, 2016). This has led to the expansion of large cities culminating in the transformation of rural to urban. This transformation coincides with unprecedented trends in human history including global climate change, sea level rise,

deforestation, the accelerated extinction of species, food insecurity, and the alienation of human society from the natural world (Angotti, 2013).

3.2. Municipal planning in developed nations

3.2.1. The case of the Netherlands, Amsterdam

Amsterdam is the capital city of the Netherlands, which in 2012 housed just over 790 000 people, with a metro area population of approximately 2.2 million. The city is characterized by the canal system that intersects the city centre with about 1500 connecting bridges (McLaren and Agyeman, 2015). In the process of the city to regional expansion, it was discovered that the terrain in Amsterdam is unstable and muddy. Municipal planning has therefore played a critical role in the long history of the development of Amsterdam due to topographical circumstances. The municipal government has been required to carry out land preparation and to determine which areas should be developed through municipal plans (Fainstein, 2010). The processes of globalisation, immigration, and Europeanisation are intertwined and have contributed to the spatial changes in cities across the Netherlands. Amsterdam as a city has transformed on a regional scale which has occurred in an unorthodox manner with no specific or predetermined plan. Social and economic processes in housing, labour, transport, and various other markets have contributed a great deal to the cultural diversity and expansion of territorial boundaries of the city (Musterd and Salet, 2003). At the beginning of the 20th century, Amsterdam welcomed an influx of people which was mainly due to three factors. Firstly, thousands of inhabitants of the former Dutch colony of Surinam, after its independence in 1975, decided to move to the Netherlands because they now had dual citizenship. Secondly, the booming economy and the need for cheap labour led to people being recruited from different countries as guest workers, who eventually assumed permanent residency. This also coincided with the institutionalization of the European Union which encouraged open borders, and the city welcomed migrants from neighbouring countries. Lastly, the refugee population also contributed to the influx of people from then-communist countries as well as war-torn Third-world countries (Van Heelsum, 2007).

The impact of municipal planning in Amsterdam is embedded in the country's governance model. The Netherlands operates under a parliamentary government where the monarch is the head of state. The government consists of multiple political parties which built a coalition government in the case of Amsterdam. National parties are represented within the municipal government, which has 45 seats, with each seat occupied by a council member who is elected by residents of the city for a 4-year term (Gilderbloom, Hanka and Lasley, 2009). There are three layers of government, namely the national level, provincial level, and municipal level.

Firstly, the Netherlands is described as a decentralized unitary state meaning that each level has independent legislative and administrative powers under the overall supervision of the central state; it may formulate its own regulations which must however be consistent with those of a higher level. All levels are involved in planning. Secondly, the arrangements for municipalities to implement national legislation are referred to as *medebewind* (co-rule). There is vertical and horizontal coordination within the different spheres of government, with a system that revolves around an efficient consultation process. Lastly, there are two kinds of plans that operate at the municipal level: the *structuurplan* (structure plan) and the detailed *Bestemmingsplan* (destination plan). The *structuurplan* is not binding but provides context for the next level of planning. The *Bestemmingsplan* is the most fundamental structure in planning and is legally binding, which covers the whole of the municipal built-up area (Newman, 1996: 47). Roberts (1996) indicates that mapping of rural settlement types shows different aspects as the landscape is vastly complex. There are generally three core zones dominated by a mixture of villages (more than 8 farmsteads), hamlets (2 to 8 farmsteads), and single farmsteads.

Initially, the impetus of municipal planning has been on housing provision. Before the commencement of the *Woningwet* (Housing Law) of 1901, the city of Amsterdam had acquired as much land as it could, which it then leased out. The Act made it easier for municipalities to acquire undeveloped land. Municipalities with more than 10 000 inhabitants had more control over new development in the city as it was compulsory for them to produce development plans. Other measures included the expropriation of land with unsustainable housing and the acquisition of land for social housing; and building directly or through recognized associations (working-class cooperatives, low-cost housing societies) managing social housing (Panerai, Castex and DePaule, 2004). The problems associated with urban sprawl such as ribbon development along roads and streams have been controlled and managed through an increased focus of national planning legislation on the rural environment. The spatial planning system of the Netherlands is based on the *Wet op de Ruimtelijke Ordening* (Spatial Planning Act) of 1965. This Act instils decentralized planning and gives municipalities power to draw up land use plans which are routinely assessed by national and provincial governments (Van Gorp, Hoff and Renes, 2003). Recently, national planning policies on agricultural and ecological areas have adopted an approach which is widely used in Europe called 'rewilding'.

The concept is an optimal conservation strategy that advocates for the maintenance and restoration of biodiversity (Bulkens, Muzaini and Minca, 2016).

Against this background, municipal planning in Amsterdam has been largely influenced by national planning policy triumphs which put a strong emphasis on integration and coordination. The municipal government of Amsterdam has however faced issues such as traffic congestion, high birth rates, ageing 19th-century structures, and a housing backlog. Through municipal planning, the municipality has managed to achieve high environmental standards and prevention of the destruction of the countryside despite increasing population densities (Fainstein, 2005). Development plans followed modernist planning approaches which gave rise to social housing developments across the city, largely influenced by Ebenezer Howard's 'Garden city' approach. Accordingly, these were urban neighbourhoods with a rural character: low-rise housing, curved streets, and gardens. However, these developments contributed to the increased distance for people working in the city centre. The introduction of the bicycle and the tram, to a large extent, attempted to rectify the situation (Musterd and Salet, 2003). Some municipal planning decisions have been met with opposition through community mobilization and unrest. While the municipality believes that urban renewal plans are necessary to rejuvenate the city's decay, the community is content with the way things are. In turn, this has given rise to a resident movement and emerging institutions which on the one hand gave rise to slums but on the other created a deco-modified housing market that universalized accessibility while promoting resident engagement and facilitating a democratized planning system (Uitermark, 2009).

3.2.2. The case of New York, United States of America

New York City, a coastal city in the New York State, was founded on the island of Manhattan, lying between two major rivers that provided access to the vast interior of North America. It is strategically located on the east coast of the United States of America (USA), which has enabled it to become a major urban development centre that supports international trade and business (Moore, Allaby and Day, 2006). The metropolitan area is made up of five counties, also known as Boroughs and these are Staten Island, the Bronx, Brooklyn, Queens, as well as Manhattan. In 2010 there were 8,186,443 residents of New York City, according to the US Census Bureau (Grove, Locke, and O'Neil-Dunne, 2014). New York City's agglomeration and territorial influence have influenced land use patterns, extending sprawling developments from the city's outer boroughs connecting regional development north and westward. Many cities and towns in New York Upstate are characterized by a wide variety of land uses such as urban, suburban, and rural landscapes (Balsas, 2016).

The New York City governance and land use planning system operates within a political system which has three tiers, namely federal, state and local governments, with planning law defined by the states but implemented by municipalities. There is a level of heterogeneity and

coordination between the different tiers of government in terms of policy approaches and priorities New York City has long been the major gateway for the nation's new arrivals and throughout its history immigration has been a fundamental feature in its population, institutions, and identity (Foner, Rath, Duyvendak and Van Reekum, 2014).

Municipal planning in New York City has faced several problems of the modern city which are interrelated with public health – for example, unpaved or poorly paved streets versus an inefficient or non-existent collection of domestic waste. This is exacerbated by rapid urbanization coupled with massive immigration and the rise of industrial centres. To this end, health problems claimed thousands of lives throughout the 20th century. This has led to progressive era reforms aimed at regulating hygiene in water, food, air, and the environment through the creation of urban parks (Sze, 2006). Much of the contemporary planning in New York City has been largely influenced by the Regional Planning Association of America (RPAA) and the New Deal of the 20th century. The RPAA believed that new technologies such as electric power, telephone, and vehicle ownership were liberating agents which allowed homes and workplaces to break free from the city due to overcrowding. This led to the sprawling of residential settlements and the decentralization of industry to small communities and rural areas. The New Deal was premised on the principle of providing land for housing, as well as money and tools, and with a green belt on the periphery. Both the RPAA and New Deal advocated bringing an urban quality of life to the countryside (Hall, 2014)

The role of municipal planning in New York City's development to play an integral part in the global economy was critical. The focus of municipal planning has been on segregating land uses through zoning, regulating noxious industries, and creating single-purpose districts with the aim of enhancing safety and efficiency by putting distance and buffers between activities that conflicted with each other (Stiftel et al., 2006). The zoning of uses is fundamental to municipal planning in New York City and even residential zones such as low-density, medium-density, and high-density housing are separated from one another. In search of security and isolation from traffic congestion in the city centre, gated communities have spread out to the suburbs on the periphery. This has created middle to upper-middle-class territories which are self-sustaining (Williams, 2013). It also contributed indirectly to ethnic segregation. Immigration and migration of African Americans from poor rural areas have contributed to overcrowding in New York City, which has led to urban pressures. Racial tensions and high rates of crime have seen the white middle class leaving New York City (Dunford and Holland, 2002).

The focus of municipal planning has shifted from separating land uses to promoting mixed land uses in order to create vitality and sustainability. The advantages of mixed-use include creating an active urban environment that promotes optimal use of infrastructure; households have a greater range of housing options; mixed housing increases affordability and equity by reducing premiums for exclusive, segregated areas; providing housing close to commercial and civic activities, reducing car dependence of the elderly and children; allowing people to live near their jobs and shops in order to reduce car ownership and vehicle mileage, increase pedestrian and transit use and mitigate the environmental impacts of vehicle ownership (Stiftel et al., 2006). New York's municipal plans have also been influenced by international mandates, such as the United Nations Framework Convention on Climate Change (1992), which adopt adaptive approaches. The goal is to reduce greenhouse gases that contribute to climate change by limiting urban sprawl and dependence on private cars (Hamin and Gurran, 2015).

3.3. Municipal planning in developing nations

3.3.1. The case of Guangzhou, China

Guangzhou is the third largest metropolitan city in mainland China. It is the capital of Guangdong province and the most densely populated city, located in the middle of the Pearl River Delta (one of the most important manufacturing sites in the world and the economic heart of China). According to the 2010 census, Guangzhou had a population of more than 12 million, of which a third are rural immigrants without *hukou* (registered residency) status (Qian, 2017). Guangzhou has experienced significant changes in urban planning, mainly due to changes in political and economic systems. Before the formation of the People's Republic of China in 1949, Guangzhou was under colonial rule under various administrations. It is said that during colonial rule, the local government of Guangzhou had independent powers from the central government of the state, which caused the rapid economic development of the city. The decision of the local government to open-up to foreign trade meant that the industrialization of Guangzhou and the importance of the city in the global market strengthened (Bracken, 2012).

The period between 1949 and 1978 saw the powers and functions of local government being transferred to the central government. Municipal planning was state-led and mainly assumed a top-down approach with national planning policy being driven by socialist ideology to accelerate growth for the broader population. Guangzhou was positioned as an industrial base in South China and was converted from being a consumer city to a producer city. In terms of rural planning, Guangzhou utilized ideas from the Soviet Union, and the municipality

developed its planning regulations based on socialist ideology (Nas, 2005). From the boundaries of the natural villages, an administrative village system was developed, which functioned according to the model of the collective farm and rural life adopted from the Soviet Union. This system was influenced by traditional and cultural values, which meant that all production assets, including land, draft animals, tools and labour, were collectivized (Zhang and Wang, 2019). Each household had the right to acquire a portion of residential land for self-help housing from the collective organizations but could not sell it or rent it out. It was the local government that was permitted to acquire land for urban expansion and compensated the collective organizations (Lin and De Meuler, 2011).

As a response to rapid urbanization from rural migrants into Guangzhou, the central government introduced the *hukou* household registration system in the mid-1950s to control the flow of population between villages and cities. The negative effect of this system was segregation between urban and rural, with migrants being labelled as the 'floating population' which was associated with criminality (Wang, 2016). The Cultural Revolution which followed thereafter coincided with de-urbanization policies that led to forced mass resettlement and strict state control of access to jobs, housing and food. This prompted reforms that have seen Guangzhou opening to foreign and international trade.

Since 1978, the urban population of Guangzhou has been increasing due to the liberalization of migration policies, increasing enforcement problems with migration restrictions, and the expansion of the tertiary sector (Hugentobler, 2006). The post-reform period has seen major spatial changes in Guangzhou. On the one hand, the city has seen the development and location of two central business districts (CBDs), the expansion of the old city boundary through renewals and gentrifications, and the construction of urban public spaces to add to the beauty and aesthetics. On the other hand, the relaxation of the *hukou*, coupled with globalization, has seen a surge in rural-to-urban migrants employed in small-sized manufacturing enterprises and informal services which has led to urban villages within the city (Qian, 2016).

In the process of positioning Guangzhou as a modern city, the top-down and modernist planning approach has not changed significantly, with the municipality faced with newer challenges such as traffic congestion and backlogs in infrastructure and housing. In addition, unauthorized building structures have emerged along existing roads and encroached on the natural green isolation belt. In the age of sustainability, the primary objective has been to satisfy the needs of rapid economic development at the expense of developing long-term plans for the city (Nas, 2005). Wong, Han and Zhan (2015) argue that municipal planning in

Guangzhou faces a dilemma. Firstly, rural-urban migration has created spatial disparities which are complex for municipal planners, and that, if addressed, might lead to migrant workers being granted full citizen rights which would entitle them to equal social welfare benefits as permanent residents. This could have dire financial implications for the municipality. This explains the predominant dormitories and simply equipped 'urban villages' on the periphery of the city. Secondly, the potential for slum formation or squatter camps is devastating for municipal plans and central government ambitions of a modernist image.

According to Yusuf and Saich (2008), it was the legislative and political reforms that changed the role of local government in managing the economy and taxation, providing public goods and services, and that were responsible for the strength and structure of administrative units. The Constitution of the People's Republic of China provides a framework for planning in the various branches of government. In this regard, the Constitution governs several important legal acts. The Law on Urban Planning of the People's Republic of China (1989) sets the general principles for governing municipal planning in cities throughout the country. The Guangzhou Urban Planning Regulation (1996) focuses on more detailed issues, such as regulations that guide the preparation of practical plans and planning management. The Urban Planning Law of the People's Republic of China (1989) encourages the preparation of statutory plans. These statutory plans are called Town Plans and are divided into two parts, i.e., (1) General Plan and (2) Detailed Plan. In large and medium-sized cities, the urban district plan applies as the intermediate between the urban master plan and the detailed urban plan (Li, Yeung and Seabrooke, 2005). The devolution of powers to municipalities has led to greater authority in collecting income and providing social services. The Budget Law (1995) has allowed municipalities to plan revenue-generating measures such as property or vehicle taxes (Yusuf and Saich, 2008: 183). More recently, the Urban and Rural Planning Law of 2008 coincided with the creation of the Ministry of Mineral Resources (MLR), which oversees land conservation. This Act extended planning powers to rural areas by formalizing efforts to integrate urban and rural planning. The law also expanded the basic system of general planning into five types: the urban system plan, the urban plan (including master and detailed plans), the town plan, the township plan, and the village plan (Wu, 2015).

The reforms have both positive and negative effects on the impact of municipal planning in Guangzhou. In the first instance, the city of Guangzhou has developed several plans aligned with the reforms but the most noticeable one is the Guangzhou Urban Master Plan for 1996–2010. This plan broadly covers critical spatial aspects which are at the centre of municipal planning, including agricultural areas, open spaces, tourism areas with rural characteristics, environmental protection, and sewage treatment (Li, 2005). Wu (2015) argues that the

Planning Act is a milestone in Chinese planning history in that it strengthened the role of municipal planning particularly in economic development. The relevant department within the municipality gained more authority in terms of the approval of state and capital projects. It can be argued that the reforms seek to deal with the inequality of service provision by improving the livelihoods of people living in the countryside and reducing urbanization in large cities like Guangzhou (Yusuf and Saich, 2008). However, the impact of municipal plans in Guangzhou has been hampered by the mushrooming of villages in the city. Nas (2005) indicates that 138 villages have emerged in the city, causing several problems associated with high density, low land-use rate, omnipresent illegal buildings; poor building quality; increased migrant populations; incomplete public facilities; and management systems not developed according to modern urban standards. This has created a dual separation of urban and rural areas and a dual type of ownership, i.e., state ownership of land and collective land ownership in rural areas. The problem for the municipality of Guangzhou is that the demand for land in rural areas has spiked in recent years and therefore it will be expensive, which makes efforts to implement its plans difficult. Lin and De Meulder (2011) argue that bottom-up planning processes are emerging in remote rural areas of Guangzhou, which show the importance of the roles and interrelationships of three key stakeholders (the state, the market, and civil society)

3.3.2. The case of Kigali, Rwanda

Kigali is a province-level city and administrative seat of the Republic of Rwanda. The city is one of five provinces but densely populated with an estimated area of 730 km² comprising three districts and a total of 35 sectors -Gasabo (15), Kicukiro (10), and Nyarugenge (10)—which historically had control of significant areas of local governance (Manirakiza, 2014). The city is built 1600 m above sea level on undulating and uneven terrain. Natural features which form the boundary of the city include the Nyabarongo River along the western and southern edge and some parts of Lake Muhazi on the north-eastern edge. The central business district (CBD) is situated on the Nyarugenge ridge while the administrative and judiciary institutions are mostly located along the Kacyiru ridge (Rwanda Environment Management Authority, 2013). By the year 2012, Rwanda's population density had reached approximately 444 persons per square kilometre. The estimated population living in rural areas was 82% while only 18% of the total population represents urban areas, with approximately 8% of that living in Kigali city (Oshodi, 2012).

Municipal planning in Kigali city has been informed by population density changes which can be attributed to major events in the recent history of the country. Firstly, the civil war which began around 1990 in Rwanda's rural north, saw about two hundred thousand migrants moving to the city of Kigali for refuge. This caused a population increase in Kigali which on the

one hand overwhelmed the city's efforts in regard to infrastructure and housing provision, and on the other was detrimental to the agricultural economy of the country. Secondly, the genocide which occurred in 1994 saw between 800 thousand and one million people of Tutsi descent being massacred alongside Hutu dissenters. However, after the genocide, the city of Kigali experienced land disputes and fresh violence which saw hundreds of thousands of migrants into the city (Shearer, Isenhour, McDonogh and Checker, 2015). By 2009, the city of Kigali had reached a million inhabitants with an average density of 2150 inhabitants per square kilometre. It is estimated that the yearly growth of the built area is 6% which can be translated to 28 square kilometres per year (Ortiz, 2012).

In the post-genocide era, the impact of municipal planning in Kigali is to be understood within the context of the city's adoption of a modernist planning approach which has been effective in transforming the outlook of the city, with the introduction of skyscrapers and massive buildings in the CBD. However, it can be argued that the top-down developmental approach aimed at social re-engineering for rural areas has not yielded the same results (Ansom, 2012). Urbanization results in urban poverty, characterized by commercialization (dependence on a cash economy), overcrowded living conditions (slums), unfavourable environmental conditions (due to the density and dangerous location of settlements and exposure to multiple pollutants), social fragmentation (Scarcity), social protection mechanisms of communities and households compared to rural areas, crime and violence, traffic accidents and natural disasters (Akinyemi, 2012).

Passing of laws and policies at the national level has strengthened the role of municipal planning in Kigali city and consolidated efforts to address challenges emanating from urbanization. At an institutional level, Kigali city derives its powers and functions from the Decentralisation Policy of 2000 which establishes two layers of government – central and local. The City of Kigali is recognized as one of the administrative entities with the others being the central government, province (Intara), district (Akagari), and village (Umudugudu). The powers and functions of the central government include formulating policies, regulating, and supporting local governments through capacity building, financing, monitoring, and evaluation.

The local government is tasked with the role of implementing government policies and service delivery and championing active public participation and accountability at the local level (Republic of Rwanda, 2015).

Vision 2020 and the Kigali Conceptual Masterplan are two important policy directives at the national and local levels which guide municipal planning. Vision 2020 is an overarching

document that translates the main developments, policies, and regulations that needed to be elaborated and implemented in development spheres from 2002 to 2020. This means all urban development-related policies must align with this vision to ensure the sustainability of those plans. This includes policies that relate to housing, infrastructure, poverty reduction, land use management, and budgeting (Baffoe et al., 2020). The Kigali Conceptual Master Plan is seen as an important instrument for urban development and addressing urbanization challenges in the city. The main aim of the plan is to bring about the renewal and modernization of Kigali, which requires infrastructure improvement for sustainable urban settlements, accommodating informal settlements through retrofitting of infrastructure, and providing appropriate and affordable technologies. The plan also recognizes the need to protect nature through sustainable cultivation (Manirakiza, 2014). Some of the broad initiatives to create green spaces through the Forest Policy of 2004 include (a) the creation of mandatory boulevards in all urban areas; (b) the inclusion of tree plantations in urban planning; (c) the provision of technical support to municipal institutions in the field of trees and breeding; and (d) involvement of private service providers in the management of urban forests for recreation and leisure purposes.

Apart from the Master Plan, rural areas are managed through national policy that clusters settlements in imidugudu. The policy introduced a system of resettlement which assisted Kigali city to deal with overcrowding and was regarded as the solution to managing rural population pressures and previously poor land management. In most cases, imidugudu are built on land owned by the state or local authorities, but private land can also be selected for the imidugudu settlements (Legal Aid Forum, 2015). Urban upgrading and low-cost housing initiatives were widely ignored, and forced evictions were used to create space for new developments or private investment. However, there is much criticism that the policy has contributed to much of the spatial inequality between urban and rural, as well as to tenure insecurity. Several underlying factors have contributed to this. Firstly, rural development has not entirely been a technical exercise because it is embedded within the elite-peasant relationship of the country (Ilberg, 2008). The elite-peasant relationship is deep-rooted within various layers of identity which has mainly focused on ethnicity, but a closer view reveals other interrelated factors such as background, next of kin, social class, occupation, and gender (Ansom, 2009). Secondly, the process of reconciliation (*Gacaca*) for the victims and survivors of the genocide promoted a culture of public participation but has been ineffective in bringing about the much-needed spatial justice for people living in rural areas (Ingelaere, 2010). Thirdly, while *imidugudu* was initially seen as an attempt to resolve the growing backlog of housing, the system was later used as a long-term economic development programme. The result was hundreds of thousands of people who were forcefully removed from their homes with no compensation for

new housing developments away from the core of the city. This also meant that the international community withdrew their funding for the habitat policy due to human rights violations (Wyss, 2006).

Some of these settlements have been relocated or established in hazardous areas that are prone to disaster risks. According to Nikuze, Sliuzas, Flacke and Van Maarseveen (2019), reinvestment, which is based on the conviction of marking the image of the city to attract more investors and increase economic growth opportunities, is often expressed through several interrelated phenomena: landlessness, homelessness, unemployment, access to shared resources, marginalization, food insecurity, morbidity and mortality, social exclusion and insecurity. The city of Kigali's modernist approach to municipal planning is evidence of a city that presented an ambitious vision at the cost of marginalizing a large urban population, leading to great inequality amongst rural residents.

3.4. Municipal planning in South Africa

3.4.1. Development of municipal planning in South Africa

Municipal planning in South Africa evolved from early urban planning concepts of 20th-century European and North American cities. However, the application of these planning concepts in South Africa was a unique historical experience that did not achieve the intended purpose that it did in the case of European and North American cities. In 1910, the Union of South Africa was formed, signalling the beginning of land dispossession of the black African majority and the division of land according to race. Black African people as a source of cheap labour were allocated small-sized areas known as 'reserves'. In areas outside the reserves such as farms, black Africans mainly occupied the land as tenants or squatters (Smith, 2003). Before 1994, multiple laws and policies were enacted to separate urban and rural areas as well as to regulate the movement of people between these areas based on race. The planning system was characterized by a top-down approach, a hierarchical system that restricted cooperation, integration, and coordination (Van der Walt et al., 2014).

The Native Land Act of 1913 is one notable piece of legislation established before the Apartheid era which laid the foundation for racial segregation through the uneven distribution of land in South Africa. This Act restricted black South Africans to a mere seven percent of the land they had previously owned. The Act played a fundamental role in the impoverishment of black South Africans through land dispossession and socio-economic injustice (Modise and Mtshiselwa, 2013: 6). The Bantu Authorities Act (Act 68 of 1951), reinforced the idea of separate development, known as grand Apartheid. Settlements in the former homelands were

planned according to three categories, namely (1) agricultural settlements of between twenty and a thousand houses in rural areas; (2) denser settlements where black Africans were resettled as family units on one-fifth of a hectare; and (3) black towns (Donaldson and Van der Merwe, 2000). The separation of land uses, especially residential land, which was codified according to race, was reinforced by the Group Areas Act in 1950. As a planning tool, segregation of land uses in European and American cities was most effective in promoting complementary uses offering opportunities for higher density living, proximity between home and work, land use mix, and social integration. However, in South Africa, the inverse was achieved as municipal planning created fragmented and separate urban areas based on racial segregation (Pillay, 2008). In some respects, municipal planning was relatively effective in terms of influx control, due to the low urbanization rate of the mid-20th century. The urban population was represented by a homogenous superior working class and lower middle class, with low pressure on services, amenities, and housing. Aspirations were channelled to rural areas due to low ambition for social mobility. By the early 1980s, this situation had changed drastically with many urban areas experiencing the stress of overcrowding, with the aspirant lower middle class migrating to the city (Schlemmer, 1985).

Master planning was the mainstay of municipal planning during Apartheid. Municipal planning adopted an autocratic style which fitted well in creating the Apartheid city that perpetuated racial and spatial segregation. Black reserves would become the homelands or Bantustans administered by tribal authorities. While the Apartheid planning system produced master plans as a tool to promote orderly urban development which dictated industrial location and population distribution, the underlying thought was on a racial basis (Baycan-Levent, Batey, Button and Nijkamp 2008). The result of the Apartheid planning system was a fragmented spatial pattern that was characterized by racial, socio-economic and land-use segregation, unsustainable human settlements far from the workplace, and poor quality environments. The difficulties of implementing contemporary planning approaches lay in the incapability of South African cities to address the broader aspects of urban and rural development, and the growing population needs in terms of social and economic development (Coetzee, 2012). The current city structure has a density profile that increases the further one moves away from the city centre. While in many cities around the world this may be standard practice, in South Africa, it relates to past spatial planning practices and subsequent difficulties in addressing past imbalances (Turok, 2011). The legacy of Apartheid spatial planning practices was deliberately created cities, towns, and homelands fragmented on racial and ethnic lines.

The legacy of Apartheid planning has also influenced current spatial patterns, which have increased the number of settlements on the fringes of cities and usually in rural areas

(Musakwa, Tshesane, and Kangethe: 2016). This further complicated the distinction between urban and rural life in South Africa. Densely populated settlements – resulting from resettlement of African-owned land in rural areas, the conversion of commercial estates in designated areas to white occupation and planned rural improvements – are limited to an agricultural base where households depend on a combination of commuting income, remittances, pensions and other sources (Todes et al., 2010).

Some commentators argue that there is a large disparity between the location of the population and jobs, as the predominantly black population living in the former Bantustans is located far from formal economic activity. In metropolitan areas, where most jobs are created, spatial economic inequality can be defined in three categories: (1) the ‘inner core’ of the metropolis, large secondary cities, some mining towns, tourist zones and selected parts of Bantustan; (2) the ‘outer core’ of metropolitan cities with a service function, medium-sized mining towns, low-lying areas associated with inner core areas and large population clusters around domestic capitals; and (3) ‘outer’ areas with even less economic activity, smaller towns, other Bantustan settlements and scattered rural communities (Todes and Turok, 2017). Many South African cities continue to reflect a legacy of segregated neighbourhoods, including residential areas and urban mobility patterns that continue to reflect racial segregation. South African cities have a higher percentage of urbanized residents compared to other African countries due to their economic status on the continent. However, as elsewhere on the continent, urbanization is associated with massive unplanned suburban growth and informal settlements on the fringes of the urban centre (Goebel, 2007).

3.4.2. Transformation of municipal planning in South Africa

The critique of the Apartheid city in the early 1990s led to the transformation of municipal planning which coincided with the devolution of powers in government. The advent of democracy in South Africa ushered in legislative and policy reforms which ensured integration through community participation and democratic processes. It also coincided with the ascendancy of globalization and economic liberalism as well as an increasing role of the state in promoting development (Mhone and Edigheji, 2004). Three factors influence municipal planning in South Africa, namely (1) local government restructuring; (2) establishment of planning systems, structures and procedures for spatial planning and land use management decisions; (3) planning policy framework to guide municipal planning.

3.4.2.1. Local government restructuring

Municipal planning in South Africa operates within a legal framework where the Constitution of the Republic (RSA, 1996) is the supreme law in the country, superseding all other legislations. It sets out three distinct spheres of government namely national, provincial and local. Planning is regarded as a core function of local government (Parliament of the Republic of South Africa, 1994). The Constitution ensures that local government has a developmental agenda, where municipalities must promote socio-economic development and cooperative governance (Reddy and De Vries, 2015). De Villiers (2008) highlights that Chapter 7 of the Constitution sets out the preconditions for the new system of local government. According to Section 151 of the Constitution, the local sphere of government consists of municipalities that have legislative and executive authority vested in their municipal councils. National and provincial legislation guides the programmes at the municipal level, but both spheres of government may not compromise or impede a municipality's ability or right to exercise its powers to perform its functions. The objects of local government as set out in Section 152 include: that democratic and accountable government be provided for local communities; that services be provided in a sustainable manner; that social and economic development be promoted; that a safe and healthy environment be promoted; and that the involvement of communities and community organizations be encouraged in all matters concerning local government. Municipal planning is a core function of local government in terms of Section 156 (1) read together with Part B of Schedule 4 of the Constitution (Van der Walt et al., 2014). Nyalunga (2006) argues that this legislative framework places much emphasis on cooperative governance between the three spheres of government including multiple sectors of the public, through bottom-up planning. Table 1 outlines the powers and functions of local government which include municipal planning.

Municipal planning in South Africa operates within a legal framework where the Constitution of the Republic (1996) is the supreme law of the land, superseding all other laws. It defines three different spheres of government namely national, provincial and local. Planning is seen as a core function of local government (Parliament of the Republic of South Africa, 1994). The Constitution ensures that local government has a developmental mandate where municipalities must promote socio-economic development and cooperative governance (Reddy and De Vries, 2015). De Villiers (2008) emphasizes that Chapter 7 of the Constitution sets the conditions for a new system of autonomy. According to Section 151 of the Constitution, a local government region consists of local government units that have legislative and executive powers belonging to the local authority. National and provincial legislation governs programmes at the municipal level, but neither jurisdiction can threaten or impede a municipality's ability or right to use its powers to fulfil its obligations. The objectives of local government according to Section 152 are: democratic and responsible administration of local

communities; services must be provided in a sustainable manner; social and economic development; promoting a safe and healthy environment and promoting the participation of communities and community organizations in all matters concerning local government. Municipal planning is the main task of municipal administration as read in Article 156 (1) of the Constitution together with Part B of the Constitution (Van der Walt et al., 2014). Nyalunga (2006) argues that this legislative framework places great emphasis on cooperation between the three spheres of government, including multiple public sectors through top-down planning. Table 1 shows the powers and responsibilities of the local government in relation to municipal planning.

Table 1: Part B of Schedule 4 of the Constitution (Republic of South Africa, 1996)

Part B of Schedule 4 relates to Local Government matters
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Air pollution
Building regulations
Child care facilities
Municipal public transport
Electricity and gas reticulation
Firefighting services
Local tourism
Municipal airports
Municipal planning
Municipal health services
Municipal public works only in respect of the needs of municipalities in the discharge of their responsibilities to administer specific functions assigned to them in terms of the Constitution or other law
Pontoons, ferries, jetties, piers, and harbours, excluding the regulation of international and national shipping
Storm-water management systems in built-up areas
Trading regulations
Water and sanitation services are limited to potable water supply systems and domestic waste-water sewerage disposal systems

The 1998 White Paper on Local Government is the policy document that translates the constitutional provisions for local government to be developmental. It also laid the foundation for the establishment of local government pieces of legislation (De Visser, 2009). Developmental local government is characterized by four developmental approaches: integrated development planning, service delivery, local economic development, and democratization. Developmental local government means that municipalities are to exercise their powers and functions in a way that will maximize their impact on social development and economic growth, align with the roles and responsibilities of the members of the public and each sphere of government, and involve community members in planning and decision-making through democratic processes (Cashdan, 2002). The White Paper on Local Government (RSA, 1998a: 33) describes the different types of settlement in South Africa, including urban core, urban fringe, small towns, dense rural settlements, betterment settlements, informal settlements, villages, agri-villages and dispersed or scattered.

Pieterse (2007: 5) lists the key legislation affecting local government in South Africa which gives effect to the constitutional directives on local government and the policy framework reflected in the White Paper on Local Government (RSA, 1998a):

1. Local Government: Municipal Demarcation Act, 1998 (Act 27 of 1998), which provided for the establishment of the Municipal Demarcation Board, tasked with the determination of municipal boundaries in a manner that would facilitate integrated development, effective service delivery, and participatory local democracy.
2. Local Government: Municipal Structures Act, 1998 (Act 117 of 1998, with three subsequent amendments in 2000, 2002, and 2003), which allowed for the establishment of different types and categories of municipalities in different areas (i.e., single-tier municipalities for metropolitan areas and two-tier municipalities outside metropolitan areas), defined two options for executive systems in metropolitan areas (mayoral executive system or collective executive system), and allowed for the establishment of ward committees to facilitate community participation in council matters.
3. Municipal Electoral Act, 2000 (Act 27 of 2000), which regulated all aspects of local government elections, including the requirements for candidates for parties and congregations at elections, voter training and election observers, voting and the counting of votes.
4. Local Government: Municipal Systems Act, 2000 (Act 32 of 2000, with an amendment in 2003), which established a framework for local government operations with guidelines for development planning and service delivery (including a partnership approach), Human Resource issues and performance management systems.
5. Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003), which created a framework for local government borrowing and defined short and long-term borrowing conditions.
6. Local Government: Property Rates Act, 2004 (Act 6 of 2004), which established a uniform property rating system across South Africa.

7. Intergovernmental Relations Act, 2005, which specifies forums and the scope of such forums for coordination between the three jurisdictions.

In addition to the above, three pieces of legislation are further discussed in detail that translate the White Paper and are therefore important in municipal planning: Local Government: the Municipal Demarcation Act (27 of 1998); the Municipal Structures Act (117 of 1998), and the Municipal Systems Act (32 of 2000) (RSA, 2000).

Local Government: Municipal Demarcation Act (27 of 1998): Municipal boundaries are delimited through a process carried out by the Independent Municipal Demarcation Board (MDB) which was established under the Local Government: Municipal Demarcation Act of 1998 (Van der Walt et al., 2014). Lehman (2007) emphasizes that the demarcation process has the following objectives: (1) to integrate rural areas into the administrative structure to reduce service overload in rural areas. This would mean the reorganization of local communities into democratically elected municipalities, and (2) to reduce the number of municipalities in order to increase their economic viability and administrative and financial efficiency. This would connect areas with functional connectivity and areas without, promoting optimal use of resources and sharing of services. Parish boundaries are limited within the provisions of the constitution, which require the creation of a wall-to-wall inclusive municipal system to unite all previously disadvantaged areas, including traditional rural areas (Kuusi, 2009). In December 2000, a municipal boundary process was approved for new local government structures, that expanded the jurisdiction of local governments in terms of geographic area and population density (Nel and Binns, 2003).

Local Government: Municipal Structures Act (117 of 1998): The new local government structure is established in terms of the Local Government: Municipal Structures Act of 1998. The local government structure consists of three categories of municipalities, namely Categories A, B, and C. Table 2 illustrates the municipal categories and description of each category.

Table 2: Categories of municipalities (Nyalunga, 2006: 4)

Municipal categories	Description of category
Category A:	Metropolitan Council: A municipality that has exclusive municipal executive and legislative authority in its area.

Category B:	Local Council: A municipality that shares municipal executive and legislative authority in its area with a category C municipality within whose area it falls.
Category C:	District Council: A municipality that has municipal executive and legislative authority in an area that includes more than one municipality.

The powers and functions assigned to municipalities in terms of Parts 4 and 5 of the Constitution and fiscal management are divided between Category B and C (local and district) municipalities. However, Category A (Metropolitan) municipalities have executive authority in their areas of jurisdiction.

Local Government: Municipal Systems Act (Act 32 of 2000) (RSA, 2000): the Municipal Systems Act 32 of 2000 reflects the developmental agenda contained in the White Paper on Local Government, which provides municipalities with a shared vision through a participatory process that involves citizens in planning and decision-making (Cashdan, 2002). Chapter 4 of the Act obliges municipalities to develop a municipal administration culture that complements formal representative administration. It is a requirement that local municipalities be encouraged to participate in the affairs of the municipality. Community participation can be achieved through political structures and mechanisms such as izimbizo (informal meetings with councillors where questions can be asked on all local government matters), public meetings, consultation sessions and information sessions with the local community (De Villiers, 2008). Chapter 5 of the Act requires each municipality to prepare a 5-year comprehensive integrated development plan (IDP) under its jurisdiction, which provides details of proposed projects and initiatives. The main objective of the plan is to ensure, among other things, that current service delivery challenges are addressed by looking at meaningful modern systems and joint venture approaches (Phago, 2009). With the help of integrated development planning, which requires the participation of all relevant interest groups, the municipality can identify the main development priorities; formulate a clear vision, mission and values; formulate appropriate strategies; develop an appropriate organizational structure and systems to implement the vision and mission; and align resources with development priorities. Integrated development planning is thus a key area of municipal planning (South African Local Government Association, 2001) The IDP also comprises other different aspects of municipal

planning which include spatial planning and land use management. Section 26 of the Municipal Systems Act (MSA) outlines the following as the core components of the IDP:

- (a) the municipal council's vision for the long-term development of the municipality with special emphasis on the municipality's most critical development and internal transformation needs;
- (b) an assessment of the existing level of development in the municipality, which must include an identification of communities that do not have access to basic municipal services;
- (c) the council's development priorities and objectives for its elected term, including its local economic development aims and its internal transformation needs;
- (d) the council's development strategies which must be aligned with any national or provincial sectoral plans and planning requirements binding on the municipality in terms of legislation;
- (e) a spatial development framework that must include the provision of basic guidelines for a land use management system for the municipality;
- (f) the council's operational strategies;
- (g) applicable disaster management plans;
- (h) a financial plan, which must include a budget projection for at least the next three years; and the key performance indicators and performance targets determined in terms of section 41 of the Act.

The introduction of integrated development plans entrenched spatial planning in urban areas at the expense of rural areas through the Local Government: Municipal Planning and Performance Management Regulations in 2001 (Republic of South Africa. Department of Provincial and Local Government, 2001). In line with the regulations, IDPs of municipalities must include a spatial development framework (SDF), and they provide broad guidelines of what such a framework must contain (Du Plessis, 2014: 6). While integrated development planning is regarded as a local development planning tool that helps local municipalities to develop a comprehensive and long-term plan to advance development and services in their areas of jurisdiction, they have not adequately served their developmental intentions. Madzivhandila and Asha (2012) highlight three main challenges to the implementation of the IDP and the following issues to substantiate this position: firstly, the absence of meaningful participation by communities and local stakeholders has undermined the legitimacy of IDPs in the sense that they may not be true reflections of community needs and priorities; secondly, poor interdepartmental cooperation and lack of horizontal integration have hampered effective local development planning and thereby contributed to crippling service delivery; and thirdly,

a serious institutional weakness in terms of a shortage of the right skills and capacity as well as drawbacks in financial management has undermined the effective implementation of IDPs (Madzivhandila and Asha, 2012).

3.4.2.2. Systems and procedures of municipal planning

South Africa's planning system has long had several planning laws governing municipal planning, which originated largely from Apartheid planning. Before the entry into force of the Spatial Planning and Land Use Act Management (Act 16 of 2013), there was no single law governing spatial planning and land use systems and procedures. South Africa's planning system adopts a typical modernist European planning model that reflects the hierarchical structure of national, provincial, and local plans. This approach is driven by the view that local politics is less important than national and provincial politics. The assumption is that the national government is the first custodian of the public interest in spatial planning and land use management (Dlamini and Musakwa, 2014). Christopher Pycroft (1998) argues that development planning was hotly contested between different spheres of government, creating complex administrative and political structures. Although the Constitution provides for intergovernmental relations between the three spheres of government, each sphere is more interested in protecting its independence from interference by the others.

The Development Facilitation Act, 67 of 1995 (DFA) was the first post-Apartheid legislation that aimed to deal with spatial planning. This Act obliges all municipalities to draw up land development objectives (LDO) with the help of integrated development plans (IDPs). LDOs provide a regional strategic framework within a geographical area, while IDPs empower local governments to prioritize and strategically direct their activities and resource' according to people's needs (Beresford, 1997). Although new principles were introduced at the national level through the DFA, new forms of cultivation management were lacking, so the old systems remained (Todes, 2014). While the DFA introduced concepts such as development principles and strategic municipal planning in the form of LDOs, it did not change the overall planning landscape. Each province implemented its own legislation, which in some cases reinforced Apartheid planning by focusing on former white areas or areas subject to former Bantustan legislation. In addition, urban and rural areas have experienced different levels of control, with formal white urban areas subject to the most stringent land use controls, mostly in the form of town planning schemes, but little or no control exercised in former black settlements or rural areas because they are under the jurisdiction of Traditional Councils (Nel, 2017).

The Constitutional Court (Republic of South Africa, 2010) recognized some sections of the DFA as unconstitutional in an important decision that in the process articulated municipal planning as follows:

meaning of 'municipal planning, the term is not defined in the Constitution. But "planning" in the context of municipal affairs is a term that has assumed a well-established meaning which includes the zoning of land and the establishment of townships. In that context, the term is commonly used to define the control and regulation of the use of land. There is nothing in the Constitution indicating that the word carries a meaning other than its common meaning which includes the control and regulation of the use of land. It must be assumed, in my view, that when the Constitution drafters chose to use "planning" in the municipal context, they were aware of its common meaning.

The KZN-Ingonyama Trust Act (Act 3 of 1994) is the most notable provincial Act that was enacted on the eve of the democratic dispensation. The Ingonyama Trust was established through the Act to manage about 2,8 million hectares of land in KwaZulu Natal as depicted in Figure 2. The legislation appointed His Majesty the King as the sole Trustee of the Trust, to administer the land on behalf of members of specific communities (Mbatha and Mchunu, 2016).

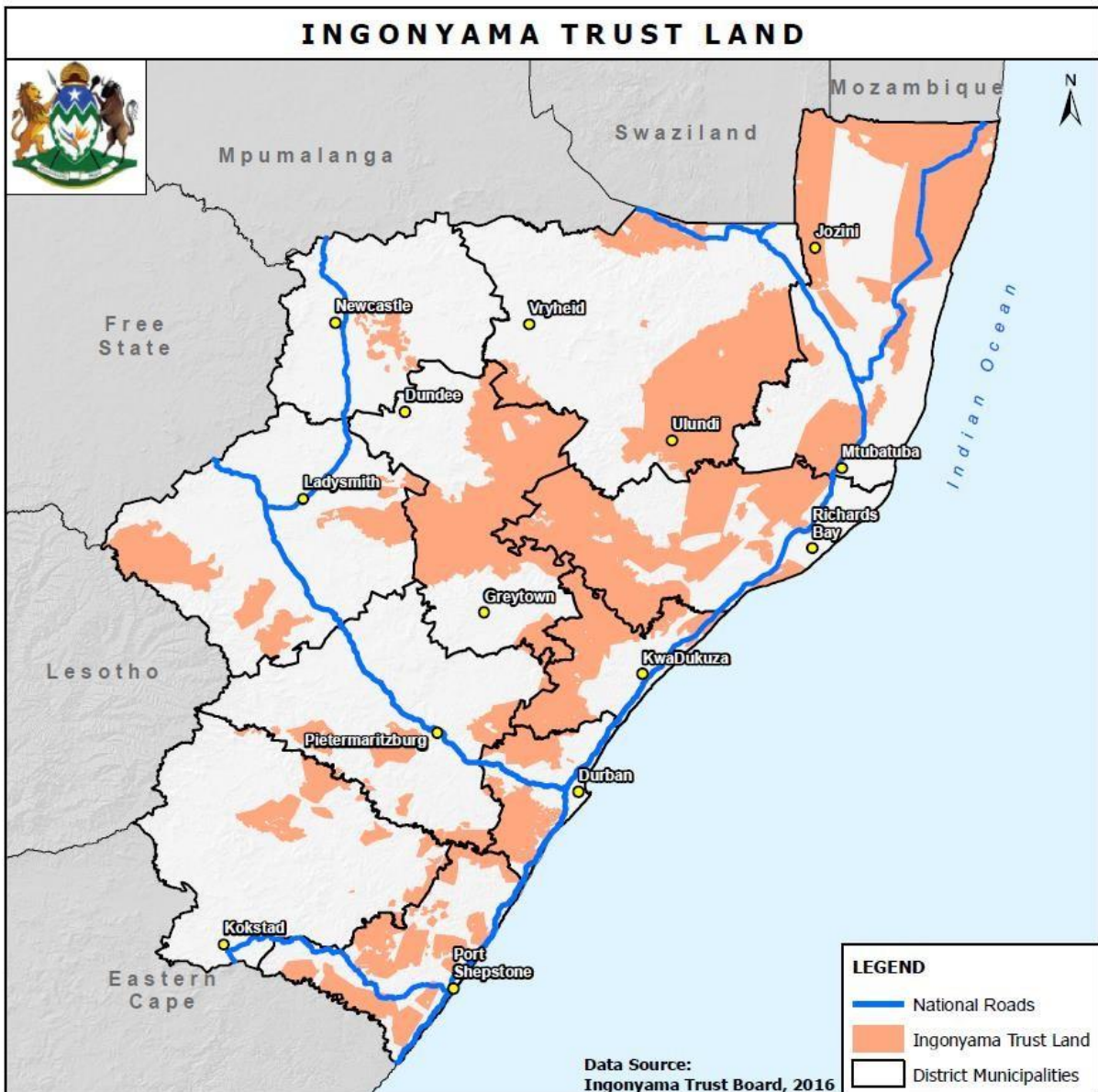


Figure 2: Ingonyama Trust Land (Source: Ingonyama Trust Board, 2016)

One of the main functions of the Trust is to issue Permit to Occupy (PTO) certificates for land under 5 hectares. The main criticism is that this places the onus on the Trust to manage the land for the profit and welfare of the communities listed in the Act. Therefore, the Trust must enter into contracts for the benefit of the communities, but recently this has come under public scrutiny for various reasons, for example, for the authorization by the Trust of mining activities and other developments on the land, that often occur without proper community consultation and generally impede access rights and access to land; and 'or' converting people's land rights (land used and inherited by families for generations) into leases (Centre for Law and Society, 2015).

The KwaZulu Natal Planning and Development Act, 6 of 2008 (KZN PDA) is the first piece of legislation in the province which was intended, inter alia, to provide for the adoption, replacement and amendment of schemes, subdivision and amalgamation of land and development of land outside the schemes which included commercial properties and Ingonyama Trust Land areas (KwaZulu Natal Office of the Premier, 2008). The Act gives a municipality five years to adopt a zoning scheme for its entire area of jurisdiction including areas that were not covered by the town planning schemes such as traditional areas. The scheme becomes a binding document unless it contradicts the IDP or by extension the SDF. The scheme must distinguish three types of land use, namely land use permitted by the zoning scheme; land use that may be permitted by the zoning scheme with the municipality's approval; and land use that is not permitted by the zoning scheme (De Visser, 2015). Challenges in the implementation of the law were that rural areas lacked formal land use systems during the development of indigenous or community land use notification plans, and community participation was limited to integration, development planning, and land allocation processes. Community participation becomes an executive activity where people are informed about existing plans but are not involved in their preparation at critical stages of the project (KwaZulu Natal Planning and Development Commission, 2010).

The Spatial Planning and Land Use Management Act (SPLUMA) (RSA, 2013) was passed in 2013 to provide a framework for spatial planning and land-use management throughout the country and a uniform set of principles and processes for land development. This new piece of legislation repeals all old legislation and issues a single law to govern spatial planning and land use management. The Act introduces a new planning system that seeks to promote development principles of spatial justice, spatial sustainability, spatial resilience, efficiency, and good administration (RSA, 2013). This includes other legislative powers where democratic governance, participation, consensus, and transparency of both rules and decision-making are identified as important criteria. A consensus-based system should also reflect the values, visions and aspirations of the community; be flexible enough to accommodate different forms of ownership and development, including unregistered areas such as customary land and informal settlements; and provide effective leadership that leads to quick decision-making and reliable conflict resolution (Nel, 2016). The SPLUMA has three main levers that influence municipal planning.

Firstly, Part E of Chapter 4 requires that the municipality must prepare the municipal spatial development framework as part of the IDP under the provisions of the MSA. Once completed through its municipal council, the municipality must give notice in the Provincial Gazette of its intention to adopt a municipal spatial development framework. Section 21 of the Act outlines

the contents of the SDF (Spatial Planning and Land Use Management Act 16 of 2013: 32). The preparation of the SDF in terms of the SPLUMA has seen municipal planning shift away from preparing master plans, toward strategic spatial planning. The SDF as the municipality's comprehensive spatial tool provides general guidance and direction. The SDF includes a hierarchical structure that provides more detailed guidance on how to respond to land use change requests, such as densification of transit-focused corridors and nodes; controlling of urban sprawl across city limits; sustainable environmental management; and creating sustainable living environments with different types, spaces and economic opportunities (Todes, 2012).

Chapter 5 of the Act requires municipalities to adopt a 'single land-use scheme for its entire area'. This scheme comprises the regulations, maps, and a register of all amendments to it. Its content must 'include appropriate categories of land-use zoning' (RSA, 2013). Schedule B of the SPLUMA contains a list of land use zones that apply when a land use system is not used. The single land-use scheme also covers rural areas under the jurisdiction of traditional leaders. Although rural areas have their own systems and procedures to manage land use, the SPLUMA encourages the development of rural schemes to assist traditional leaders in managing these areas (Ferreira, Nel and Nel, 2016).

Lastly, Part B of Chapter 6 requires that municipalities must establish a Municipal Planning Tribunal to determine land use and development applications within its municipal area. The Act also allows municipalities to authorize that certain land use and land development applications be considered and determined by an official in the employ of the municipality (RSA, 2013).

In the absence of provincial legislation, many municipalities have adopted municipal bylaws as the basis for land use management. Although municipalities are based on 'model bylaws', they have the freedom to adapt their eligibility procedures to local circumstances, leading to differences between municipalities and provinces (Nel, 2015). Some commentators argue that the SPLUMA is delivered in a complex state environment that reflects past and present political demands and social realities. The land is owned by the state, private individuals, or organizations; it is held in trust by traditional authorities; and it is occupied by those who claim the right to land outside of formal processes, including informal settlers (Sim, Sutherland, Buthelezi and Khumalo, 2018). Mainly, the implementation of the SPLUMA through municipal planning in rural areas is related to the municipal ownership of land. Lands falling under

traditional authority are administered under customary law, where local traditional leaders allocate land and resolve disputes. These customary practices may have worked in the past when the land was primarily agricultural and sparsely populated. However, the effects of these practices can still be seen in the densely populated urban areas of today. More research into the impact of these practices is needed as their frequency increases.

3.4.2.3. Planning policy framework to guide municipal planning

Municipal planning in South Africa is confronted by social, political, and economic challenges which create complexities in their work. The social aspect includes increasing levels of unemployment and poverty, HIV/AIDS, and upsurge in crime with concerns about private property safety. The political aspect involves the struggle to balance the need for a decentralized governance system from the national autonomy and then from the local level to the neighbourhood/municipality level, with more centralized and hierarchical decision-making processes. The economy is linked to the increased integration of South Africa into the global economy, which means a change in macroeconomic policy towards neoliberalism (Zetter and Watson, 2006). The Reconstruction and Development Programme (RDP) of 1994 was introduced by the democratic government and was premised on the view of building a developmental state where government plays a leading and enabling role in the economic and social transformation of the Apartheid planning (Karriem and Hoskins, 2016: 329). The RDP had five major policy programmes which were: (1) meeting basic needs; (2) developing our human resources; (3) building the economy; (4) democratizing the state and society; and (5) implementing the RDP (RSA, 1994). The critique of this policy is that at the time of its introduction, there was a lack of financial resources and capacity within the state, particularly in local government, to implement it. This often resulted in uncoordinated planning and contradictory decision-making between state organs (Van Dijk and Croucamp, 2007).

The Growth Employment and Distribution (GEAR) policy followed thereafter in 1996, which saw a shift from the developmental approach of the state to a market-related economy that aimed to reduce poverty and inequality through economic growth (Maphunye, 2009). The GEAR received widespread criticism due to its macroeconomic measures which relied on the market to create economic growth which would trickle down and assume a limited role of the public sector investment (Streak, 2004). The Accelerated and Shared Growth Initiative for South Africa (AsgiSA) came into effect in 2006, intending to grow the economy at an average rate of 6%, halving poverty and unemployment between 2004 and 2014, and improving the human resource capacity with education and skills development (The Presidency, 2008). The implementation of the policy was met by several difficulties such as providing linkages and closing the gap between the formal and informal economy, infrastructure spending still

neglecting rural areas with a focus on urban centres, priority not afforded to Small MicroMedium Enterprises (SMMEs), with the ratio of the risk to reward opportunities for black entrepreneurs and economic empowerment (affirmative action) being less favourable than in the corporate sector (mainly white dominated) and skills development and transfer of assets not reaching the intended, which were the poor in rural areas, and the financial volatility at the time impeded on the poverty alleviation targets because the financial resources were not available (Gelb, 2007).

In terms of spatial policy, two important policy documents were developed in 1997 which influenced municipal planning, namely the Urban Development Framework (UDF) and the Rural Development Framework (RDF). These aimed to develop urban nodes and provide a formal perspective on rural areas respectively. Through these policies, rural areas began to receive attention due to the ineffectiveness of the RDP. They did not however respond to rural challenges inherited from Apartheid planning, such as high poverty, multidisciplinary rural development, marginalized economies and high environmental sensitivity. The vision of the UDF was to strive for environmental sustainability with vigorous urban management and an integrated approach to the development of various land uses. Along with the RDF, the goal was to create a regional balance through a policy of regional development initiatives to address fragmented regional patterns and promote equality, integration and efficiency (Drewes and Van Aswegen, 2013).

The National Spatial Development Perspective (NSDP) was developed in 2003 and later revised in 2006 to guide spatial planning and infrastructure development. Initially, the NSDP aimed to guide infrastructure development which would support areas that would become major growth nodes to create regional gateways to the global economy. Hughes (2005: 13) argues that the NSDP emphasized people rather than places as a direct result of the spatially distorted legacy of Apartheid, and that it had to play an important social role in uplifting the socially excluded. The NSDP principles aimed to facilitate structured and rigorous analysis that allowed comparisons across locations and sectors, help governments consider trade-offs, and maximize the impact of scarce government funding.

According to Oranje (2010), the second version of the NSDP (2006) created an 'unease' because it was seen as an unbalanced approach. The rationale against the NSDP was that it was 'anti-rural', aiming to promote economic growth only in urban areas with high potential and low need, as opposed to rural areas characterized mostly by low potential and high need. It is important to note that the NSDP was the first policy/perspective to focus on the entire space economy. In 2010, the National Planning Commission in the Office of the President of

the Republic prepared the National Development Plan 2030. This plan presents a comprehensive strategy to accelerate economic growth, eliminate poverty and reduce inequality by 2030. The new growth path and other relevant programmes created a platform to look beyond the current limitations and see the changes within the next 20-30 years. Its goals for 2030 are to eliminate income poverty and reduce inequality (National Planning Commission, 2013).

At the provincial level, the KZN Provincial Growth and Development Strategy (PGDS) was first developed and adopted in 2011 with the collective agreement of all the growth development partners and stakeholders in the province which included government, business, labour, and civil society (Kwazulu-Natal Provincial Planning Commission, 2011). The strategy and long term-vision was revised in 2021, with the continuous focus of aligning implementation with the NDP imperative, taking into cognizance the significant policy shifts such as (1) the United Nations Sustainable Development Goals (SDGs); (2) the African Union Programme Goals 2063; (3) NDP; (4) the 2019-2024 Medium Term Strategic Framework (MTSF); (5) eight Provincial Priorities as announced by the leadership of the Sixth Administration; (6) the Spatial Planning and Land Use Management (SPLUMA) Principles; (7) the KZN Radical SocioEconomic Transformation Programme; (8) Operation Sukuma Sakhe (OSS) Principles; and (9) the District Development Model (DDM) as a new approach to district level integration (Kwazulu-Natal Provincial Planning Commission, 2021).

The PGDS aimed to eradicate poverty, unemployment, and inequality by identifying seven strategic goals and objectives supported by 124 interventions, as shown in Figure 4, which are meant to implement plans by the provincial government departments. These interventions have been translated into an Implementation Framework in form of the Provincial Growth Development Plan (PGDP), detailing the description of each intervention, related key performance indicators, baseline indicators, target/s, timeframes, the identification of the primary responsible provincial department, supporting partners and inherent risks and assumptions (Kwazulu-Natal Provincial Planning Commission, 2011).



Figure 3: KZN PGDS Strategic Framework (Source: KZN PGDS, 2011)

From the PGDP, the Provincial Spatial Development Framework (PSDF) was developed, which translates into the long-term spatial vision of the province. This is a master plan with a long-term and short-term perspective that identifies priority intervention areas on a provincial scale. The implementation of the PSDF emphasizes cooperative spatial planning and governance amongst spheres of government and departments; effective development partnerships; catalytic interventions which include major strategic capital investments into regional economy and infrastructure; planning performance, monitoring and evaluation system; and influence on the District Growth and Development Plans (DGDP) to guide local IDPs/SDFs (Kwazulu-Natal Provincial Planning Commission, 2016). It is important to note that municipal plans such as the IDP and SDF are intrinsically connected and are also required to be aligned, ensuring that local municipal government achieves its developmental agenda in terms of alignment with the national and provincial plans such as the NDP and PGDS/P, while also ensuring that they develop (Subban and Theron, 2016).

Against this background, municipal planning is influenced by high-level planning from the national and provincial spheres of government which must be translated into local plans to ensure that the local sphere of government achieves its developmental agenda. The NDP and PGDS/P set out the long-term vision, strategic objectives, and strategic interventions which are translated into the PSDF. These are fed into the local municipal plans, which then need to be addressed through municipal plans such as the IDP and SDF.

3.4.3. The example of eThekweni Municipality

The role and impact of municipal planning in eThekweni Metropolitan Municipality have been influenced by structural changes in local government and changes in the political framework. In the municipal boundary process of 1998, eThekweni municipality was created with the following criteria: (i) to be a city with densely populated areas and a strong system of movement of people, goods and services, as well as extensive development and several commercial and industrial areas; ii) to be a centre of economic activity with a complex and diverse economy; iii) to be an individual area for which an integrated development plan is desirable; iv) to have strong social and economic ties between its building blocks (Maharaj, 2002). After 2000, eThekweni became a single unitary metropolitan local authority consisting of six councils from previous local authorities. The metropolitan area was later divided into four sub-metropolitan planning regions, namely North, South, West, and Central (Breetzke, 2009).

The changes in the policy framework of eThekweni Municipality have seen an advancement in municipal planning through the development of the IDP and the SDF. The SDF gives effect to the short and long-term vision of the IDP and the long-term objectives of the municipality, which are translated into the spatial development narrative of compact city development (Musvoto, Lincoln and Hansmann, 2016: 189). Area-based management (ABM) was also introduced as an approach to planning, to address underdevelopment in previously disadvantaged areas which included rural areas. The initiative was also seen as a catalyst for identifying new and innovative ways of implementing the municipality's IDP and identified five ABM areas which included: (1) Inanda, Ntuzuma and KwaMashu (INK); (2) Cato Manor; (3) South Durban Basin; (4) Inner eThekweni regeneration and urban management programme; and (5) rural areas (eThekweni Municipality, 2011).

eThekweni Municipality has developed a package of plans which follow an integrated and iterative process which is outlined in Section 11 of the eThekweni Municipality Planning and Land Use Management By-laws, 2016. The package of plans is aimed at guiding the municipality's social, economic, environmental, and infrastructural development. The entire

package of plans of the municipality forms part of the IDP /SDF as together they communicate the strategic intent through the detailed land use guideline as required in terms of the MSA. Figure 4 illustrates the iterative process of the package of plans.

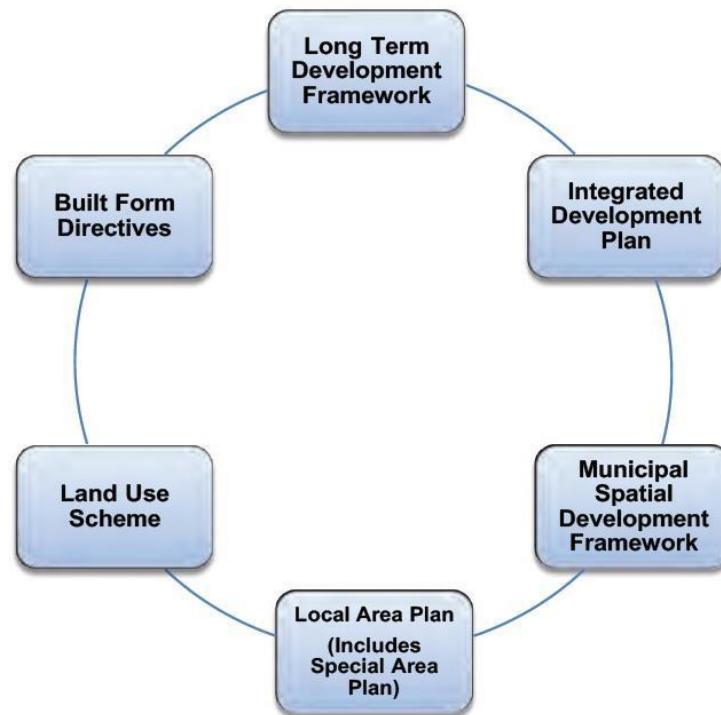


Figure 4: Cyclic Process of eThekwini Hierarchy of Plans (Source: eThekwini Municipality, 2016)

The eThekwini Municipality has also realized the need to pay more attention to planning for the rural areas due to some spatial challenges. The eThekwini Rural Development Strategy of 2016 characterizes rural areas as outside of city limits; with a sparse population using a population formula per square kilometre; population densities of less than 150 people / km²; dwelling densities less than 1 du/ hectare; the primary economic activity being agriculture; and generally located in the countryside. The implications of defining the rural space include social practices such as burial options and practices; land use management (allocation, zoning, institutional mechanisms to regulate land use, servitudes); environmental issues such as refuse collection, environmentally sensitive land use allocation, and use; socio-cultural and development issues such as mixed options for allocation of services – based on affordability, lifestyle and socio-cultural needs. Also included are different traditions of socio-cultural events, aesthetics, healing, and rituals (eThekwini Municipality, 2016).

According to the eThekwini Spatial Development Framework (2020), rural areas in the city comprise approximately 68% of the municipality, which largely falls beyond the urban development line (UDL), with communal land tenure under the ownership of the Traditional

Authorities. These areas are characterized by hilly, rugged terrain, varied settlement patterns, commercial farms, and smallholdings. These areas support different lifestyles and densities as they cover several areas that can be categorized as peri-urban. There is a lack of land use management in these areas, which has resulted in some of the households in rural areas being located on environmentally sensitive land and within road reserves. The implications of the UDL, including the complex nature of characterizing rural areas, has rendered the relevance of the UDL obsolete; institutional and socio-cultural issues that create hesitation in regard to classification of these former rural areas as urban areas must be identified and dealt with so that they are considered in making a viable strategy for the rural areas; the need to rationalise routes and linkages to economic nodes within and between eThekweni and elsewhere; the need to maximise the typology of economic offerings from subsistence agriculture, entrepreneurship, professional and formal business options; the need to define the development line within the context of densification; review of the definition of a development line to align with thresholds of densification – as one way of defining the development line, it might be useful for such a line to be called a densification line; the need to define specific areas of rural preservation and protection such as promotion of the general principles of sustainability, efficiency and integration; protection of prime agricultural land; and protections of areas of environmental significance and bio-diversity (eThekweni Municipality, 2020).

eThekweni Metropolitan Municipality is located along the south-eastern coast of South Africa in the province of KwaZulu Natal. The total extent area of the municipality is 229 123 hectares (approximately 2297km²). The municipality is bounded by uTongati River in the north, the aMahlongwa River to the south, and the Indian Ocean to the east. The municipal area is characterized by diverse topography ranging from steep escarpments in the west to relatively flat coastal plains in the east (World Bank, 2016). The population of eThekweni Municipality has grown over the last two decades. Between 2001 and 2011, the average annual population growth rate is 1,13% which saw a rise from 3.09 million to 3.44 million inhabitants. This growth was expected to reach about 3,7 million inhabitants by the year 2020. Most of the population is of African origin (71%), followed by Indians (19%), Whites (8%), and Coloureds (2%). About 66% of this population is below the age of 35 years, while the economically active age group (from 15 to 59 years) includes 67% of the population. The population dependency ratio is 48/100. In terms of gender, the municipal population comprises 49% males and 51% females, with females having a longer life expectancy than males (Sutcliffe, 2015) . Factors that impact municipal planning in eThekweni Municipality are associated with local and regional restructuring, rapid urbanization, planning, and legislative and policy reforms.

Municipal planning in the case of Mzinyathi must be understood within the context of the dual governance system of eThekweni Municipality and Ingonyama Trust Board (ITB) represented by Traditional Councils (TCs). The 2000 local government elections introduced a redemarcation process which resulted in the area under the control of eThekweni Municipality expanding, essentially becoming a metropolitan urban centre. The newly incorporated territory consists of mainly rural and semi-rural areas and included traditional areas. These traditional areas are split over municipal wards, which creates this dual system of governance (Ray et al., 2011). The expansion of municipal boundaries to include tribal authorities has seen the municipality incorporating areas with high numbers of traditional dwellings within the city. Typically, these areas are less dense with uneven distribution of services, but rapid urbanization in the city has exacerbated the informality of settlements and diverse levels and types of housing and infrastructure (Goebel, 2007). The tensions between traditional leaders and the Demarcation Board to fulfil the Constitutional obligation of a wall-to-wall government has created mistrust, however. Traditional leaders always fear losing their powers and functions to elected local governments in their areas (Lehman, 2007). Maharaj (2002) argues that addressing the fragmentation of communities through integration cannot be achieved merely by a legislative act. In the case of eThekweni Municipality, the tensions have also played themselves out in terms of existing urban and rural regions. On the one hand, affluent urban local authorities were opposed to the spatial extension of their boundaries due to the costs of service and infrastructure provision once rural areas are incorporated. On the other hand, traditional authorities believed that their territorial jurisdiction and authority were being undermined by the Municipal Demarcation Board, which radically redefined the administrative authority. While legislation might have achieved the political geography of Apartheid on a macro-scale, the challenge for municipal planning is to reduce the socio-spatial and economic inequalities that persist which further perpetuate Apartheid marginalization of black-dominated areas.

In eThekweni Municipality, there are 18 TCs, each with its inkosi (chief) and izinduna (headman). There are also provincial departments that are involved in this space. This includes the KwaZulu-Natal Department of Cooperative Governance and Traditional Affairs (KZN CoGTA), which oversees and supports traditional governance structures following legislation, and the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) that guides social, economic and environmental development. Customary law, upheld in Chapter 12 of the South African Constitution, governs the traditional system. The land is allocated by TCs to individuals for their use, predominantly for residential and subsistence purposes, without a transfer of ownership. Ownership of land remains vested in the state. Land allocation is predominantly an oral process whereby an individual makes an

application for land to the relevant TC through the local induna, with the final boundaries witnessed by neighbours (Sutherland et al., 2016). Mzinyathi, therefore, characterizes a complex and sensitive co-existence of the two governance systems. In terms of the ward demarcation of 2016, Mzinyathi falls within Ward 3 and Ward 108 of eThekweni Municipality. This means that there are two ward councillors and ward committees that emerged through the democratic process and represent the municipality. The traditional jurisdiction of Mzinyathi falls under the Qadi Traditional Authority, consisting of inkosi and his izinduna, who do so at the behest of the Zulu king. Izinduna are the inkosi's deputies and they manage sub-villages called izigodi. However, the traditional boundaries are largely abstract and therefore imprecise (Mbatha and Ngcoya, 2019)

3.5. Conclusion

This chapter has discussed the different contexts of municipal planning, taking into consideration case studies in developed and developing nations. Examples of developed nations include the Netherlands, where municipal planning is discussed within the context of a parliamentary government with a monarch as the head of state, and consisting of multiple political parties which build a coalition government; and New York which highlights that municipal planning has shifted its focus from segregating land uses to creating mixed uses due to implications of urbanization. Examples of developing nations include Guangzhou, which saw a transformation of municipal planning under different political regimes, and Kigali, which has implemented short-, medium- and long-term planning in their municipal plans. These examples were chosen to demonstrate that municipal planning has different impacts under different planning systems and environments. In the case of South Africa, eThekweni Municipality is the example used because the study area is situated there. The next chapter will deal with the research methodology.

Chapter 4: Research Methodology

This chapter presents the research methodology chosen for this research study. The research methodology entails the research philosophy, different sources of data, data collection process, instruments and tools, data analysis, and limitations of the research study.

4.1. Introduction

Khothari (2004) distinguishes between research methods and research methodology. Research methods are understood as all the methods/techniques used to conduct research. Research methods are grouped into three, namely: (1) methods related to data collection. These methods are used when the already available information is not enough to find the necessary solution; (2) statistical methods used to determine relationships between data and unknowns, and 3) the methods used to assess the accuracy of the results obtained. Research methods belonging to the last two groups are usually used as analytical tools for research.

Research methodology should be understood as a science that examines how research is conducted. Research methodology has many dimensions and research methods are only a part of this. The scope of research methodology is wider than research methods because it considers the logic of the methods used and at the same time explains why a certain method or technique was chosen over another so that the results can be evaluated either by the researcher or others. Gray (2004) argues that the choice of research methodology is determined by a variety of factors such as the researcher's belief in external truth that needs to be discovered; exploring multiple perspectives in natural field settings (including positivist, interpretive, or another perspective); researcher's attitude towards researcher's use of theory; adopting a theoretical model or perspective (deductive approach) or adopting models which emerge from the data (inductively).

This study has adopted the case study research methodology approach. There are numerous definitions of a case study. Yin (2009) defines the case study as a research strategy that focuses on understanding the dynamics present within a single setting. A case study has distinctive characteristics. A case study is also an exploration of a bounded system [bounded by time and place] or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context (Yin, 2009). The area of Mzinyathi, eThekweni Municipality, was chosen as the case study for this research study. The intention is to explore the implications of dense rural settlements in this area concerning municipal interventions provided by eThekweni municipality. Multiple sources of information will be used that will require attention to detail by the researcher which will occur over some time.

One of the strengths of case study research is that it is context specific but has the scope for applicability across other arenas. The issues emanating from the case study of Mzinyathi in eThekweni Municipality can also apply to other areas within the Republic. Lessons learned from this case study could be applied in other rural areas in eThekweni Municipality which are transforming at the same rate. According to Taylor (2013), a well-written case study allows readers to reflect on and analyse the findings from a study to determine its applicability to their own situation. However, it can result in complex decision-making for the research process due to the numerous approaches available to the researcher. Case study research that is done well, (1) allows for the exploration of complexity through the use of multiple data sources; (2) is situated in a real-life setting; (3) is suited to research where phenomena are complex and based on realities; and (4) is contextual with thick description enabling others to make judgments about the relevance of findings to their situation (Taylor 2013).

Case study research is also appropriate when dealing with the 'how' and 'why' research questions. These deal with operational links needing to be traced over time, rather than mere frequencies or incidence. In this instance, the scope of a case study is defined as 'an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clear (Yin, 2013).

The literature suggests that Mzinyathi is transforming and in certain parts has maintained its rural character with some areas regarded as peri-urban. This is due to an increase in population densities in more recent years, which has changed the spatial landscape of the area. The case study should thus provide an insight into the driving forces influencing these rapid changes which should lead to the researcher's understanding of the implications relating to land use and environmental management and the provision of basic services in such areas. Dasgupta (2015) highlights the following as useful conditions for undertaking case study research, (1) when a phenomenon is broad and complex; (2) where the existing body of knowledge is insufficient to permit the posing of casual questions; (3) when a holistic, in-depth investigation is needed; (4) when a phenomenon cannot be studied outside the context in which it occurs.

Defining and selecting a case study entails the greatest risk, which relates to the unavailability and unreliability of key role players and sources of data at a time when both are needed by the researcher. Yin (2009) recommends pilot work to reduce the potential risk of defining and selecting the wrong case study. Thus, choosing a good case study is a challenging endeavour.

Firstly, representativeness becomes an issue because the case uses a small sample to generalize to a broader population. Secondly, chosen cases must also achieve variation on relevant dimensions, a requirement that is often unrecognized. Lastly, background cases often play a key role in case study analysis. While they are not entirely cases, they are nonetheless integrated with the analysis (Seawright and Gerring, 2008). The abovementioned challenges are relevant in the case of Mzinyathi. The area of Mzinyathi operates within the context of the dual-governance system of the eThekweni Municipality and the Qadi Traditional Authority. Each of these has its own land allocation and planning system, laws, rules, and practices (Sutherland, 2016). It is therefore critical that both of these institutions are represented in terms of participants for this study.

The methodological justification for choosing the Mzinyathi case study is based on the pragmatism approach. Pragmatism can provide a very powerful justification for the use of case studies since case studies as a research method offer the possibility of studying a problemdefined situation in great detail. Easton (2010) argues that pragmatism espouses usefulness but only specifically and in context. 'Truth' is what is useful to people researching in a field, what helps the research project, what can be accepted and defended, and what is open to criticism and renewal. It is a linguistic convention, a sort of shorthand that helps researchers to achieve various objectives when researching and theorizing. Seawright and Gerring (2008) concede that while recent work has noted that the problem in case study research is sample bias, not many solutions have been developed in response. Thus, in the absence of detailed, formal treatments, researchers continue to lean primarily on pragmatic considerations such as time, money, expertise, and access.

4.2. Sources of data

The types of data used for this research study comprise primary and secondary data. Primary data occurs when the researcher obtains information directly from research subjects to answer a specific research question (Nicoll et al., 1999). Secondary data occurs when the researcher obtains information that has been established by others, not for the research question at hand (Harris, 2001).

Qualitative and quantitative approaches for data collection were used for this research study. This forms the basis of primary and secondary data for analysis and synthesis. Qualitative data revolves around trustworthiness and actual information whereas quantitative data assists in quantifying to derive a logical conclusion (Somekh and Lewin, 2005). Dasgupta (2015) argues that quantitative research has been directed more toward theory testing while

qualitative research has been concerned with theory building. Thus, while most quantitative research is confirmatory, most qualitative research is exploratory. Both of these methodological approaches complement each other and will ensure accuracy in analysis and synthesis by the researcher (De Leeuw, 2005). As an approach to integrating both the qualitative and quantitative data sources, triangulation was adopted to ensure the validity of the case study research.

Triangulation can serve as an advantage, i.e., referring to additional data sources (e.g. data collected from different persons, at different times, or from different places), using different methods (e.g., observation, interviews, documents, etc.), using different researchers, applying different theories, and using different types of data (Diefenbach, 2008). Creswell (2003: 22) indicates that a mixed method design is useful to capture the best of both quantitative and qualitative approaches. To better understand the research problem, it could prove advantageous to collect both close-ended quantitative data and open-ended qualitative data. Primary and secondary data will come as a result of using different data sources and techniques such as focus groups, ethnographies, participant observation, key interviews, documentary evidence, access to archival records, direct observations in the field, and surveys (Yin, 2009).

Primary data was sourced from different stakeholders which included municipal officials, the traditional authority, and the local community, i.e., representatives from eThekweni municipality, Qadi Traditional Authority, and the community of Mzinyathi. The advantages of primary data collection include having a tailor-made strategy to specifically answer a precise research question, having data that is current and comes from a known source, confidentiality can be maintained, and the researcher can put certain controls in place to ensure reliability (Nicoll and Beyea, 1999). The principal advantage of secondary data is that it is less costly to acquire. The fact that secondary data already exists means that such data is generally less expensive than primary data. Secondary data also has the advantage of saving time and may be less biased (Cowton, 1998). The main disadvantage of collecting primary data is the expense of collecting such data. Primary data collection is also time-consuming. In the case of Mzinyathi, questionnaires will form a part of the research study. Criticisms of existing questionnaire surveys include poor questionnaire design, the use of convenience rather than random samples, low response rates and a failure to address the issue of non-response bias, and the use of poor scenarios (Cowton, 1998). Secondary data was collected from various documents such as the eThekweni Integrated Development Plan, the Spatial Development Framework, newspaper articles, published academic articles, the Northern Urban

Development Corridor Plans, the Northern Spatial Development Plan, Rural Strategy, and Statistics South Africa.

4.3. Data collection

The project methods used for data collection include population sampling, interviews, administration of questionnaires, and observation. Other methods which supplemented the instruments and tools used included GIS mapping for deriving the sampling frame, setting up appointments for face-to-face interviews or visual meetings through online communication platforms, and the use of field workers.

4.3.1. Population/Sampling/Data collection techniques for quantitative data

The population for this research study was selected in the rural area of Mzinyathi which is situated in eThekweni Municipality. According to Creswell (2007), the objective of sampling in quantitative research is to choose individuals who are representative of the broader population where each element has an equal probability of being selected. This method is chosen because it is convenient and manageable (Creswell, 2007). The probability technique that will be used for this study in collecting quantitative data is simple random sampling. This sampling technique is used to ensure that the sample is representative of the study area while avoiding bias in the results and ensuring that all elements of the population have an equal chance of being selected (Teddlie and Tashakkori, 2009) The Mzinyathi study area is located on tribal land administered by the Qadi Tribal Authority and falls within Ward 108 of eThekweni Municipality. In 2016, the Municipal Demarcation Board delimited wards for the 2016 local government elections and Ward 108 became a new ward in eThekweni Municipality through this process. Preliminary investigations suggest that there is no household register in the area. In the absence of such a household register, a sampling frame which is a list that closely approximates all the elements in the population will be drawn from the area. The sampling frame with the assistance of mapping generated from the Geographic Information System (GIS) identified the number of households within the area and those that could be selected for the sample (Neuman, 2014).

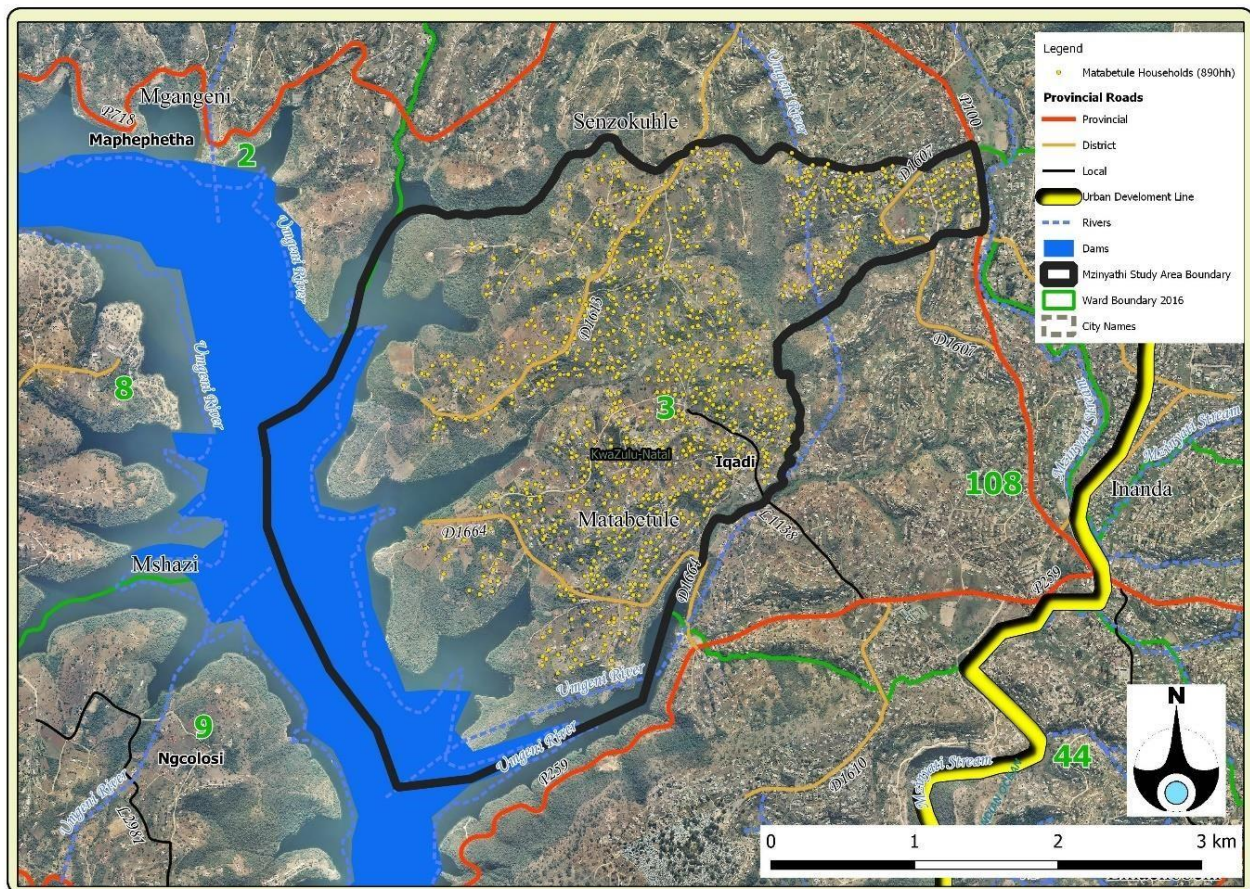


Figure 5: Mzinyathi Sample Frame (Source: eThekweni GIS 2017)

The available GIS data reveals that there are approximately 890 dwelling units within the study area as shown in Figure 5. A simple percentage approach will be used to determine the sample size. According to Leedy and Ormrod (2015), a population size of around 1500 means that 20% should be sampled. For the Mzinyathi study area, the sample size was determined using this percentage approach (i.e., 20% of 890 dwelling units) which is estimated at 178 dwelling units. From the sample frame, all the dwellings were assigned individual numbers. A random number table was used to select participants randomly. Two lists were drawn up, i.e., the first represented the selected 178 dwellings and the second was drawn up as a backup to substitute for those households that were unavailable or unwilling to participate (Neuman, 2014).

Neuman (2014) outlines some of the key steps for the process of data collection, which were undertaken for this research study: (1) A structured questionnaire was developed and used as an instrument according to which the selected respondents were asked similar questions in a one-on-one interview. (2) The data was recorded on the sheet that had the questions. A pilot

test questionnaire was developed for the pilot test survey. The pilot test was undertaken with a few respondents, which was similar to double-checking the viability of the final survey (3) The gatekeepers were approached to ask for permission to carry out the survey. This was in the form of a formal meeting to ensure that the content of the research study was discussed and that permission was obtained before the fieldwork was done, and that the community was informed in advance. (4) The respondents were located on the sample frame and the data was collected. (5) The responses from questionnaires once completed were stored and were then transferred into an electronic format for statistical analysis.

4.3.2. Population/Sampling/Techniques for qualitative data

The population for the qualitative data was drawn from the different role players who were involved in municipal planning. The different roles players included eThekweni municipal officials, the Qadi Traditional Authority, and the ward councillor. In qualitative research, the intention of selecting participants is based on a specific purpose or their experience in the subject matter. This phenomenon is also known as purposeful sampling (Creswell, 2007).

The non-probability sampling technique that was used in this study was snowball sampling. This is a well-known purposive sampling technique that involves using participants to identify additional cases that may be included in the study (Teddlie and Tashakkori, 2009). This approach ensured that suitable variables were chosen, that would best influence an individual's contribution in addressing issues relating to the implications of dense rural settlements on the efficacy of municipal plans. It was understood that there were various role players involved in planning processes.

The snowballing technique ensured that the sample for qualitative data was drawn from the interconnected network of people or organizations (Neuman, 2014). The following role players were selected purposively: (1) the eThekweni municipal official responsible for the Northern region (specifically the area of Mzinyathi) from Development Planning who dealt with spatial planning such as the preparation of the Spatial Development Framework was selected to gain an understanding of their challenges and ideas when planning for dense rural settlements in the municipality. (2) the Qadi Traditional Authority was important, particularly the local induna who administered land within the study area. The local induna could provide challenges on the ground that related to their role in land allocation and how that was affected by municipal planning; (3) the ward councillor and ward committee members were the interface between the local community and the municipality. They were important in providing insight into issues, experiences, and stories regarding the research topic. It was anticipated that 10 people would be purposively selected, however, this number could increase if there were other referrals.

The advantage of purposive sampling for this study was that it provided diverse perspectives and opinions. The data was sourced from participants who were well-versed and knowledgeable about their areas of expertise (Leedy and Ormrod, 2015). Three data collection techniques were employed, namely observations, focus groups, and interviews. The observations comprised visits to the Mzinyathi area at different time intervals which ensured flexibility. The data was recorded through field notes. Interviews and focus groups were flexible and concise, were done on appointments, and were arranged with the participants before the meeting. Existing municipal documents such as the eThekweni Integrated Development Plan, Spatial Development Framework, and Newspaper articles, published academic articles contributed towards the official records (Leedy and Ormrod, 2015).

4.4. Instruments and tools

Data collection is an important part of any type of research. In this study, data were collected through interviews, semi-structured questionnaires and observational instruments. These tools were used to obtain relevant information and guide the research process.

4.4.1. Interviews

One of the most used methods in data collection for qualitative data is an interview. Khothari (2011) describes different types of interviews wherein direct personal investigation or indirect oral investigation are possible. In the case of personal investigation, information is sourced personally, whereas in cases where this is not possible, an indirect oral examination can be conducted in the form of cross-examination of other persons who are supposed to know about the problem under investigation, and the information obtained is recorded. The personal interview is conducted in a structured manner. The one-on-one interview approach was adopted to collect information from eThekweni municipal officials, Qadi Traditional Authority, and the ward councillor. This allowed the researcher to establish the experience and perceptions of the interviewees on issues relating to municipal planning concepts.

4.4.2. Questionnaires

According to Rubin (2011), a questionnaire is an instrumental tool that is not just a collection of questions but reveals many statements as questions. This allows the researcher to establish a particular attitude or perspective from respondents. A sample quantity of questionnaires was administered for the research study. There was a questionnaire for: (1) the local ward councillor on their role in municipal planning and the impact on service delivery as well as the involvement of the community in projects; (2) the Qadi Traditional Authority on the role of

indigenous knowledge on municipal plans and involvement of the community in the public participation processes; and (3) the eThekweni municipal officials on the challenges of preparing municipal plans and interventions. These were semi-structured questionnaires because they allowed the researcher to ask additional questions for more clarity. The questionnaires for households were mainly intended to ascertain the perspective of the community on municipal planning concepts and their role in public participation processes.

4.4.3. Observation

Observation was used to assess existing processes and projects in terms of their effectiveness and efficiency for the overall community.

4.5. Data analysis

Mixed methods research was applied for collecting, analysing, and integrating quantitative and qualitative data for this research study. Creswell (2007) refers to this phenomenon as triangulation. The advantage of combining both qualitative and quantitative research is that it provides a better understanding of the research problem. This is important to note because the research design for data analysis in this study is based on the simultaneous approach of both qualitative and quantitative design methods which seeks to converge the results and embed both data sources for a concise interpretation.

Methods and instruments for collecting quantitative data yield numerical data, whereas qualitative data are in the form of field notes, historical documents, photos, and open interview transcripts (Neuman, 2014: 282). Onwuegbuzie (2011) indicates that there are four phases involved in data analysis for mixed data. These include (a) data transformation, (b) data correlation and comparison, (c) analysis for inquiry conclusions and inferences, and (d) using aspects of the analytical framework of one methodological tradition within the analysis of data from another tradition.

This study was guided by three steps that are suggested by Leedy and Omrod (2015), which are embedded in these phases: (a) raw data that was collected was simplified, wherein quantitative data was coded into more descriptive statistics while qualitative data was condensed into general themes; (b) general patterns were depicted which led to visual representation; and (c) the two types of data were systematically compared and results were integrated through cross-tabulation, inferences, and categorization of the data.

4.6. Research Ethical Considerations

This study employed the standard guidelines for mixed-methods research which include protection from harm, voluntary and informed consent, and participants' right to privacy (Leedy & Ormrod, 2015). Furthermore, the research study adopted the Durban University of Technology (DUT) Research Ethics Policy.

A fundamental ethical principle in research is to ensure always that participation in the study is voluntary and that participants are not coerced. The DUT Research Ethics Policy stipulates that voluntary informed consent by participants is required, or special safeguards where this is not possible. Neuman (2014) indicates that informed consent statements provide specific information such as the kinds of procedures or questions involved and that the uses of data are sufficient for informed consent. The informed consent form was issued to participants before their voluntary participation in the study. This was people from the age of 18 years.

The study has considered the principles and practices governing research that include confidentiality of the information supplied by research participants and anonymity of respondents. The privacy and identities of the participants are protected through the coding of information through a database method and system which was used for this research study.

4.7. The limitations of the research study

The commencement of the data collection coincided with the COVID-19 pandemic which brought about regulations and mandates such as lockdowns and social distancing. The impact on the time consumed and selection of the sample size was negative. Firstly, the data collection required more time because the surveys had to be undertaken during the day, and mainly on weekends when people are available. The COVID-19 protocols had to be adhered to, which meant that sanitizing had to take place, for instance, and arrangements made for social distancing. Secondly, the sample size had to be reduced from 178 to 153 dwellings. The implication is that the sample size does not meet the requirements of 20% of the general population. To counter this, the researcher divided the study area into zones by using a grid and randomly selected participants in each of those zones. This was to ensure that there was no sample or selection bias. Despite this limitation, the quantitative data that was collected for

this study was sufficient to derive rational conclusions and recommendations. The qualitative data also assisted in addressing some of the gaps that were encountered in the quantitative data.

4.8. Conclusion

This chapter has discussed the different methods used in the research study. The next chapter will discuss the case study in greater detail.

Chapter 5: Background to the case study of Mzinyathi

5.1. Introduction

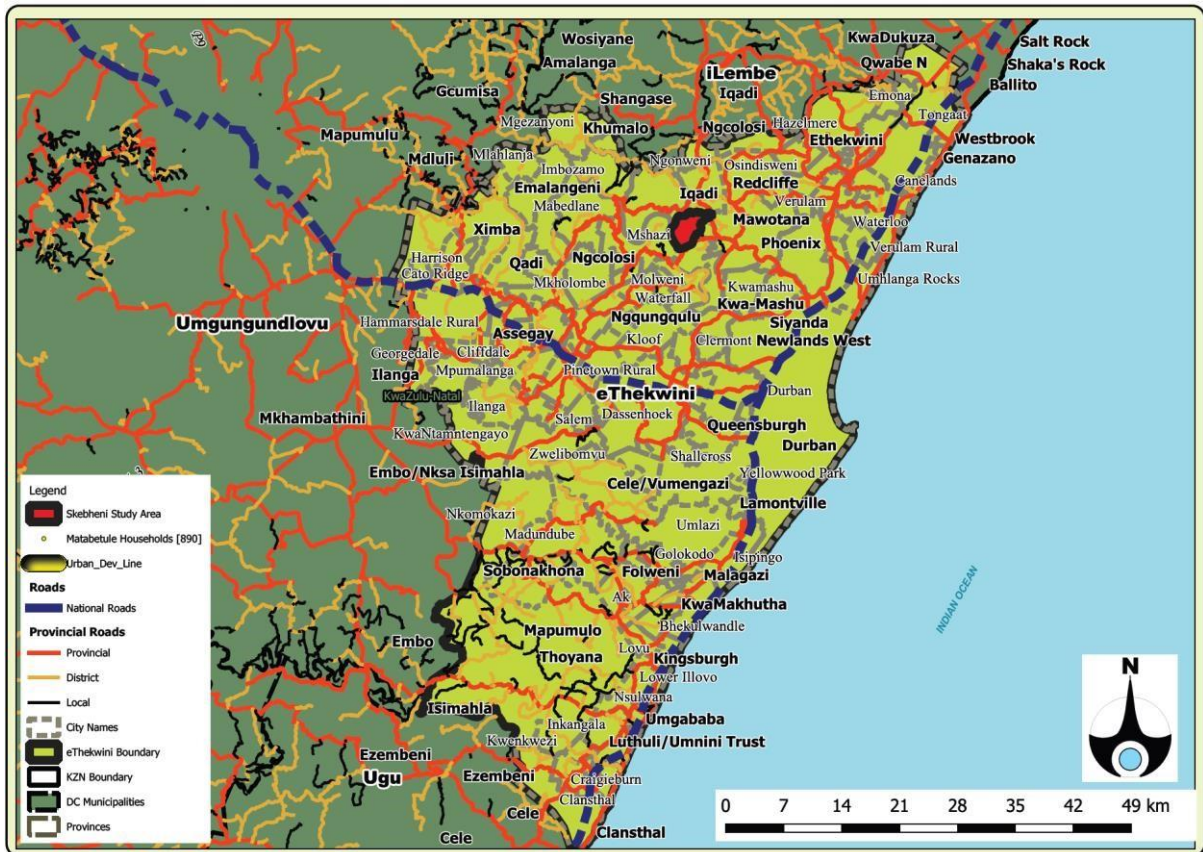
This chapter provides the background to the case study of Mzinyathi. The available statistics for Mzinyathi are at the ward level. Since the 2011 local government elections, Mzinyathi has been one of the area's voting districts in Ward 3 and this has been the case in the 2011 and 2016 local government elections. The 2011 Census data was utilized for this section which shows that data collected for Mzinyathi is combined with the Senzokuhle settlement. The current Census data has not yet been released and therefore there are limitations to the data used.

This chapter will therefore provide the locality of Mzinyathi in respect of the regional/municipal context. It will also provide a summary of the demographics, education levels, economic profile, and access to services with the use of the 2011 Census data, analysis of existing infrastructure and facilities as well as the environmental analysis.

5.2. Local context

The study area is situated in Mzinyathi, a settlement located in Ward 3 of the eThekweni Metropolitan Municipality under the jurisdiction of the Qadi Traditional Council. eThekweni Metropolitan Municipality is bounded by ILembe District Municipality to the north, Umgungundlovu District Municipality to the west, Ugu District Municipality to the south, and the Indian Ocean to the east, as illustrated in the locality map (Map 1). The municipality covers an area of approximately 2 556km² in extent, while Ward 3 measures approximately 94,9 km in extent and consists of 17 voting districts. The ward accommodates settlements such as Mzinyathi, Matata, lower Kumanaza, Ngonweni, Eskebheni, Nyoni, Senzokuhle, and Kwa Gence (Statistics SA, 2012). Mzinyathi is situated approximately 30 km north of the Durban CBD. The immediate surrounding settlements include Maphephetha to the north; INK area, i.e., Inanda, Ntuzuma, and Kwamashu to the east and south; Ngcolosi and Molweni to the west, separated by the Inanda Dam.

Mzinyathi is located within a good transportation network as depicted in Map 1. It can be accessed from two main mobility routes, the N2 and N3 highways. To the north of the Durban CBD, the study area is accessed via the N2, M25/R102/Curnick Ndlovu Highway/Mafukuzela Highway to Mzunjana Drive. To the west of the Durban CBD, the study area is accessed from the N3, M19, Dumisani Makhaye Drive to 108977 Street.



Map 1: Locality (Source: eThekweni GIS 2017)

5.3. Demographic Analysis

5.3.1. Population

The population statistics of Mzinyathi are shown in Table 3. By 2011, the population of Mzinyathi was 7141 people, which is about 16% of the Ward 3 total population. Most people in Mzinyathi are black African, representing approximately 99,9% (7069) of the total population. Table 1 shows that the main language spoken in Mzinyathi is isiZulu (95,1%) followed by English (1,7%) which is a trend similar to that of the municipality (Statistics SA, 2012). These findings suggest that municipal programmes must be delivered in a language that will be understood by most of the population in Mzinyathi.

Table 3: Population groups and languages spoken in Mzinyathi (Statistics SA, 2012)

POPULATION GROUPS		LANGUAGES SPOKEN												
		AFRIKAANS	ENGLISH	ISINDEBELE	ISIXHOSA	ISIZULU	SEPED	SESOTHO	SETSWANA	SIGN LANGUAGE	SISWATI	TSHIVENDA	XITSONGA	OTHER
Black African	99.9%	0,3%	1,7%	0,8%	0,1%	95,1%	0,5%	0,0%	1,2%	0,3%	0,0%	0,0%	0,0%	0,1%
Coloured	0.0%													
Indian/Asian	0.0%													
White	0.0%													
Other	0.0%													

The gender and age profiles are illustrated in Table 4. In terms of gender representation, the population of Mzinyathi has more females (51,4%) than males (48,6%). These findings demonstrate that there is a need for women empowerment programmes to accommodate the larger population of females in the area. The age profile in Table 2 indicates that the population of Mzinyathi is dominated by young people (15 to 35-year age bracket). This trend suggests that municipal programmes and interventions should be geared towards youth development. This could be a source of labour since municipal statistics show that unemployment is high within the municipal area. This age group is economically and socially active which means that the availability of economic opportunities would assist in preventing young people from undertaking illegal and unorthodox avenues to sustain their livelihoods (Statistics SA, 2012).

Table 4: Gender and age profile in Mzinyathi (Statistics SA, 2012)

GENDER AND AGE PROFILE IN MZINYATHI		
Age	Males	Females
0-4	6,7%	6,2%
5-9	5,9%	5,2%
10-14	4,9%	5,4%
15-19	6,3%	6%
20-24	5,4%	5,5%
25-29	4,4%	4,8%
30-34	3,1%	3,1%
35-39	2,8%	2,4%
40-44	1,9%	1,8%
45-49	1,5%	2,3%
50-54	1,5%	2%
55-59	1,8%	1,8%
60-64	1,1%	1,5%

65-69	0,5%	1%
70-74	0,5%	0,9%
75-79	0,2%	0,7%
80-84	0,1%	0,5%
85+	0,1%	0,4%
Total	100%	100%

5.3.2. Education levels

Table 5 illustrates that 9,2% of the people in Mzinyathi have had no schooling. Approximately 17,2% of the population has had access to limited primary education with only 28,8% of the population having matric. About 2,8% of the population of Mzinyathi have acquired higher education. Education is one of the essential needs of a community. With such levels of education within Mzinyathi, the literacy rate is likely low. This may impede the future development of the area because human resources are limited. These findings demonstrate the need for municipal and government interventions in terms of skills development and improving adult education. This could in turn contribute to improved broad social benefits, productivity, creativity, and technological advancements.

Table 5: Education levels of Ward 3 (Statistics SA, 2012)

EDUCATION PROFILE IN MZINYATHI	
Level of education	Percentage %
No schooling	9,2%
Some primary	17,2%
Completed primary	4%
Some secondary	37,9%
Matric	28,8%
Higher education	2,8%
Total	100%

5.3.3. Economic profile

Table 6, illustrates that about 19,1% of households in Mzinyathi have no income. This is a high number considering the unemployment rate in the municipality and Ward 3. High unemployment has serious socio-economic ramifications, including engaging in illicit activities such as robbery, theft, drug use/abuse, prostitution, etc. Most households (46,7%) earn between R9601 and R38 200 annually. This indicates that most of the households in Mzinyathi earn less than R3500,00 per month which is less than the minimum wage. This is representative of the low-skill base prevalent in the area.

Table 6: Average household income in Mzinyathi (Statistics SA, 2012)

AVERAGE HOUSEHOLD INCOME IN MZINYATHI	
Income	Percentage %
No income	19,1%
—1 - R4,800	4,2%
R4,8—1 - R9,600	9,1%
R9,601 – R19,600	23,1%
R19,601 – R38,200	23,6%
R38,201 – R76,400	12,1%
R76,401 --R153,800	5,8%
R153,801-- R307,600	2%
R307,601 --R614,400	0,8%
R614,-01 - R1,-28,800	0,1%
R1,228,-01 - R2,457,600	0%
R2,457,601+	0%
Total	100%

5.4. Settlement density

Settlement patterns and densities changed dramatically in Mziyathi between 2004 and 2021. Figure 6 shows that the settlement density of Mziyathi has evolved over this period from a typical rural area of approximately 6 dwelling units per hectare or less to a dense rural settlement of more than 6 dwellings per hectare. Notably, in 2004 there were fewer dwellings scattered throughout Mziyathi, mainly located along the main routes for accessibility, and visible green spaces between dwellings. In 2014, this situation changed with most of the vacant spaces being occupied by dwellings. By 2021, settlement patterns in Mziyathi had completely changed and housing has become much denser. Some of these dwellings are not easily accessible because they are located on hilly and uneven terrain.

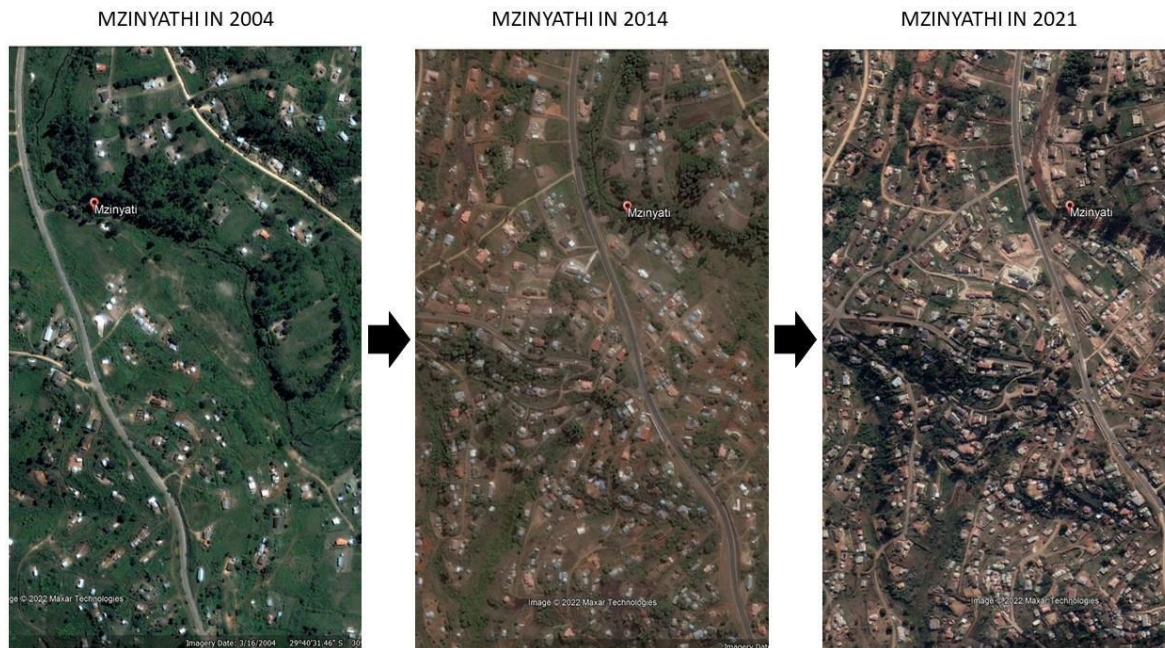


Figure 6: Mzinyathi settlement density between 2004 and 2021 (Google Earth Imagery, 2021)

5.5. Existing services and facilities

5.5.1. Water services

Water is an essential service within a community as it is used for domestic purposes such as drinking, washing, personal hygiene, and cooking. It is also needed for business and industrial purposes. Therefore, the provision of water to households is important as it will prevent people from using natural sources of water which can be contaminated if not treated properly. Plate 1 shows a communal Jojo tank in the study area supplied by the eThekweni Water and Sanitation department.



Plate 1: Communal Jojo tank (Photo: S Gwala)

Table 7 depicts the level of access to water in Mzinyathi. It shows that the municipality supplies water to about 27,5% of households. Most households (35,8%) still rely on water from rivers/streams while 18% of households have boreholes.

Table 7: Access to water in Mzinyathi (Statistics SA, 2012)

NO. OF HOUSEHOLDS WITH ACCESS TO WATER IN MZINYATHI	
Source of water	Percentage %
Regional/Local water scheme	27,5%
Borehole	18%
Spring	0,4%
Rainwater tank	0,9%
Dam/Pool/Stagnant water	0,2%
River/Stream	35,8%
Water vendor	8%
Water tanker	6,5%
Other	2,7%
Total	100%

5.5.2. Sanitation services

The current method of sewerage disposal used by most households is pit toilets with ventilation and informal sanitation systems which have been constructed by residents. About 72,6% of households use pit latrines with no ventilation, while 8% of households have no access to sanitation. Plate 2 shows an example of a self-built pit toilet.



Plate 2: Self built pit toilet in Mzinyathi (Photo: S Gwala)

Table 8 illustrates the level of access to sanitation in Mzinyathi. It confirms that there is currently no waterborne sewerage system in the broader area of Mzinyathi. It shows that only 0,5% of households have flush toilets connected to sewerage systems while 0,2% have flush toilets connected to septic tanks and about 8,6% of households have chemical toilets.

Table 8: Access to sanitation in Mzinyathi (Statistics SA, 2012)

NO. OF HOUSEHOLDS WITH ACCESS TO SANITATION IN MZINYATHI	
Toilet Facility	Percentage %
None	8%
Flush toilet (connected to sewerage system)	0,5%
Flush toilet (with septic tank)	0,2%
Chemical toilet	8,6%
Pit toilet with ventilation	0,7%
Pit toilet without ventilation	72,6%
Bucket toilet	9,3%
Other	0,2%
Total	100%

The pit latrine system has various shortcomings and numerous risks in terms of health and hygiene. Informal sanitation systems are generally unventilated pits, with no wall or floor linings. In some cases, these systems are erected on ground conditions where penetrability rates are relatively low, which may result in poor permeation of sewage. The long-term effects of the continued use of informal sanitation systems result in challenges such as raw effluent seeping through the pit walls and draining into lower properties which poses a health risk and environmental hazard. Upgrading sanitation depends on the available or planned water capacity.

5.5.3. Electricity services

Electricity plays a vital role in community development as it is used for lighting and cooking. This service is one of the most important pull factors for potential investors. Likewise, electricity is a source of power to run industries, offices, and businesses in general. For instance, frequent electricity supply interruption can lead to significant losses to the industrial sector, and the absence of electricity can discourage investors from starting a business in the area. Plate 3 shows an electric pole along the main road that services the dwelling nearby.



Plate 3: Electricity in Mzinyathi (Photo: S Gwala)

Table 9 shows the number of households with access to electricity in Mzinyathi. It shows that Mzinyathi is serviced with electricity but that the whole area is not covered. About 58,8% of households use electricity for cooking, 38,8% for heating, and 38,8% for lighting. Only about

21,3% of households use candles for lighting, while 35,2% of households use wood for cooking and 21,3% use wood for heating.

Table 9: Access to electricity in Mzinyathi (Statistics SA, 2012)

NO. OF HOUSEHOLDS WITH ACCESS TO ELECTRICITY IN MZINYATHI			
Energy source	Cooking %	Heating %	Lighting %
Electricity	56,8%	38,8%	38,8%
Gas	2,1%	0,9%	0,9%
Paraffin	5,2%	1,1%	1,1%
Solar	0%	0,4%	0%
Candles	0%	0%	21,3%
Wood	35,2%	21,3%	0%
Coal	0,2%	0%	0%
Animal Dung	0%	0,2%	0%
Other	0,1%	0%	0%
None	0,5%	37,2%	0,2%
Total	100%	100%	100%

5.5.4. Refuse collection services

Refuse collection is an important municipal service within a community because it reduces the effects of pollution. Poor waste management can cause air and water pollution, which: (a) affects health and the conservation of surface and underground water; (b) affects the environmental status quo; (c) weakens the municipality's income from the waste collection (refuses collection fees), and (d) exposes the community to hazardous environmental conditions. Plate 4 depicts waste trapped in a stormwater management system due to poor waste management.



Plate 4: Waste trapped in a stormwater system in Mzinyathi (Photo: S Gwala)

Table 10 illustrates the level of access to refuse removal in Mzinyathi. It reveals that only 23,5% of households in Mzinyathi have their refuse removed by the municipality at least once a week. Most households (64,8%%) use their refuse dump, and 10% have no rubbish disposal.

Table 10: Access to refuse collection in Mzinyathi (Statistics SA, 2012)

NO. OF HOUSEHOLDS WITH ACCESS TO REFUSE REMOVAL IN MZINYATHI	
Refuse Disposal	Percentage %
Removed by local authority/private company at least once a week	23,5%
Removed by local authority/private company less often	1,3%
Communal refuse dump	0,1%
Own refuse dump	64,8%
No rubbish disposal	10%
Other	0,4%
Total	100%

Poor solid waste management can therefore have detrimental social and economic effects on the study area and on eThekweni in general. If well managed, however, it can generate revenue for the municipality and result in economic spinoffs to the community through waste recycling activities, etc. Plate 5 shows a recycling operation consisting of used bottles that are being stacked in a large bag for easy disposal and collection.



Plate 5: Recycling activities in Mzinyathi (Photo: S Gwala)

5.5.5. Public facilities

Public facilities play a vital role in community development. The existing public facilities are outlined in Table 11.

Table 11: Existing public facilities within Mzinyathi

EXISTING PUBLIC FACILITIES IN MZINYATHI	
TYPE OF FACILITY	NO.
Qadi Tribal Court	1
Qadi clinic	1
Community hall with councillor's office	1
Umzinyathi Primary School	1
Mqhawe Secondary School	1
Community library	1
Place of worship	3
Total	9

Plate 6 shows the Qadi Tribal Court which is located in the study area. The Tribal Court is used by the Qadi Traditional Council to hold its own meetings and to deal with the community at large.



Plate 6: Qadi Tribal Court (Photo: S Gwala)

The Qadi clinic is depicted in Plate 7. It operates 24 hours a day, offering primary health care to the community of Mzinyathi and surrounding areas. The clinic was recently renovated.



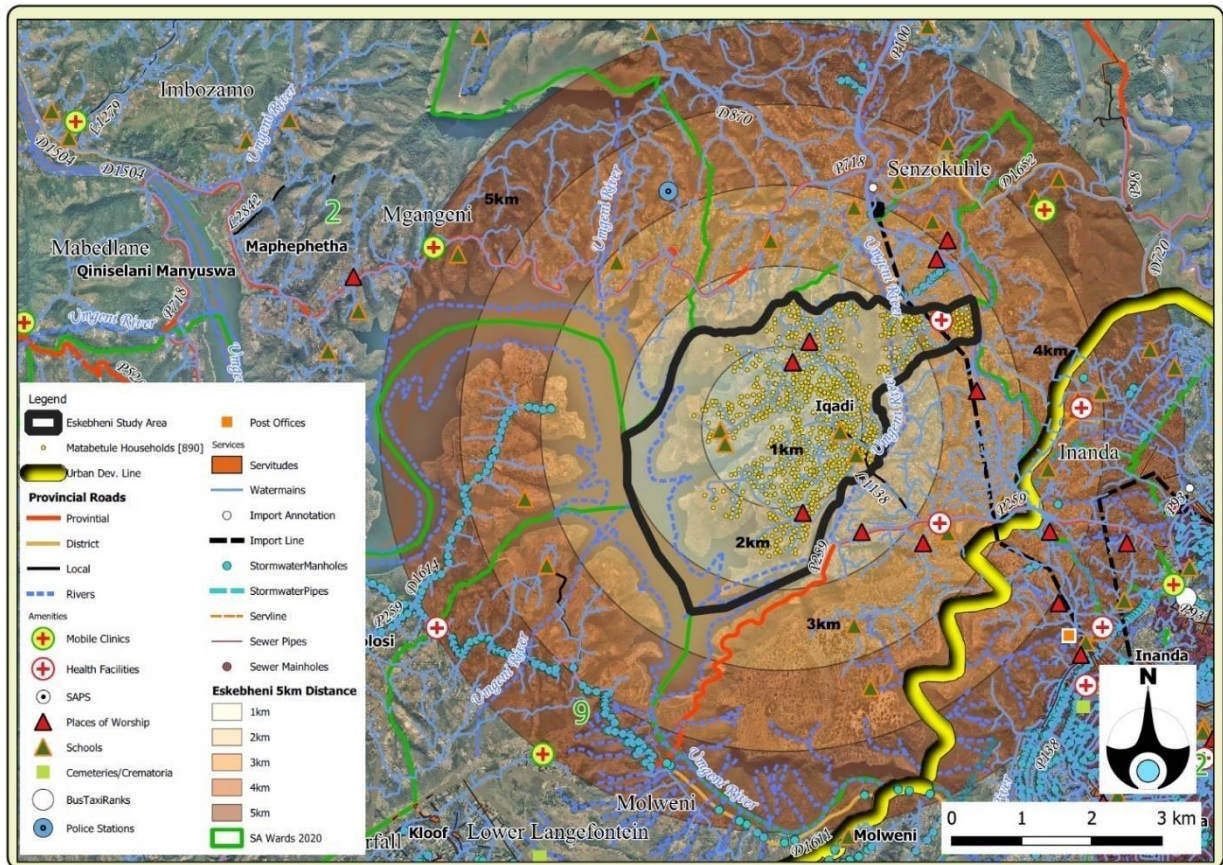
Plate 7: Qadi Clinic (Photo: S Gwala)

Plate 8 shows the community hall which houses the councillor's office and the library. This facility operates as a multipurpose centre.



Plate 8: Qadi Community Hall and Umzinyathi Library (Photo: S Gwala)

Map 2 depicts the distribution of existing public facilities in Mzinyathi within a maximum of a 5km radius walking distance for households. It shows that most of the households are within 2km walking distance from the various existing facilities. However, the topography of the area does not make it suitable for walking, especially for households which are not closer to these public facilities.



Map 2: Public facilities in Mzinyathi (Source: eThekwini GIS, 2017)

5.6. Environmental analysis

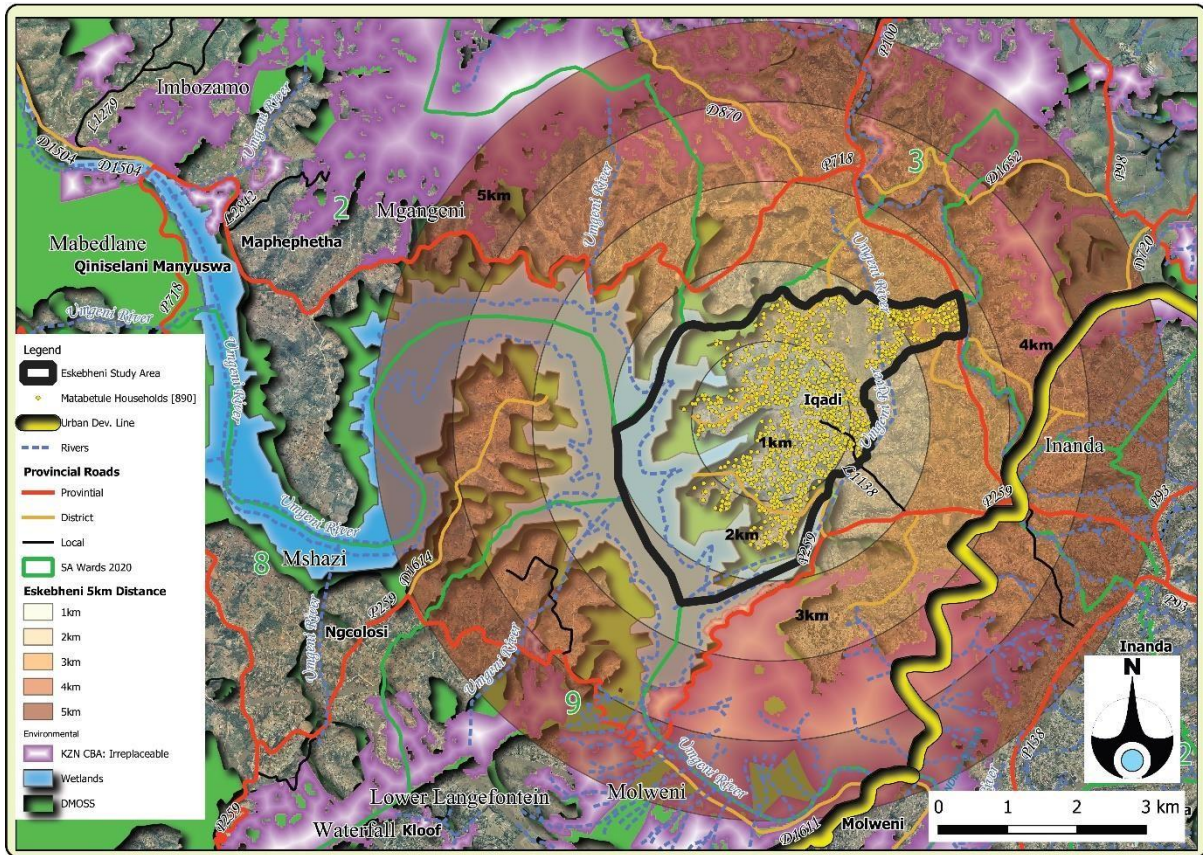
The Durban Metropolitan Open Space System (D'MOSS) is a system of open spaces covering 74671 ha of land and water containing biologically valuable areas connected to the available network of open spaces. DMOSS was mapped by the Biodiversity Planning Division of the Environmental Planning and Climate Protection Division (EPCPD) using Systematic Conservation Planning, which is recognized by national and provincial environmental agencies as an accepted method for prioritizing biodiversity and ecosystem service areas in South Africa. D'MOSS includes dams, estuaries such as sand and mud flats, mangroves and swamps, forests including dunes, coastal and desert forests; wetlands, including floodplains, swamp forests and reedbeds; grasslands, including the endangered Ngongoni and Sandstone Sourveld; dry valley; and including dense woodland (eThekwini GIS, 2017).

Several dwellings are located either on the D'MOSS layer or within a 1km radius as shown in Plate 9. The encroachment of dwellings on the D'MOSS is a concern for the municipality.



Plate 9: Dwelling houses located on D'MOSS (Photo: S Gwala)

Map 3 shows the D'MOSS layer in the study area. The biodiversity protected within the D'MOSS provides a range of ecosystem services that play an important role in climate change mitigation. The disturbance of these ecosystems harms the climate adaptation of the municipality which leads to an increase in adverse weather temperatures, a rise in sea level, increased floods, and soil erosion (eThekwini GIS, 2017).



Map 3: Environmental analysis of Mzinyathi (eThekweni GIS, 2017)

5.7. Conclusion

This chapter has provided the background to Mzinyathi looking at the regional context, demographics, available services, community spaces and environmental characteristics of the area. The findings highlighted that the demographic profile of Mzinyathi is largely black African, with a predominance of females and a predominance of youth. Education levels are low, and most people are unemployed. There is a backlog in service provision and some households are in environmentally sensitive areas. The next chapter presents research findings and analysis of the effectiveness of municipal planning initiatives in Mzinyathi District.

Chapter 6: Findings, analysis, and results

6.1. Introduction

Chapter 6 provides an analysis, interpretation, and synthesis of the research findings. The research study was conducted in the Mzinyathi study area between December 2020 and December 2021. The research data was collected through a survey questionnaire in the community, and interviews were conducted with the traditional leadership, the Ward 3 councillor, and eThekweni municipal officials. The survey questionnaire was undertaken with 153 respondents in the Mzinyathi study area. The survey dealt with different themes such as the overall profile of respondents, the profile of household heads, household characteristics, strategic spatial planning, statutory planning awareness, migration trends, community involvement in municipal planning, the effectiveness of municipal planning, and municipal planning within the COVID-19 context. The findings are presented through graphs and tables as well as statistical tabulations and inferential statistics.

Cross-tabulation was used to identify whether there was a statistically significant difference between the means of different groups. This test of significance considers what happened in the sample versus what would happen under independence (where independence represents no relationship between the variables). In the approach of testing the hypotheses, the p-value was set at $P < 0.05$, which indicates a 95% confidence that a difference exists so that the alternate or null hypothesis (that no relationship exists) can be rejected. In this research study, the variables of interest include ethnic group, position in the household, gender group, and age group, while the dependent variables include familiarization with municipal planning concepts by the community, their involvement in community development, their perceptions of the role of traditional leadership in municipal planning, and effectiveness of municipal planning in the rural context. The findings are discussed within the context of municipal planning interventions of eThekweni municipality in dense rural settlements.

6.2. Mzinyathi residents' perception of the role of municipal planning in Mzinyathi area

6.2.1. Overall profile of respondents

The study area overlaps two wards, namely Ward 3 and Ward 108, in terms of the ward demarcation of 2016. A total of 153 questionnaires were administered for the study with most respondents (142) being in Ward 3 and the remainder (11) being in Ward 108. As shown in Table 12, this translates to 92,8% of respondents who reside in Ward 3, with 7,2% residing in

Ward 108. It can be deduced that while the people of Mzinyathi are under the jurisdiction of the Qadi Traditional Authority, two councillors serve in the area in terms of municipal service delivery.

Table 12: Demographic profile of respondents

Demographic profile of respondents		
Participants characteristics	Frequency (No.)	Percentage (%)
Ward location		
3	142	92.8
108	11	7.2
Total	153	100
Gender		
	Frequency (No.)	Percentage (%)
Female	87	56.9
Male	66	43.1
Total	153	100.0
Age group (years)		
	Frequency (No.)	Percentage (%)
-18 - 25	23	15.0
26 -30	20	13.1
31 – 35	16	10.5
36 – 40	12	7.8
41 – 45	13	8.5
46 – 50	11	7.2
51 – 55	9	5.9
56 – 60	14	9.2
> 60	23	15.0
Ethnic group		
	Frequency (No.)	Percentage (%)
African/ Black	153	100.0
Citizenship		
	Frequency (No.)	Percentage (%)
South African	152	99.3
Non-South African	1	0.7

Table 12 also shows the profile of the respondents. Most of the respondents are female (56,9%), between the ages of 18-35 years (23,5%), all African/black (100%), and South African

(99,3%). This profile is a representation of the statistics of the broader area as indicated by the ward statistics.

6.2.2. Household characteristics

Household characteristics are depicted in Table 13. Generally, there were more female-headed households (51,0%), headed by the African/black population group (98,0%), headed by a person over the age of 60 (20,0%), with the home language being isiZulu (100%) and mostly married couples (58,2%). The household characteristics correlated with the ward statistics but revealed that this area was in a state of transformation. While female-headed households are distinctive in rural areas, the age group of household heads in the area is changing in that they are becoming younger.

Table 13: Demographics within the household

Demographics within the household		
Participant characteristics	Frequency (No.)	Percentage (%)
Position in the household		
Head or acting of the household	74	48.4
Spouse	23	15.0
Child	56	36.6
Gender of the household head		
	Frequency (No.)	Percentage (%)
Female	78	51.0
Male	75	49.0
Age group of the household head		
	Frequency (No.)	Percentage (%)
< 18	1	0.7
26 -30	4	2.6
31 – 35	8	5.2
36 – 40	14	9.2
41 – 45	20	13.1
46 – 50	25	16.3
51 – 55	22	14.4
56 – 60	27	17.6
> 60	32	20.9
Citizenship of the household head		
	Frequency (No.)	Percentage (%)
South African	153	100.0
Population group of the household head		
	Frequency (No.)	Percentage (%)

African/ Black	150	98.0
Coloured	3	2.0
Home language of the household head		
	Frequency (No.)	Percentage (%)
Isizulu	153	100.0
Marital status of the household head		
	Frequency (No.)	Percentage (%)
Single	52	34.0
Married	89	58.2
Divorced / Separated	2	1.3
Widow	10	6.5

Most of the households had three to six members with the age groups generally youthful. A household in rural areas is usually characterized by extended family members, and six members within a single household is typical in rural areas. The majority of households resided in formal dwelling houses (94,8%). Some of these formal dwellings are quite large as shown below in Plate 10.



Plate 10: An example of formal dwelling houses in Mzinyathi (Photo: S Gwala)

The tenure status of the study area is that dwelling houses are owned and fully paid off because they are built on tribal land where Permission to Occupy certificates are issued to the occupants. The estimated value of the dwellings is between R100 000 and R300 000 as indicated in Table 14.

Table 14: Household characteristics

Household characteristics		
Participant Characteristics	Frequency (No.)	Percentage (%)
Size of household		
1- 2 persons	11	7.2
3- 4 persons	50	32.7
5- 6 persons	50	32.7
7 or more people	42	27.5
The age group of household members		
	Frequency (No.)	Percentage (%)
0 – 5 Years	50	32.7
6 – 10 Years	89	58.2
11 -14 Years	91	59.5
15 – 20 Years	91	59.5
21 – 25 Years	86	56.2
26 – 30 Years	58	37.9
31 – 35 Years	47	30.7
36 – 40 Years	43	28.1
41 – 45 Years	35	22.9
46 – 50 Years	35	22.9
51 – 55 Years	31	20.3
56-60 Years	39	25.5
> 60 Years	35	22.9
Dwelling type		
	Frequency (No.)	Percentage (%)
Formal dwelling house	145	94.8
Traditional dwelling/hut/structure made of traditional materials	8	5.2
Tenure status		
	Frequency (No.)	Percentage (%)

Rented	1	0.7
Owned and fully paid off	152	99.3
The estimated value of the dwelling		
	Frequency (No.)	Percentage (%)
Less than R50 000	4	2.6
R50 001 - R100 000	16	10.5
R100 001 - R200 000	22	14.4
R200 001 - R300 000	51	33.3
R300 001 - R400 000	29	19.0
R400 001 - R500 000	22	14.4
>R500 000	9	5.9

Most households in the area relied on a monthly income from formal employment (44,3%), followed by those that relied on government grants (30,7%), and informal employment (5,0%). It can be deduced from the total household income that the standard of living is characterized by a mixture of low-middle to high-income households. In addition, on average, most households had one to two employed household members and one to two household members who were school-going or doing some skills training as shown in Table 15. Where the household size was large, there were many unemployed members, suggesting that these households were low-income or susceptible to poverty, while the smaller households had many members who are employed.

Table 15: Employment profile of households

Employment profile of households		
Household members currently employed		
	Frequency (No.)	Percentage (%)
None	50	32,7
1 – 2 people	91	59,5
3– 5 people	7	4,6
> 5 people	4	2,7
Household members currently unemployed		
	Frequency (No.)	Percentage (%)
None	43	28.1
1 – 2 people	63	41.2
3– 5 people	39	25.5
> 5 people	8	5.2
Household members who are school-going or doing some skills training courses		

	Frequency (No.)	Percentage (%)
None	20	13.1
1 – 2 people	76	49.7
3– 5 people	54	35.3
> 5 people	3	2.0
Total household monthly Income		
	Frequency (No.)	Percentage (%)
No income	1	0.7
Less than R1000	2	1.3
R1001 - R3000	44	28.8
R3001 - R5000	23	15.0
R 5001 - R 10 000	27	17.6
R 10 001 - R 15 000	2–	17.0
R 15 001 - R 20 000	14	9.2
More than R20 000	16	10.5

6.2.3. Strategic spatial planning and statutory planning awareness

Generally, most households were not aware of existing strategic and spatial plans that can be conceptualized as the strategic spatial planning that form the hierarchy of plans of eThekweni Municipality. This is shown in Figure 8. On the contrary, the integrated development plan (IDP) is the only municipal plan which had the most positive responses, with 16,3% saying they were aware of this plan. The difference between the IDP and other municipal plans is that it has gained much traction over a long period receiving much exposure due to its annual reviews.

The IDP Representative Forums have also contributed to its publicity because these forums ensure that all stakeholders are represented. While the IDP has received positive responses, the possibility that the general community is not entirely aware of its content is relatively high due to the review process concentrating on compliance issues. For instance, the IDP contains the budget and future projects of the area that will be implemented within five years.

The lack of awareness of strategic and spatial plans can be attributed to the technical expertise required to compile strategic and spatial plans. In the development of such plans, consultation occurs at a high level and the broader community is involved at the end of the project. The community is usually represented by a person who is nominated by the existing community structures such as the traditional authority, ward councillor, and community based organizations. The lack of proper coordination also contributes to a lack of awareness. eThekweni Municipality is responsible for planning for the whole municipal area including rural and tribal areas such as Mzinyathi, while traditional leaders exercise control on land use management as a parallel structure. The implication for municipal planning is that the

municipality and traditional leadership might not share a collective long-term vision, goals or objectives for the area. The lack of coordination at an institutional level during the development of these strategic and spatial plans means that public participation does not filter down to the grassroots level.

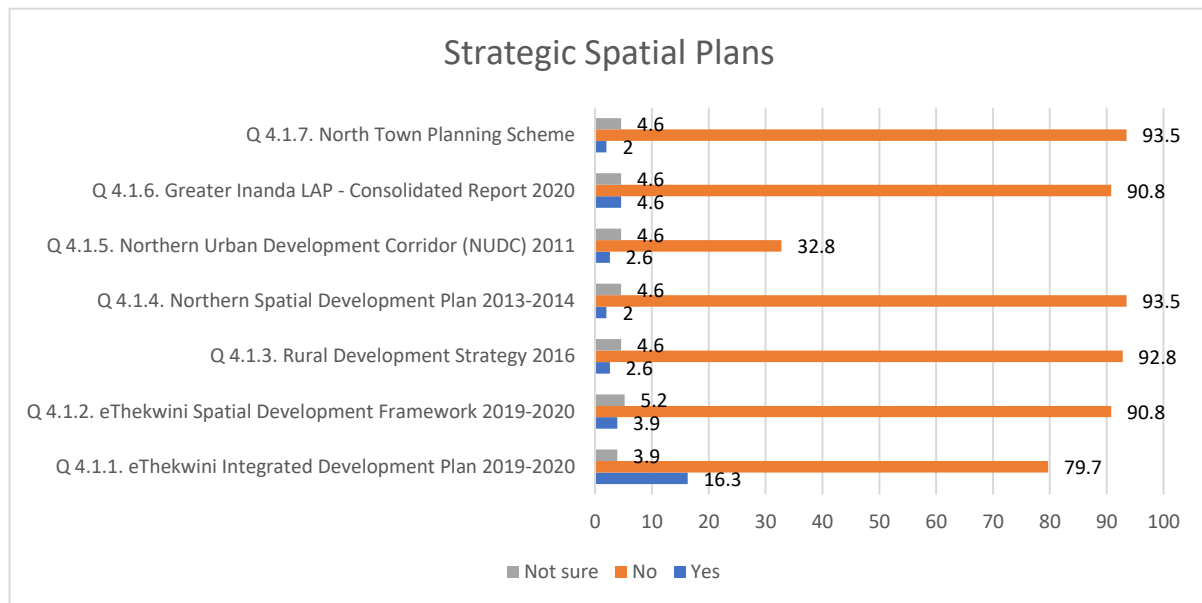


Figure 7: Strategic spatial plans

Most households were also not aware of the administrative structures and tools embodied in statutory planning as shown in Figure 8. This includes not being part of the department responsible for Land Use Management, the Spatial Planning Land Use Management Act of 2013 that deals with redressing imbalances of the past, the National Building Regulations of 1977 that requires any person to submit building plans to the local authority for approval, and the development process of the scheme that separates land into zones and provides development parameters and the D'MOSS layer that has identified areas of environmental significance where development should not be permitted. The lack of awareness of statutory planning means that the traditional authority is regarded as the face of the municipality. The land allocation system is representative of the traditional governance in the area. The residents have pre-existing rights to develop on their designated land without the requirement of submitting any building plans for approval. The traditional authority is empowered with the responsibility to allocate land and resolve disputes in the community that are land related.

The Implication for municipal planning is that the development controls and land use rights are managed through statutory plans with those practised in Mzinyathi. The challenge is to integrate these plans with existing indigenous knowledge systems and practices. The existence of a dual governance system on land use management has the potential to create conflicts and contestations unless there is agreement and cooperation on how both systems must operate. It also becomes difficult to implement and make the public aware of such plans when there is no agreement at an institutional level.

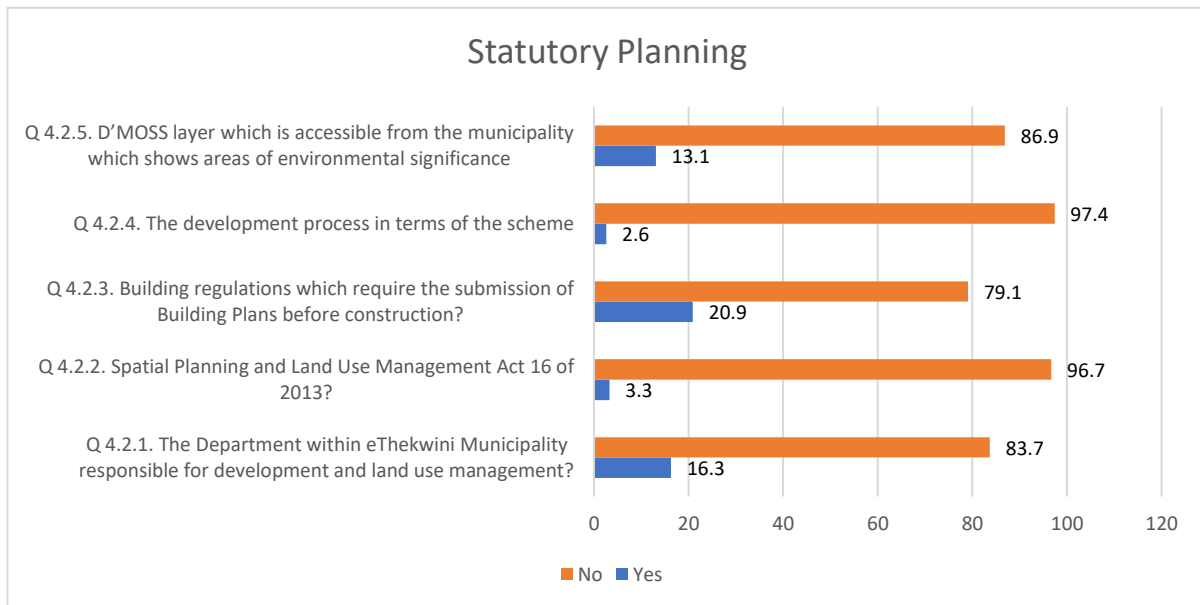


Figure 8: Statutory Planning

6.2.4. Migration trends

The migration trends in Table 16 show that most of the households (98,7%) that reside in Mzinyathi are from the province of KwaZulu Natal, have stayed in the residence for more than 10 years (54,3%), reside in the residence for at least four nights a week and have done so for the last six months or intend to reside in this residence for at least four nights for the next six months (90,8%), and are unlikely to move away from this area (82,4%). These findings suggest that most households that migrated into the study area came from smaller surrounding towns within the province of KwaZulu Natal. The length and period of their residence imply that they can no longer be regarded as temporary residents because most have stayed for more than a decade. This residence can be treated as their main one because they do not foresee themselves moving away from the area.

Migration trends affect population statistics of the area which require all households that are now part of Mzinyathi to be factored into municipal plans of the municipality. The implication for municipal planning is that the lack of accurate population statistics makes it difficult for the Municipality to make an informed conclusion on future infrastructure projections. Municipal plans are developed based on population data that is outdated because of the year intervals that it is collected and published. Migration trends also influence changes in the homogeneity of the community due to the diversity of backgrounds and beliefs. Public participation can be affected because some households might not be willing to participate in planning processes as they consider themselves or others as outsiders.

Table 16: Household migration trends

Household migration trends		
In which province did the household previously reside?		
	Frequency (No.)	Percentage (%)
Gauteng	1	0.7
KwaZulu Natal	151	98.7
Eastern Cape	1	0.7
Total	153	100.0
When did your household move into the residence?		
	Frequency (No.)	Percentage (%)
3 years ago	12	7.8
3-5 years ago	24	15.7
5-10 years ago	34	22.2
More than 10 years ago	83	54.3
	153	100.0
Does the household reside in the residence for at least four nights a week and has done so for the last six months OR intends to reside in this residence for at least four nights for the next six months?		
	Frequency (No.)	Percentage (%)
Yes	139	90.8
No	14	9.2
Total	153	100.0
How likely or unlikely is it that you will never move away from 'this area'?		
	Frequency (No.)	Percentage (%)
Very likely	9	5.9
Likely	8	5.2
Unlikely	126	82.4

Don't know	10	6.5
Total	153	100.0

6.2.5. Community involvement in municipal planning

The community involvement in municipal planning is depicted in Table 17. This table shows that most of the households (66,7%) knew their ward councillor, the local municipal offices (in this case the councillor's offices) were easily accessible (56,9%), and they received information about municipal plans and programmes through loud hailing (95,5%). Households that could easily access the ward councillor's office were situated mainly along the access roads. Dwellings located on steep terrain mean that some people had to walk a long distance or pay transport fares to access the office, which was a cost burden on low-income households.

Most of the households were not aware of public meetings which are usually called by the representatives of the municipality to discuss issues on municipal plans/programmes within the area. Their lack of awareness of the occurrence of such meetings results in their not attending such meetings. Households that were not aware of public meetings were those that were far away from the access roads where even the loud hailing could not reach. This could be a concern for the municipality in that the plans that it develops might not be representative of the community. This might also mean that the municipality must try other communication platforms to be able to communicate the message.

Table 17: Household community involvement dynamics

Do you know your ward councillor?		
	Frequency (No)	Percentage (%)
Yes	102	66.7
No	51	33.3
Total	153	100.0
How accessible are the local municipal offices (e.g., Sizakala Centre) from your area?		
	Frequency (No)	Percentage (%)
Easily accessible	87	56.9
Not easily accessible	66	43.1
Total	153	100.0
How do you receive information about municipal plans and programmes?		
	Frequency (No)	Percentage (%)
Radio	2	1.3

Newspaper	1	0.7
Ward councillor	1	0.7
Loud hailing	146	95.5
Other	3	2.0
Total	153	100.0
Are you aware of any public meetings which are usually called by the representatives of the municipality to discuss issues pertaining to the municipal plans/programmes in your ward?		
	Frequency (No)	Percentage (%)
Yes	71	46.4
No	82	53.6
Total	153	100.0
What is the occurrence of such public meetings?		
	Frequency (No)	Percentage (%)
None	51	33.4
Once every week	3	2.0
Once a month	7	4.6
Once every 3 months	35	22.9
Once every 6 months	27	17.6
Not sure	30	19.6
Total	153	100.0

6.2.6. Effectiveness of municipal planning

Table 18 indicates the community's perception of the roles and responsibilities of the Qadi Traditional Authority in municipal planning. Most households (70,6%) perceived that the primary role and responsibility of the traditional authority in Mzinyathi is to reserve and allocate land for residential use within their area of jurisdiction. This can be attributed to a common understanding amongst households that the area falls on tribal land and land allocation for residential purposes is solely a responsibility of the traditional authority. The majority of respondents (99,3%) indicated that the land allocation process within the area is delegated to Izinduna by the Traditional Council.

Notably, households did not consider other roles and responsibilities to be conducted by the traditional authority such as ensuring development within their area of jurisdiction, influencing decision-making and actions of the municipality within their area of jurisdiction, or being involved in the budget allocation process for their communities. Many of these activities could be understood to be undertaken by the government, with the traditional authority having no jurisdiction due to limited their legislative powers and financial resources. In addition, the preservation and conservation of agricultural land and natural resources were also not seen as a role and responsibility of the traditional authority. The encroachment of settlements on

agricultural and environmentally sensitive land has possibly contributed to this perception because land allocation is done by the traditional authority.

Generally, the perceived relationship between traditional leaders and ward councillors was average and there was no fair consultation for public participation in development programmes by either traditional leaders or ward councillors. It is important to note that public participation and consultation could be more favourable to those households that can easily access the tribal court and councillor’s office.

Table 18: Perceived roles and responsibilities of the traditional authority in municipal planning

As depicted in Table 19, most of the households knew practically nothing about urban sprawl, sustainability, and conservation of natural resources but have a fair amount of knowledge about air and water pollution. Their knowledge of air and water pollution could be related to disposing of their refuse. In some cases, households must burn their waste because refuse collection is not done by the municipality in rural areas. This waste tends to pollute the air and water which can result in a health hazard. Knowledge of environmental conservation might be limited because there are very few spaces that have not been built up. In terms of the roles and responsibilities in the protection and conservation of the environment, most households strongly agreed that businesses, the municipality, and individual citizens all have a role to play in solving environmental problems. The municipality can contribute through environmental awareness campaigns and individuals should develop a clean habit toward the environment.

Table 19: Environmental protection and conservation

The perceived roles and responsibilities of the traditional authority in municipal planning		
Ensure development within their area of jurisdiction		
	Frequency (No)	Percentage (%)
True	43	28.1
False	87	56.9
Don't know	23	15.0
Total	153	100.0
Influence decision-making and actions of the municipality within their area of jurisdiction		
	Frequency (No)	Percentage (%)
True	38	24.8
False	83	54.2
Don't know	32	20.9

Total	153	100.0
Involved in the budget allocation process for their communities		
	Frequency (No)	Percentage (%)
True	27	17.6
False	86	56.2
Don't know	40	26.1
Total	153	100.0
Maintain law and order within the community		
	Frequency (No)	Percentage (%)
True	48	31.4
False	82	53.6
Don't know	23	15.0
Total	153	100.0
Involved in the decision-making of job and economic opportunities		
	Frequency (No)	Percentage (%)
True	18	11.8
False	106	69.3
Don't know	29	19.0
Total	153	100.0
Protection of land for agricultural activities		
	Frequency (No)	Percentage (%)
True	43	28.1
False	93	60.8
Don't know	17	11.1
Total	153	100.0
Protection and conservation of the environment		
	Frequency (No)	Percentage (%)
True	44	28.8
False	91	59.5
Don't know	18	11.8
Total	153	100.0
Reserve and allocate land for residential use within their area of jurisdiction		
	Frequency (No)	Percentage (%)
True	108	70.6
False	33	21.6
Don't know	12	7.8
Total	153	100.0
Reserve and allocate land for residential uses within their area of jurisdiction for public uses		
	Frequency (No)	Percentage (%)
True	29	19.0

False	108	70.6
Don't know	16	10.5
Total	153	100.0
The perceived relationship between traditional leaders and ward councillors		
	Frequency (No)	Percentage (%)
Poor	61	39.9
Average	79	51.6
Good	13	8.5
Total	153	100.0
Is there any fair consultation for public participation in development programmes by either traditional leaders or ward councillors?		
	Frequency	Percent
Yes	39	25.5
No	114	74.5
Total	153	100.0
Who is eligible to apply for the occupation of land?		
	Frequency (No)	Percentage (%)
A person who grew up in the community	25	16.3
A person from outside the community	58	37.9
There are no restrictions	69	45.1
Total	152	99.3
System	1	0.7
	153	100.0
Who is responsible for the land allocation process?		
	Frequency (No)	Percentage (%)
Induna who is delegated by the Traditional Council	152	99.3
Community-based organization	1	0.7
Total	153	100.0
Are your residential boundaries fixed?		
	Frequency (No)	Percentage (%)
Yes	153	100.0
Did you receive any evidence for the right to occupy the land?		
	Frequency (No)	Percentage (%)
Yes	150	98.0
No	3	2.0
Total	153	100.0

Most households were strongly dissatisfied with the level of infrastructure services, which included the piped water system for drinking water, the sanitary sewer system, waste removal and/or recycle services, access roads, and the drainage system, but were neutral on social welfare, and strongly satisfied with the level of electricity as shown in Table 20. Due to the

terrain, the slope of the area, and unplanned settlements, the installation of infrastructural services would be difficult because it would have to follow the settlement patterns. This exercise could be costly because some settlements would have to be moved to allow for new roads, water reticulation, and sewerage systems. Plate 11 shows an access road in the study area which is gravel. The dissatisfaction with the condition of roads is linked to the lack of stormwater management, which is problematic for road users, especially on rainy days.



Plate 11: Gravel Road in Mzinyathi (Photo: S Gwala)

Table 20 depicts the level of satisfaction with access to municipal and other related services. Households were more satisfied with the level of cellphone/internet coverage and internet broadband than other services in the study area.

Table 20: Level of satisfaction with the access to municipal and other related services

Level of satisfaction with the access to municipal and other related services		
The piped water system for drinking water		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	90	58.8
Dissatisfied	19	12.4
Neutral	16	10.5
Satisfied	15	9.8
Strongly satisfied	13	8.5
	153	100.0
Sanitary sewer system		

	Frequency (No)	Percentage (%)
Strongly dissatisfied	88	57.5
Dissatisfied	16	10.5
Neutral	18	11.8
Satisfied	19	12.4
Strongly satisfied	12	7.8
	153	100.0

Waste removal/recycling services		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	79	50.3
Dissatisfied	29	19.0
Neutral	25	16.3
Satisfied	12	7.8
Strongly satisfied	12	7.8
	153	100.0

Electricity		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	14	9.2
Dissatisfied	12	7.8
Neutral	21	13.7
Satisfied	42	27.5
Strongly satisfied	64	41.8
	153	100.0

Access roads		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	85	55.5
Dissatisfied	41	26.8
Neutral	14	9.2
Satisfied	7	4.6
Strongly satisfied	6	3.9
	153	100.0

Drainage system		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	86	56.2

Dissatisfied	42	27.5
Neutral	7	4.6
Satisfied	11	7.2
Strongly satisfied	7	4.6
	153	100.0
Cellular phone and internet coverage		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	32	20.9
Dissatisfied	13	8.5
Neutral	35	22.9
Satisfied	44	28.8
Strongly satisfied	29	19.0
	153	100.0
Internet/Broadband services		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	33	21.6
Dissatisfied	13	8.5
Neutral	35	22.9
Satisfied	45	29.4
Strongly satisfied	27	17.6
	153	100.0
Social Welfare		
	Frequency (No)	Percentage (%)
Strongly dissatisfied	27	17.6
Dissatisfied	9	5.9
Neutral	56	36.6
Satisfied	29	19.0
Strongly satisfied	34	22.2
	153	100.0

6.2.7. COVID-19 and municipal planning

The impact of COVID-19 on municipal planning within the study area is illustrated in Table 21. Most households (71,9%) were not aware of any COVID-19 related cases within the area, did not know how long it would continue to affect their area (47,1%), and did not believe it affected

municipal service delivery (56,2%), public transport (58,2%), safety/security (58,2%), of communication of municipal plans/programmes to the community (64,0%). While the COVID19 pandemic had a national impact in numerous aspects, in Mzinyathi the impact might not have been devastating because households managed to adjust. The implication for municipal planning is that the municipality had to identify various means to reach the community in terms of service delivery. This included communication of municipal plans and programmes through social media due to restrictions on physical interaction.

Table 21: COVID-19 and municipal planning

COVID-19 and municipal planning		
Are you aware of any COVID-19-related cases within your area?		
	Frequency (No)	Percentage (%)
Yes	43	28.1
No	110	71.9
	153	100.0
Have COVID-19 regulations affected municipal service delivery		
	Frequency (No)	Percentage (%)
Yes	46	30.1
No	86	56.2
Not sure	21	13.7
	153	100.0
Have COVID-19 regulations affected the status of public transport		
	Frequency (No)	Percentage (%)
Yes	41	26.8
No	89	58.2
Not sure	23	15.0
	153	100.0
Have COVID-19 regulations affected safety/security		
	Frequency (No)	Percentage (%)
Yes	37	24.2
No	89	58.2
Not sure	27	17.6
	153	100.0
Have COVID-19 regulations affected the communication of municipal plans/programmes to the community?		
	Frequency (No)	Percentage (%)
Yes	31	20.3
No	98	64.0
Not sure	24	15.7
	153	100.0

For how long do you estimate COVID-19 will continue affecting your area?		
	Frequency (No)	Percentage (%)
Less than a year	5	3.3
1-3 years	27	17.6
More than 3 years	49	32.0
Do not know	72	47.1
	153	100.0

6.2.8. Casual associations in municipal planning and dense rural settlements

Cross-tabulations were used to establish if there were associations between the independent and dependent variables in the research study. Independent variables comprised household demographics and characteristics.

6.2.8.1. Cross-tabulation between variables of interest and gender of household head

Table 22 shows that the gender of the household head is significantly associated with variables of interest. There were more female-headed households than there were male-headed households in Mzinyathi. The socio-economic conditions relating to the gender of the household head signified low-income households that were mostly female-headed and earning an estimated monthly household income of between R1001 – R3000. The relationship between the gender of the household head and socio-economic conditions indicates that for municipal planning to be effective in Mzinyathi, consideration of gender representation amongst household heads and addressing issues of poverty and unemployment is paramount.

Notably from Table 22, the lack of awareness about the department within the municipality responsible for the development and land use management was high amongst female-headed households. Regardless of the gender of the household head, most households indicated that the traditional leadership was not involved in the budget allocation process for their communities and that the relationship between the traditional leaders and ward councillors was average. Also notable was that regardless of the gender of the household head, most households (55,7%) were not satisfied with the state of the drainage system (p-value 0,003).

Table 22: Cross-tabulation between the variable of interest and gender of household head

Variable of interest		Gender of household head	
		Female	Male
Employed members	household	Chi-square = 0,001	
		78 (51,3%)	74 (48,7%)

None		35 (23,0%)	15 (9,9%)
1-2 people		40 (26,3%)	51 (33,6%)
3-5 people		0 (0,0%)	7 (4,6%)
>5 people		3 (2,0%)	1 (0,7%)
Estimated total monthly household income	Chi-square = 0,033	78 (51,0%)	75 (49,0%)
No income		0 (0,0%)	1 (0,7%)
Less than R1000		2 (1,3%)	0 (0,0%)
R1001 - R3000		28 (18,3%)	16 (10,5%)
R3001 - R5000		15 (9,8%)	8 (5,2%)
R5001 - R10 000		15 (9,8%)	12 (7,8%)
R10 001 - R15 000		8 (5,2%)	18 (11,8%)
R15 001 - R20 000		4 (2,6%)	10 (6,5%)
More than R20 000		6 (3,9%)	10 (6,5%)
Awareness about the Department within eThekweni Municipality responsible for development and land use management	Chi Square = 0,038	78 (51,0%)	75 (49,0%)
Yes		8 (5,2%)	17 (11,1%)
No		70 (45,8%)	58 (37,9%)
The role of traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,045	78 (51,0%)	75 (49,0%)
True		11 (7,2%)	16 (10,5%)
FALSE		40 (26,1%)	46 (30,1%)
Don't know		27 (17,6%)	13 (8,5%)
Perception of the relationship between traditional leaders and ward councillors	Chi Square = 0,054	78 (51,0%)	75 (49,0%)
Poor		38 (24,8%)	23 (15,0%)
Average		33 (21,6%)	46 (30,1%)
Good		7 (4,6%)	6 (3,9%)
Level of satisfaction with the drainage system	Chi Square = 0,003	78 (51,7%)	73 (48,3%)
Strongly Dissatisfied		38 (25,2%)	46 (30,5%)
Dissatisfied		26 (17,2%)	16 (10,6%)
Neutral		0 (0,0%)	7 (4,6%)
Agree		9 (6,0%)	2 (1,3%)
Strongly Agree		5 (3,3%)	2 (1,3%)

The cross-tabulation between the age group of the household head and variables of interest is shown in Table 23. There is a statistically significant association (p value 0,000) between households headed by people over the age of 60 years and household size consisting of 7 or more people. Mainly, these households were headed by people who were living with two generations, i.e., their children and grandchildren, in the house. The relationship between the age of the household head and household size means that there are different age groups amongst households that can influence the direction of municipal planning.

While most households (94,7%) resided mainly in formal dwelling houses (p value 0,000), there was a high unemployment rate amongst households coupled with an estimated total household monthly income of between R1001 – R3000. This indicates that the household heads were generally pensioners receiving government grants. The relationship between the age group of the household head and migration trends highlights that most households had moved into their current residence more than 10 years previously, spent most of their nights in the same residence, and were unlikely to move away from this area. It can be deduced that the age of the household head has some influence on migration trends. The prolonged stay and unlikelihood of moving away from the area suggest that this is a permanent residence and has been chosen due to its proximity to amenities.

Table 23 also shows that the community was not entirely involved in municipal planning within the area because most households were not aware of any public meetings to discuss issues on municipal plans/programmes in the ward, and the occurrence of such public meetings. However, most households (66,6%) – mainly with more mature and older people in the household – knew their ward councillor and their local municipal office was easily accessible. Despite the age group of the household head, most households did not agree that the role of traditional leadership is to ensure development in the area or protect land for agricultural and environmental purposes. However, there was a common acceptance that the municipality should be responsible for solving environmental problems.

From Table 23, the level of satisfaction with services and infrastructure such as piped water systems, electricity, and drainage system was unsatisfactory. Notwithstanding the age group of the household head, the level of satisfaction was evaluated based on their daily experiences.

Table 23: Cross-tabulation between the variable of interest and the age of the household head

Variable of interest		Age group of the household head								
		<18 Years	26-30 Years	31-35 Years	36-40 Years	41-45 Years	46-50 Years	51-55 Years	56-60 Years	>60 Years
Number of people living in the household	Chi-square = 0,000	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
1-2 persons		0 (0,0%)	0 (0,0%)	1 (0,7%)	3 (2,0%)	3 (2,0%)	2 (1,3%)	0 (0,0%)	1 (0,7%)	1 (0,7%)
3-4 persons		0 (0,0%)	2 (1,3%)	4 (2,6%)	10 (6,5%)	8 (5,2%)	13 (8,5%)	6 (3,9%)	4 (2,6%)	3 (2,0%)
5-6 persons		1 (0,7%)	1 (0,7%)	3 (2,0%)	1 (0,7%)	7 (4,6%)	5 (3,3%)	11 (7,2%)	14 (9,2%)	7 (4,6%)
7 or more people		0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	5 (3,3%)	5 (3,3%)	8 (5,2%)	21 (13,7%)
Type of dwelling	Chi-square = 0,001	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Formal Dwelling House		0 (0,0%)	4 (2,6%)	8 (5,2%)	12 (7,8%)	18 (11,8%)	25 (16,3%)	20 (13,1%)	27 (17,6%)	31 (20,3%)
Traditional Dwelling/hut/structure made of traditional materials		1 (0,7%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	2 (1,3%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	1 (0,7%)
Employed household members	Chi-square = 0,042	1 (0,7%)	4 (2,6%)	8 (5,3%)	14 (9,2%)	20 (13,2%)	24 (15,8%)	22 (14,5%)	27 (17,8%)	32 (21,1%)
None		0 (0,0%)	1 (0,7%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	9 (5,9%)	8 (5,3%)	12 (7,9%)	18 (11,8%)
1-2 people		1 (0,7%)	3 (2,0%)	8 (5,3%)	12 (7,9%)	17 (11,2%)	13 (8,6%)	14 (9,2%)	13 (8,6%)	10 (6,6%)
3-5 people		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	4 (2,6%)
> 5 people		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	0 (0,0%)	1 (0,7%)	0 (0,0%)
Unemployed Household members	Chi-square = 0,026	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
None		0 (0,0%)	1 (0,7%)	1 (0,7%)	9 (5,9%)	10 (6,5%)	6 (3,9%)	5 (3,3%)	4 (2,6%)	5 (3,3%)
1-2 people		1 (0,7%)	3 (2,0%)	7 (4,6%)	4 (2,6%)	4 (2,6%)	9 (5,9%)	11 (7,2%)	12 (7,8%)	14 (9,2%)
3-5 people		0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	6 (3,9%)	8 (5,2%)	4 (2,6%)	10 (6,5%)	10 (6,5%)
> 5 people		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	2 (1,3%)	1 (0,7%)	3 (2,0%)
Estimated total monthly household income	Chi-square = 0,044	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
No income		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)
Less than R1000		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)
R1001 - R3000		0 (0,0%)	1 (0,7%)	1 (0,7%)	3 (2,0%)	2 (1,3%)	4 (2,6%)	3 (2,0%)	11 (7,2%)	19 (12,4%)
R3001 - R5000		0 (0,0%)	2 (1,3%)	1 (0,7%)	0 (0,0%)	3 (2,0%)	4 (2,6%)	4 (2,6%)	5 (3,3%)	4 (2,6%)
R5001 - R10 000		1 (0,7%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	3 (2,0%)	6 (3,9%)	5 (3,3%)	4 (2,6%)	6 (3,9%)
R10 001 - R15 000		0 (0,0%)	0 (0,0%)	1 (0,7%)	6 (3,9%)	4 (2,6%)	4 (2,6%)	6 (3,9%)	3 (2,0%)	2 (1,3%)
R15 001 - R20 000		0 (0,0%)	1 (0,7%)	2 (1,3%)	0 (0,0%)	3 (2,0%)	4 (2,6%)	3 (2,0%)	1 (0,7%)	0 (0,0%)
More than R20 000		0 (0,0%)	0 (0,0%)	1 (0,7%)	5 (3,3%)	3 (2,0%)	3 (2,0%)	1 (0,7%)	2 (1,3%)	1 (0,7%)

Years since the household moved into the current residence	Chi Square = 0,000	1 (0,7%)	4 (2,6%)	8 (5,3%)	14 (9,2%)	19 (12,5%)	25 (16,4%)	22 (14,5%)	27 (17,8%)	32 (21,1%)
3 years ago		0 (0,0%)	2 (1,3%)	2 (1,3%)	1 (0,7%)	2 (1,3%)	0 (0,0%)	3 (2,0%)	0 (0,0%)	2 (1,3%)
3-5 years ago		0 (0,0%)	0 (0,0%)	2 (1,3%)	7 (4,6%)	7 (4,6%)	3 (2,0%)	1 (0,7%)	4 (2,6%)	0 (0,0%)
5-10 years ago		1 (0,7%)	1 (0,7%)	3 (2,0%)	3 (2,0%)	4 (2,6%)	9 (5,9%)	5 (3,3%)	3 (2,0%)	5 (3,3%)
More than 10 years ago		0 (0,0%)	1 (0,7%)	1 (0,7%)	3 (2,0%)	6 (3,9%)	13 (8,6%)	13 (8,6%)	20 (13,2%)	25 (16,4%)
The household resides in the residence for at least four nights a week and has done so for the last six months OR intends to reside in this residence for at least four nights for the next six months	Chi Square = 0,015	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Yes		1 (0,7%)	4 (2,6%)	5 (3,3%)	13 (8,5%)	20 (13,1%)	19 (12,4%)	21 (13,7%)	25 (16,3%)	31 (20,3%)
No		0 (0,0%)	0 (0,0%)	3 (2,0%)	1 (0,7%)	0 (0,0%)	6 (3,9%)	1 (0,7%)	2 (1,3%)	1 (0,7%)
Likelihood that the household will move away from this area	Chi Square = 0,024	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Very likely		1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	3 (2,0%)	1 (0,7%)	0 (0,0%)	1 (0,7%)	0 (0,0%)
Likely		0 (0,0%)	0 (0,0%)	2 (1,3%)	1 (0,7%)	1 (0,7%)	1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)
Unlikely		0 (0,0%)	3 (2,0%)	5 (3,3%)	10 (6,5%)	14 (9,2%)	20 (13,1%)	21 (13,7%)	24 (15,7%)	29 (19,0%)
Don't know		0 (0,0%)	1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	3 (2,0%)	1 (0,7%)	1 (0,7%)	1 (0,7%)
Do you know your ward councillor	Chi Square = 0,003	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Yes		1 (0,7%)	0 (0,0%)	2 (1,3%)	8 (5,2%)	11 (7,2%)	19 (12,4%)	17 (11,1%)	17 (11,1%)	27 (17,6%)
No		0 (0,0%)	4 (2,6%)	6 (3,9%)	6 (3,9%)	9 (5,9%)	6 (3,9%)	5 (3,3%)	10 (6,5%)	5 (3,3%)
The occurrence of public meetings	Chi Square = 0,051	1 (0,7%)	4 (2,6%)	8 (5,3%)	14 (9,2%)	20 (13,2%)	25 (16,4%)	22 (14,5%)	27 (17,8%)	31 (20,4%)
None		0 (0,0%)	4 (2,6%)	4 (2,6%)	5 (3,3%)	7 (4,6%)	8 (5,3%)	5 (3,3%)	9 (5,9%)	8 (5,3%)
Once every week		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	2 (1,3%)
Once a month		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	4 (2,6%)	2 (1,3%)	0 (0,0%)	0 (0,0%)	1 (0,7%)
Once every 3 months		0 (0,0%)	0 (0,0%)	1 (0,7%)	3 (2,0%)	5 (3,3%)	3 (2,0%)	10 (6,6%)	5 (3,3%)	8 (5,3%)
Once every 6 months		1 (0,7%)	0 (0,0%)	3 (2,0%)	2 (1,3%)	1 (0,7%)	8 (5,3%)	2 (1,35)	7 (4,6%)	3 (2,0%)
Not sure		0 (0,0%)	0 (0,0%)	0 (0,0%)	4 (2,6%)	3 (2,0%)	3 (2,0%)	5 (3,3%)	6 (3,9%)	9 (5,9%)
The role of traditional leadership is to ensure development within their	Chi Square = 0,033	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)

area of jurisdiction										
TRUE		0 (0,0%)	0 (0,0%)	4 (2,6%)	6 (3,9%)	3 (2,0%)	7 (4,6%)	10 (6,5%)	6 (3,9%)	7 (4,6%)
FALSE		0 (0,0%)	3 (2,0%)	2 (1,3%)	4 (2,6%)	16 (10,5%)	12 (7,8%)	10 (6,5%)	18 (11,8%)	22 (14,4%)
Don't know		1 (0,7%)	1 (0,7%)	2 (1,3%)	4 (2,6%)	1 (0,7%)	6 (3,9%)	2 (1,3%)	3 (2,0%)	3 (2,0%)
The role of traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,005	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	0 (0,0%)	5 (3,3%)	6 (3,9%)	4 (2,6%)	4 (2,6%)	11 (7,2%)	4 (2,6%)	4 (2,6%)
FALSE		0 (0,0%)	3 (2,0%)	3 (2,0%)	4 (2,6%)	14 (9,2%)	12 (7,8%)	9 (5,9%)	16 (10,5%)	22 (14,4%)
Don't know		1 (0,7%)	1 (0,7%)	0 (0,0%)	4 (2,6%)	2 (1,3%)	9 (5,9%)	2 (1,3%)	7 (4,6%)	6 (3,9%)
The role of traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,052	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	1 (0,7%)	5 (3,3%)	1 (0,7%)	2 (1,3%)	4 (2,6%)	7 (4,6%)	3 (2,0%)	4 (2,6%)
FALSE		0 (0,0%)	2 (1,3%)	1 (0,7%)	8 (5,2%)	14 (9,2%)	12 (7,8%)	12 (7,8%)	15 (9,8%)	22 (14,4%)
Don't know		1 (0,7%)	1 (0,7%)	2 (1,3%)	5 (3,3%)	4 (2,6%)	9 (5,9%)	3 (2,0%)	9 (5,9%)	6 (3,9%)
The role of traditional leadership is to maintain law and order within the community	Chi Square = 0,008	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	1 (0,7%)	6 (3,9%)	3 (2,0%)	3 (2,0%)	7 (4,6%)	13 (8,5%)	9 (5,9%)	6 (3,9%)
FALSE		0 (0,0%)	2 (1,3%)	2 (1,3%)	8 (5,2%)	15 (9,8%)	11 (7,2%)	8 (5,2%)	14 (9,2%)	22 (14,4%)
Don't know		1 (0,7%)	1 (0,7%)	0 (0,0%)	3 (2,0%)	2 (1,3%)	7 (4,6%)	1 (0,7%)	4 (2,6%)	4 (2,6%)
The role of traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,000	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	0 (0,0%)	5 (3,3%)	0 (0,0%)	0 (0,0%)	5 (3,3%)	4 (2,6%)	2 (1,3%)	2 (1,3%)
FALSE		0 (0,0%)	4 (2,6%)	0 (0,0%)	9 (5,9%)	19 (12,4%)	13 (8,5%)	14 (9,2%)	19 (12,4%)	28 (18,3%)
Don't know		1 (0,7%)	0 (0,0%)	3 (2,0%)	5 (3,3%)	1 (0,7%)	7 (4,8%)	4 (2,6%)	6 (3,9%)	2 (1,3%)
The role of traditional leadership is to protect land for agricultural activities	Chi Square = 0,002	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	1 (0,7%)	3 (2,0%)	5 (3,3%)	4 (2,6%)	6 (3,9%)	12 (7,8%)	7 (4,6%)	5 (3,3%)

FALSE		0 (0,0%)	3 (2,0%)	4 (2,6%)	5 (3,3%)	16 (10,5%)	14 (9,2%)	7 (4,6%)	17 (11,1%)	27 (17,6%)
Don't know		1 (0,7%)	0 (0,0%)	1 (0,7%)	4 (2,6%)	0 (0,0%)	5 (3,3%)	3 (2,0%)	3 (2,0%)	0 (0,0%)
The role of traditional leadership is to protect and conserve the environment	Chi Square = 0,001	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	1 (0,7%)	3 (2,0%)	5 (3,3%)	4 (2,6%)	5 (3,3%)	14 (9,2%)	7 (4,6%)	5 (3,3%)
FALSE		0 (0,0%)	3 (2,0%)	4 (2,6%)	5 (3,3%)	15 (9,8%)	14 (9,2%)	7 (4,6%)	17 (11,1%)	26 (17,0%)
Don't know		1 (0,7%)	0 (0,0%)	1 (0,7%)	4 (2,6%)	1 (0,7%)	6 (3,9%)	1 (0,7%)	3 (2,0%)	1 (0,7%)
The role of the traditional leadership is to reserve and allocate land for public uses within their area of jurisdiction	Chi Square = 0,000	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
TRUE		0 (0,0%)	1 (0,7%)	3 (2,0%)	5 (3,3%)	0 (0,0%)	3 (2,0%)	10 (6,5%)	2 (1,3%)	5 (3,3%)
FALSE		0 (0,0%)	3 (2,0%)	4 (2,6%)	5 (3,3%)	18 (11,8%)	19 (12,4%)	11 (7,2%)	21 (13,7%)	27 (17,6%)
Don't know		1 (0,7%)	0 (0,0%)	1 (0,7%)	4 (2,6%)	2 (1,3%)	3 (2,0%)	1 (0,7%)	4 (2,6%)	0 (0,0%)
The responsibility of the land allocation process	Chi Square = 0,019	1 (0,7%)	4 (2,6%)	8 (5,2%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Induna who is delegated by the Traditional Council		1 (0,7%)	4 (2,6%)	7 (4,6%)	14 (9,2%)	20 (13,1%)	25 (16,3%)	22 (14,4%)	27 (17,6%)	32 (20,9%)
Community-based organization		0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)
The municipality should be responsible for solving environmental problems in the area	Chi Square = 0,030	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Disagree		0 (0,0%)	1 (0,7%)	3 (2,0%)	2 (1,3%)	1 (0,7%)	3 (2,0%)	2 (1,3%)	6 (4,0%)	3 (2,0%)
Neutral		1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	1 (0,7%)
Agree		0 (0,0%)	0 (0,0%)	0 (0,0%)	3 (2,0%)	4 (2,6%)	3 (2,0%)	3 (2,0%)	2 (1,3%)	5 (3,3%)
Strongly Agree		0 (0,0%)	2 (1,3%)	5 (3,3%)	9 (6,0%)	14 (9,3%)	19 (12,6%)	16 (10,6%)	17 (11,3%)	22 (20,5%)
Individual citizens should be responsible for solving environmental problems in your area	Chi Square = 0,047	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Disagree		0 (0,0%)	2 (1,3%)	2 (1,3%)	2 (1,3%)	2 (1,3%)	7 (4,6%)	1 (0,7%)	3 (2,0%)	3 (2,0%)
Disagree		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)

Neutral		0 (0,0%)	1 (0,7%)	2 (1,3%)	2 (1,3%)	1 (0,7%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	2 (1,3%)
Agree		1 (0,7%)	0 (0,0%)	0 (0,0%)	5 (3,3%)	3 (2,0%)	2 (1,3%)	4 (2,6%)	3 (2,0%)	7 (4,6%)
Strongly Agree		0 (0,0%)	0 (0,0%)	4 (2,6%)	5 (3,3%)	14 (9,3%)	15 (9,9%)	15 (9,9%)	21 (13,9%)	19 (12,6%)
Level satisfaction with the piped water system for drinking water	Chi Square = 0,048	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Dissatisfied		1 (0,7%)	2 (1,3%)	2 (1,3%)	7 (4,6%)	10 (6,6%)	18 (11,9%)	13 (8,6%)	15 (9,9%)	20 (13,2%)
Dissatisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	3 (2,0%)	3 (2,0%)	2 (1,3%)	7 (4,6%)	1 (0,7%)
Neutral		0 (0,0%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	4 (2,6%)	2 (1,3%)	2 (1,3%)	3 (2,0%)	3 (2,0%)
Satisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	3 (2,0%)	2 (1,3%)	1 (0,7%)	0 (0,0%)	6 (4,0%)
Strongly Satisfied		0 (0,0%)	1 (0,7%)	4 (2,6%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	4 (2,6%)	2 (1,3%)	1 (0,7%)
Level of satisfaction with electricity	Chi Square = 0,011	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Dissatisfied		1 (0,7%)	2 (1,3%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	4 (2,6%)	2 (1,3%)	2 (1,3%)	3 (2,0%)
Dissatisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	2 (1,3%)	5 (3,3%)
Neutral		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	2 (1,3%)	2 (1,3%)	3 (2,0%)	8 (5,3%)	3 (2,0%)
Satisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	5 (3,3%)	11 (7,3%)	7 (4,6%)	2 (1,3%)	9 (6,0%)	7 (4,6%)
Strongly Satisfied		0 (0,0%)	1 (0,7%)	5 (3,3%)	6 (4,0%)	7 (4,6%)	11 (7,3%)	13 (8,6%)	6 (4,0%)	13 (8,6%)
Level of satisfaction with the drainage system	Chi Square = 0,009	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Dissatisfied		0 (0,0%)	3 (2,0%)	4 (2,6%)	9 (6,0%)	12 (7,9%)	16 (10,6%)	6 (4,0%)	15 (9,9%)	19 (12,6%)
Dissatisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	6 (4,0%)	9 (6,0%)	8 (5,3%)	9 (6,0%)	7 (4,6%)
Neutral		1 (0,7%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	3 (2,0%)	1 (0,7%)	1 (0,7%)
Satisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	1 (0,7%)	2 (1,3%)	0 (0,0%)	2 (1,3%)	1 (0,7%)	4 (2,6%)
Strongly Satisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	0 (0,0%)	0 (0,0%)	3 (2,0%)	1 (0,7%)	0 (0,0%)
Level of satisfaction with social welfare	Chi Square = 0,004	1 (0,7%)	3 (2,0%)	8 (5,3%)	14 (9,3%)	20 (13,2%)	25 (16,6%)	22 (14,6%)	27 (17,9%)	31 (20,5%)
Strongly Dissatisfied		0 (0,0%)	3 (2,0%)	4 (2,6%)	1 (0,7%)	4 (2,6%)	3 (2,0%)	4 (2,6%)	3 (2,0%)	5 (3,3%)
Dissatisfied		1 (0,7%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	0 (0,0%)	3 (2,0%)	1 (0,7%)	0 (0,0%)	2 (1,3%)
Neutral		0 (0,0%)	0 (0,0%)	0 (0,0%)	7 (4,6%)	8 (5,3%)	8 (5,3%)	5 (3,3%)	14 (9,3%)	10 (6,6%)
Satisfied		0 (0,0%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	5 (3,3%)	3 (2,0%)	7 (4,6%)	6 (4,0%)	5 (3,3%)
Strongly Satisfied		0 (0,0%)	0 (0,0%)	3 (2,0%)	2 (1,3%)	3 (2,0%)	8 (5,3%)	5 (3,3%)	4 (2,6%)	9 (6,0%)

There is a significant association between the education level of the household head and variables of interest. Secondary education (Grades 8 to 12) recorded the highest number (46,4%) in regard to the education level of the household head as shown in Table 24. The lack of awareness in terms of spatial strategic and statutory planning was evident across the

different levels of education. Despite the level of education of the household head, most households were not aware that they must submit building plans before construction. They were also not aware of spatial plans such as the Spatial Development Framework and Greater Inanda Local Area Plan. This is due to the limited information they have relating to these plans and not necessarily because of their education level.

Table 24 also shows a significant association between the education level of the household head and migration trends. Most households despite the education level of the household head had moved into the residence more than 10 years previously and spent most of their nights in the same residence. A contributing factor to the prolonged stay in the area was the need to be close to the economic opportunities offered in the city. Regardless of the education level of the household head, knowledge of sustainability and conservation of natural resources was minimal. However, most households strongly agreed that the municipality should be responsible for solving environmental problems. This could also contribute to households being capacitated with knowledge on sustainability and conservation of natural resources.

From Table 24, it is clear that households were not satisfied with the level of sanitation; in this regard, the education level of the household head was not a contributing factor. The significance is that households rate the level of satisfaction with infrastructure services based on their own experience despite the education level of the household head.

Table 24: Cross-tabulation between the variable of interest and the education level of the household head

Variable of interest		Educational Level of the household head			
		No education	Primary education (Grades R-7)	Secondary Education (Grade 8-12)	Post-Matric Qualification
Number of people living in the household	Chi-square = 0,001	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
1-2 persons		0 (0,0%)	1 (0,7%)	6 (3,9%)	4 (2,6%)
3-4 persons		1 (0,7%)	5 (3,3%)	21 (13,7%)	23 (15,0%)
5-6 persons		3 (2,0%)	11 (7,2%)	28 (18,3%)	8 (5,2%)
7 or more people		5 (3,3%)	16 (10,5%)	16 (10,5%)	5 (3,3%)
The estimated value of the property	Chi-square = 0,036	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
Less than R50 000		1 (0,7%)	0 (0,0%)	1 (0,7%)	2 (1,3%)
R50 001 - R100 -000		0 (0,0%)	3 (2,0%)	10 (6,5%)	3 (2,0%)
R100 001 - R200 000		1 (0,7%)	8 (5,2%)	10 (6,5%)	3 (2,0%)
R200 001 - R300 000		4 (2,6%)	14 (9,2%)	26 (17,0%)	7 (4,6%)
R300 000 - R400 000		2 (1,3%)	5 (3,3%)	14 (9,2%)	8 (5,2%)
R400 001 - R500 000		1 (0,7%)	3 (2,0%)	7 (4,6%)	11 (7,2%)

>R500 000		0 (0,0%)	0 (0,0%)	3 (2,0%)	6 (3,9%)
Employed household members	Chi-square = 0,000	9 (5,9%)	33 (21,6%)	70 (46,1%)	40 (26,3%)
None		3 (2,0%)	21 (13,8%)	22 (14,5%)	4 (2,6%)
1-2 people		6 (3,9%)	9 (5,9%)	46 (30,3%)	30 (19,7%)
3-5 people		0 (0,0%)	3 (2,0%)	2 (1,3%)	2 (1,3%)
> 5 people		0 (0,0%)	0 (0,0%)	0 (0,0%)	4 (2,7%)
Estimated total monthly household income	Chi-square = 0,000	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
No income		0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)
Less than R1000		0 (0,0%)	0 (0,0%)	2 (1,3%)	0 (0,0%)
R1001 - R3000		7 (4,6%)	17 (11,1%)	18 (11,8%)	2 (1,3%)
R3001 - R5000		0 (0,0%)	9 (5,9%)	9 (5,9%)	5 (3,3%)
R5001 - R10 000		2 (1,3%)	5 (3,3%)	20 (13,1%)	0 (0,0%)
R10 001 - R15 000		0 (0,0%)	2 (1,3%)	11 (7,2%)	13 (8,5%)
R15 001 - R20 000		0 (0,0%)	0 (0,0%)	9 (5,9%)	5 (3,3%)
More than R20 000		0 (0,0%)	0 (0,0%)	1 (0,7%)	15 (9,9%)
Awareness of the eThekweni Spatial Development Framework	Chi Square = 0,039	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
Yes		0 (0,0%)	0 (0,0%)	2 (1,3%)	4 (2,6%)
No		9 (5,9%)	31 (20,3%)	68 (44,4%)	31 (20,3%)
Not sure		0 (0,0%)	2 (1,3%)	1 (0,7%)	5 (3,3%)
Awareness of the Greater Inanda LAP Consolidated Report	Chi Square = 0,014	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
Yes		0 (0,0%)	0 (0,0%)	1 (0,7%)	6 (3,9%)
No		9 (5,9%)	31 (20,3%)	68 (44,4%)	31 (20,3%)
Not sure		0 (0,0%)	2 (1,3%)	2 (1,3%)	3 (2,0%)
Awareness of the Building regulations which require the submission of Building Plans before construction	Chi Square = 0,009	9 (5,9%)	33 (21,6%)	71 (46,4%)	40 (26,1%)
Yes		1 (0,7%)	2 (1,3%)	14 (9,2%)	15 (9,8%)
No		8 (5,2%)	31 (20,3%)	57 (37,3%)	25 (16,3%)
Years since the household moved into the current residence	Chi Square = 0,000	9 (5,9%)	33 (21,6%)	70 (46,1%)	40 (26,1%)

3 years ago		0 (0,0%)	1 (0,7%)	3 (2,0%)	8 (5,3%)
3-5 years ago		0 (0,0%)	2 (1,3%)	10 (6,6%)	12 (7,9%)
5-10 years ago		2 (1,3%)	4 (2,6%)	20 (13,2%)	8 (5,3%)
More than 10 years ago		7 (4,6%)	26 (17,1%)	37 (24,3%)	12 (7,9%)
Household resides in the residence for at least four nights a week and has done so for the last six months OR intends to reside in this residence for at least four nights for the next six months	Chi Square = 0,046	9 (5,9%)	33 (21,7%)	70 (46,1%)	40 (26,3%)
Yes		9 (5,9%)	31 (20,3%)	67 (43,8%)	32 (20,9%)
No		0 (0,0%)	2 (1,3%)	4 (2,6%)	8 (5,2%)
Knowledge about Sustainability	Chi Square = 0,002	9 (6,0%)	32 (21,2%)	71 (47,0%)	39 (25,8%)
Practically nothing		4 (2,6%)	12 (7,9%)	46 (30,5%)	19 (12,6%)
only a little		1 (0,7%)	14 (9,3%)	11 (7,3%)	6 (4,0%)
A fair amount		4 (2,6%)	5 (3,3%)	11 (7,3%)	7 (4,6%)
A lot		0 (0,0%)	1 (0,7%)	3 (2,0%)	7 (4,6%)
Knowledge about the Conservation of natural resources	Chi Square = 0,031	9 (6,0%)	32 (21,2%)	71 (47,0%)	39 (25,8%)
Practically nothing		2 (1,30%)	8 (5,3%)	32 (21,2%)	16 (10,6%)
only a little		1 (0,7%)	10 (6,6%)	14 (9,3%)	3 (2,0%)
A fair amount		6 (4,0%)	10 (6,6%)	21 (13,9%)	12 (7,9%)
A lot		0 (0,0%)	4 (2,6%)	4 (2,6%)	8 (5,3%)
The municipality should be responsible for solving environmental problems	Chi Square = 0,031	9 (6,0%)	32 (21,2%)	71 (47,0%)	39 (25,8%)
Strongly Disagree		1 (0,7%)	6 (4,0%)	10 (6,6%)	4 (2,6%)
Neutral		2 (1,3%)	0 (0,0%)	4 (2,6%)	0 (0,0%)
Agree		0 (0,0%)	5 (3,3%)	13 (8,6%)	2 (1,3%)
Strongly Agree		6 (4,0%)	21 (13,9%)	44 (29,1%)	33 (21,9%)
Level of satisfaction with the sanitary sewer system	Chi Square = 0,037	9 (6,0%)	32 (21,2%)	71 (47,0%)	39 (25,8%)
Strongly Dissatisfied		5 (3,3%)	14 (9,3%)	42 (27,8%)	25 (16,6%)
Dissatisfied		0 (0,0%)	8 (5,3%)	7 (4,6%)	1 (0,7%)
Neutral		1 (0,7%)	5 (3,3%)	8 (5,3%)	4 (2,6%)
Satisfied		3 (2,0%)	5 (3,3%)	5 (3,3%)	6 (4,0%)

Strongly Satisfied	0 (0,0%)	0 (0,0%)	9 (6,0%)	3 (2,0%)
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Table 25 shows a statistically significant association between the source of income of the household head and variables of interest. Households where the source of income of the household head was through formal employment and government grants recorded the most cases, particularly within medium to large-sized households ranging from 3-4, 5-6, and more than 7 people. Low-income households tended to have more people while this was the opposite for middle to high-income households. Unemployment was high in larger households where the total household monthly income was between R1001 – R3000. On the other hand, employment was high in smaller households where the total household monthly income was R10 001 and more. The glaring correlation between household size and source of income is linked to inequality in the area where the impact of municipal planning should be focused on creating sustainable livelihoods.

The estimated value of the property is mainly between R200 001 and R300 000 across the different sources of income. The socio-economic conditions are such that low-income households are characterized by household heads who receive grants, and middle to highincome households have household heads that are formally employed. These conditions also contribute to the housing typology of the area.

Table 25 also highlights a relationship between migration trends and the source of income of the household head. Most of the households had moved into the current residence more than 10 years previously, regardless of the source of income of the household head. The significance of community involvement was witnessed in households with household heads who were formally employed and those that received government grants. Generally, these households were aware of the occurrence of public meetings because they dealt with issues that were discussed in their best interest.

Table 25: Cross-tabulation between the variable of interest and source of income of the household head

Variable of interest		Source of income of the household head				
		No income	Formal employment	Informal employment	Government grants	Other (Specify)
Number of people living in the household	Chi-square = 0,000	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
1-2 persons		0 (0,0%)	6 (3,9%)	2 (1,3%)	2 (1,3%)	1 (0,7%)
3-4 persons		1 (0,7%)	34 (22,2%)	7 (4,6%)	8 (5,2%)	0 (0,0%)

5-6 persons		3 (2,0%)	18 (11,8%)	9 (5,9%)	19 (12,4%)	1 (0,7%)
7 or more people		3 (2,0%)	8 (5,2%)	5 (3,3%)	26 (17,0%)	0 (0,0%)
The estimated value of the property	Chi-square = 0,053	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
Less than R50 000		0 (0,0%)	0 (0,0%)	2 (1,3%)	2 (1,3%)	0 (0,0%)
R50 001 - R100 -000		0 (0,0%)	6 (3,9%)	6 (3,9%)	4 (2,6%)	0 (0,0%)
R100 001 - R200 000		2 (1,3%)	8 (5,2%)	0 (0,0%)	12 (7,8%)	0 (0,0%)
R200 001 - R300 000		1 (0,7%)	18 (11,8%)	9 (5,9%)	22 (14,4%)	1 (0,7%)
R300 000 - R400 000		3 (2,0%)	12 (7,8%)	4 (2,6%)	9 (5,9%)	1 (0,7%)
R400 001 - R500 000		1 (0,7%)	15 (9,8%)	1 (0,7%)	5 (3,3%)	0 (0,0%)
>R500 000		0 (0,0%)	7 (4,6%)	1 (0,7%)	1 (0,7%)	0 (0,0%)
Employed household members	Chi-square = 0,001	7 (4,6%)	66 (43,4%)	22 (14,5%)	55 (36,2%)	2 (1,3%)
None		3 (2,0%)	7 (4,6%)	6 (3,9%)	33 (21,7%)	1 (0,7%)
1-2 people		3 (2,0%)	55 (36,2%)	14 (9,2%)	18 (11,8%)	1 (0,7%)
3-5 people		1 (0,7%)	2 (1,3%)	1 (0,7%)	3 (2,0%)	0 (0,0%)
> 5 people		0 (0,0%)	2 (1,3%)	1 (0,7%)	1 (0,7%)	0 (0,0%)
Unemployed household members	Chi-square = 0,000	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
None		0 (0,0%)	32 (20,9%)	5 (3,3%)	5 (3,3%)	1 (0,7%)
1-2 people		1 (0,7%)	22 (14,4%)	14 (9,2%)	26 (17,0%)	0 (0,0%)
3-5 people		5 (3,3%)	11 (7,2%)	3 (2,0%)	19 (12,4%)	1 (0,7%)
>5 people		1 (0,7%)	1 (0,7%)	1 (0,7%)	5 (3,3%)	0 (0,0%)
Estimated total monthly household income	Chi-square = 0,000	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
No income		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)
Less than R1000		0 (0,0%)	1 (0,7%)	1 (0,7%)	0 (0,0%)	0 (0,0%)
R1001 - R3000		3 (2,0%)	2 (1,3%)	7 (4,6%)	31 (20,3%)	1 (0,7%)
R3001 - R5000		1 (0,7%)	7 (4,6%)	3 (2,0%)	12 (7,8%)	0 (0,0%)
R5001 - R10 000		1 (0,7%)	11 (7,2%)	6 (3,9%)	9 (5,9%)	0 (0,0%)
R10 001 - R15 000		1 (0,7%)	19 (12,4%)	4 (2,6%)	2 (1,3%)	0 (0,0%)
R15 001 - R20 000		0 (0,0%)	12 (7,8%)	1 (0,7%)	1 (0,7%)	0 (0,0%)
More than R20 000		1 (0,7%)	14 (9,2%)	1 (0,7%)	0 (0,0%)	0 (0,0%)
Years since the household moved into the current residence	Chi Square = 0,001	7 (4,6%)	65 (42,8%)	23 (15,1%)	55 (36,2%)	2 (1,3%)
3 years ago		0 (0,0%)	7 (4,6%)	1 (0,7%)	4 (2,6%)	0 (0,0%)
3-5 years ago		0 (0,0%)	20 (13,2%)	2 (1,3%)	2 (1,3%)	0 (0,0%)
5-10 years ago		1 (0,7%)	18 (11,8%)	5 (3,3%)	9 (5,9%)	1 (0,7%)
More than 10 years ago		6 (3,9%)	20 (13,2%)	15 (9,9%)	40 (26,3%)	1 (0,7%)

The occurrence of public meetings	Chi Square = 0,001	7 (4,6%)	66 (43,4%)	23 (15,1%)	55 (35,5%)	2 (1,3%)
None		3 (2,0%)	24 (15,8%)	11 (7,2%)	12 (7,9%)	0 (0,0%)
Once every week		0 (0,0%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	1 (0,7%)
Once a month		0 (0,0%)	1 (0,7%)	1 (0,7%)	5 (3,3%)	0 (0,0%)
Once every 3 months		0 (0,0%)	18 (11,8%)	5 (3,3%)	11 (7,2%)	1 (0,7%)
Once every 6 months		0 (0,0%)	13 (8,6%)	3 (2,0%)	11 (7,2%)	0 (0,0%)
Not sure		4 (2,6%)	10 (6,6%)	3 (2,0%)	13 (8,6%)	0 (0,0%)
The role of traditional leadership is to maintain law and order within the community	Chi Square = 0,026	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
TRUE		1 (0,7%)	25 (16,3%)	9 (5,9%)	13 (8,5%)	0 (0,0%)
FALSE		2 (1,3%)	30 (19,6%)	12 (7,8%)	36 (23,5%)	2 (1,3%)
Don't know		4 (2,6%)	11 (7,2%)	2 (1,3%)	6 (3,9%)	0 (0,0%)
The role of traditional leadership is to protect land for agricultural activities	Chi Square = 0,049	7 (4,6%)	66 (43,1%)	23 (15,0%)	55 (35,9%)	2 (1,3%)
TRUE		1 (0,7%)	23 (15,0%)	8 (5,2%)	11 (7,2%)	0 (0,0%)
FALSE		3 (2,0%)	35 (22,9%)	12 (7,8%)	41 (26,8%)	2 (1,3%)
Don't know		3 (2,0%)	8 (5,2%)	3 (2,0%)	3 (2,0%)	0 (0,0%)

6.2.8.2. Cross-tabulation between the variable of interest and household characteristics

Cross-tabulation between the size of the household and the years since the household moved into the current residence shows a significant association (p value 0,002). This is evident in Table 26 where households had resided in the current residence for more than 10 years, irrespective of the household size. However larger household sizes of 5 – 6 people and 7 or more recorded the most cases of households that had moved into the current residence more than 10 years previously. The relationship between household size and migration trends is informed by socio-economic conditions.

Table 26: Cross-tabulation between the variable of interest and the number of people living in the household

Variable of interest	Number of people living in the household			
	1-2 persons	3-4 persons	5-6 persons	7 or more people

Years since the household moved into the current residence	Pearson Chi Square = 0,002	11 (7,2%)	50 (32,9%)	49 (32,2%)	42 (27,6%)
3 years ago		1 (0,7%)	6 (3,9%)	4 (2,6%)	1 (0,7%)
3-5 years ago		3 (2,0%)	16 (10,5%)	3 (2,0%)	2 (1,3%)
5-10 years ago		3 (2,0%)	11 (7,2%)	11 (7,2%)	9 (5,9%)
More than 10 years ago		4 (2,6%)	17 (11,2%)	31 (20,4%)	30 (19,7%)

A relationship between employed household members and variables of interest has already been established earlier in the findings. Households with 1-2 people had the most cases (59,9%) of employed household members. While there is a significant association between employed household members and awareness of strategic spatial planning, most households were not aware of spatial plans. Migration trends reveal that households with employed members had moved into their current residence more than 10 years previously. This means that they treated this residence as their primary residence, judging by the cases recorded for the number of nights staying in this residence. In terms of community involvement, households with employed members knew their ward councillor regardless of their employment status and the size of the household. However, their knowledge of environmental issues varied from knowing practically nothing to knowing a fair amount.

Likewise, a relationship was established earlier in the findings between unemployed household members and variables of interest. Regardless of the household size, the province that households previously resided in was mainly KwaZulu Natal (p value 0,003) and they have stayed in the current residence for more than 10 years (p value 0,000). Households with unemployed members were mostly aware of public meetings which were usually called by representatives of the municipality to discuss issues about the municipal plans/programmes in the ward. Most of the households disagreed with the statement that the role of the traditional leadership is to be involved with the budget allocation process for their communities, and strongly agreed that the municipality should be responsible for solving environmental problems.

Table 27 shows a significant association between household members who were in school or doing some skills training with knowledge about urban sprawl (p value 0,005). Most households did not know the phenomenon of urban sprawl even though they had members who were school-going or doing some skills training.

Table 27: Cross-tabulation between the variable of interest and household members school-going or doing some skills training courses

Variable of interest	Household members school going or doing some skills training
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		None	1 - 2 people	3 - 5 people	> 5 people
Knowledge about urban sprawl	Chi Square = 0,005	20 (13,2%)	75 (49,7%)	53 (35,1%)	3 (2,0%)
Practically nothing		14 (9,3%)	49 (32,5%)	41 (27,2%)	0 (0,0%)
Only a little		5 (3,3%)	9 (6,0%)	6 (4,0%)	1 (0,7%)
A fair amount		1 (0,7%)	16 (10,6%)	4 (2,6%)	1 (0,7%)
A lot		0 (0,0%)	1 (0,7%)	2 (1,3%)	1 (0,7%)

6.2.8.3. Cross-tabulation between the variable of interest and awareness of strategic spatial planning

Table 28 shows the cross-tabulation between awareness of strategic spatial planning and variables of interest. Different strategic and spatial plans encompassing strategic spatial planning were presented to respondents. A significant association (p value 0,000) was discerned between households' awareness of strategic spatial planning such as the eThekweni Spatial Development Framework and migration trends. The relationship reflects that most households were not aware of strategic spatial planning even though they had previously resided in the province of KwaZulu Natal. This means that households lack awareness of spatial strategic planning despite migration trends. There is also significance between the number of years that the household has stayed in the residence and their lack of awareness of strategic spatial planning such as the Northern Urban Development Corridor. Most households that were unaware of this plan had moved into their current residence 10 years previously. The lack of awareness of strategic spatial planning is representative of the lack of impact of municipal planning, despite the household having lived in the residence for more than 10 years.

There is a significant association between households' awareness of strategic spatial planning and the effectiveness of municipal planning, as well as the impact of COVID-19. Despite the lack of awareness of various strategic and spatial plans, households perceived that the role of traditional leadership is mainly to reserve and allocate land for residential uses within their jurisdiction. In this regard, municipal planning can be more effective if households are sensitized to the coordinated roles of municipal planning. Generally, information about municipal plans and programmes is announced and received through loud hailing, but households were not aware of the occurrence of public meetings. Knowledge of environmental issues was largely limited and there was a low level of satisfaction with infrastructure services irrespective of their awareness of municipal plans. This may indicate that the level of service

that confronts them daily outweighs proposed or future planning initiatives until they are informed through public participation. COVID-19 regulations had a limited impact on service delivery, the status of public transport, safety/security, and communication of municipal plans and programmes, regardless of the awareness of strategic spatial planning.

Table 28: Cross-tabulation between the variable of interest and strategic spatial planning awareness

Variable of interest		Strategic spatial planning awareness		
		Awareness of the eThekweni Spatial Development Framework 2019-2020		
		Yes	No	Not sure
The role of Traditional leadership is to ensure development within their area of jurisdiction	Chi Square = 0,015	25 (16,3%)	122 (79,7%)	6 (3,9%)
TRUE		12 (7,8%)	30 (19,6%)	1 (0,7%)
FALSE		12 (7,8%)	73 (47,7%)	2 (1,3%)
Don't know		1 (0,7%)	19 (12,4%)	3 (2,0%)
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,025	25 (16,3%)	122 (79,7%)	6 (3,9%)
TRUE		4 (2,6%)	14 (9,2%)	0 (0,0%)
FALSE		19 (12,4%)	85 (55,6%)	2 (1,3%)
Don't know		2 (1,3%)	23 (15,0%)	4 (2,6%)
The role of Traditional leadership is to protect land for agricultural activities	Chi Square = 0,021	25 (16,3%)	122 (79,7%)	6 (3,9%)
TRUE		13 (8,5%)	29 (19,0%)	1 (0,7%)
FALSE		11 (7,2%)	79 (51,6%)	3 (2,0%)
Don't know		1 (0,7%)	14 (9,2%)	2 (1,3%)
The role of the Traditional leadership is to reserve land for residential uses within their jurisdiction	Chi Square = 0,045	25 (16,3%)	122 (79,7%)	6 (3,9%)
TRUE		22 (14,4%)	83 (54,2%)	3 (2,0%)

FALSE		2 (1,3%)	30 (19,6%)	1 (0,7%)
Don't know		1 (0,7%)	9 (5,9%)	2 (1,3%)
There is evidence for the right to occupy the land	Chi Square = 0,026	25 (16,3%)	122 (79,7%)	6 (3,9%)
Yes		25 (16,3%)	120 (78,4%)	5 (3,3%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,003	25 (16,5%)	122 (79,5%)	6 (4,0%)
Practically nothing		1 (0,7%)	41 (27,2%)	2 (1,3%)
Only a little		5 (3,3%)	35 (23,2%)	3 (2,0%)
A fair amount		12 (7,9%)	35 (23,2%)	1 (0,7%)
A lot		7 (4,6%)	9 (6,0%)	0 (0,0%)
Knowledge about water pollution	Chi Square = 0,004	25 (16,5%)	122 (79,5%)	6 (4,0%)
Practically nothing		1 (0,7%)	38 (25,2%)	2 (1,3%)
Only a little		5 (3,3%)	33 (21,9%)	3 (2,0%)
A fair amount		12 (7,9%)	41 (27,2%)	1 (0,7%)
A lot		7 (4,6%)	8 (5,3%)	0 (0,0%)
Knowledge about the conservation of natural resources	Chi Square = 0,002	25 (16,5%)	122 (79,5%)	6 (4,0%)
Practically nothing		3 (2,0%)	52 (34,4%)	3 (2,0%)
Only a little		2 (1,3%)	24 (15,9%)	2 (1,3%)
A fair amount		13 (8,6%)	35 (23,2%)	1 (0,7%)
A lot		7 (4,6%)	9 (6,0%)	0 (0,0%)
Level of satisfaction with the sanitary sewer system	Chi Square = 0,032	25 (16,5%)	122 (79,5%)	6 (4,0%)
Strongly dissatisfied		8 (5,3%)	77 (52,0%)	1 (0,7%)
Dissatisfied		5 (3,3%)	10 (6,6%)	1 (0,7%)
Neutral		5 (3,3%)	12 (7,9%)	1 (0,7%)
Satisfied		5 (3,3%)	13 (8,6%)	1 (0,7%)
Strongly satisfied		2 (1,3%)	8 (5,3%)	2 (1,3%)
Level of satisfaction with waste removal/recycling services	Chi Square = 0,004	25 (16,5%)	122 (79,5%)	6 (4,0%)
Strongly dissatisfied		5 (3,3%)	66 (43,7%)	2 (1,3%)
Dissatisfied		11 (7,3%)	15 (9,9%)	3 (2,0%)
Neutral		6 (4,0%)	19 (12,6%)	0 (0,0%)
Satisfied		2 (1,3%)	10 (6,6%)	0 (0,0%)
Strongly satisfied		1 (0,7%)	10 (6,6%)	1 (0,7%)

COVID-19 regulations broughtt about changes to municipal service delivery in the area	Chi Square = 0,003	25 (16,6%)	120 (79,5%)	6 (4,0%)
Yes		10 (6,6%)	35 (23,2%)	1 (0,7%)
No		12 (7,9%)	71 (47,0%)	1 (0,7%)
Not sure		3 (2,0%)	14 (9,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,010	25 (16,6%)	120 (79,5%)	6 (4,0%)
Yes		7 (4,6%)	34 (22,5%)	0 (0,0%)
No		14 (9,3%)	71 (47,0%)	2 (1,3%)
Not sure		4 (2,6%)	15 (9,9%)	4 (2,6%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community in the area	Chi Square = 0,001	25 (16,6%)	120 (79,5%)	6 (4,0%)
Yes		11 (7,3%)	18 (11,9%)	2 (1,3%)
No		10 (6,6%)	85 (56,3%)	1 (0,7%)
Not sure		4 (2,6%)	17 (11,3%)	3 (4,0%)
Variable of interest		Awareness of the eThekwini Spatial Development Framework		
		Yes	No	Not sure
Province the household previously resided in	Pearson Chi Square = 0,000	6 (3,9%)	139 (90,8%)	8 (5,2%)
Gauteng		1 (0,7%)	0 (0,0%)	0 (0,0%)
KwaZulu Natal		5 (3,3%)	138 (90,2%)	8 (5,2%)
Eastern Cape		0 (0,0%)	1 (0,7%)	0 (0,0%)
How information about municipal plans and programmes is received	Chi Square = 0,007	5 (4,7%)	97 (90,7%)	5 (4,7%)
Radio		0 (0,0%)	2 (1,9%)	0 (0,0%)
Newspaper		0 (0,0%)	1 (0,9%)	0 (0,0%)
Ward councilor		1 (0,7%)	0 (0,0%)	0 (0,0%)
Loud hailing		4 (3,7%)	91 (85,0%)	5 (4,7%)

Other		0 (0,0%)	3 (2,8%)	0 (0,0%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,035	6 (4,0%)	139 (90,8%)	8 (5,2%)
TRUE		4 (2,6%)	33 (21,6%)	1 (0,7%)
FALSE		1 (0,7%)	79 (51,6%)	3 (2,0%)
Don't know		1 (0,7%)	27 (17,6%)	4 (2,6%)
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,005	6 (3,9%)	139 (90,8%)	8 (5,2%)
TRUE		4 (2,6%)	22 (14,4%)	1 (0,7%)
FALSE		0 (0,0%)	83 (54,2%)	3 (2,0%)
Don't know		2 (1,3%)	34 (22,2%)	4 (2,6%)
The role of Traditional leadership is to maintain law and order within the community	Chi Square = 0,005	6 (3,9%)	139 (90,8%)	8 (5,2%)
TRUE		6 (3,9%)	39 (25,5%)	3 (2,0%)
FALSE		0 (0,0%)	79 (51,6%)	3 (2,0%)
Don't know		0 (0,0%)	21 (13,7%)	2 (1,3%)
The role of Traditional leadership is to protect land for agricultural activities	Chi Square = 0,026	6 (3,9%)	139 (90,8%)	8 (5,2%)
TRUE		5 (3,3%)	36 (23,5%)	2 (1,3%)
FALSE		1 (0,7%)	88 (57,5%)	4 (2,6%)
Don't know		0 (0,0%)	15 (9,8%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,031	6 (4,0%)	137 (90,7%)	8 (5,3%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)
Only a little		0 (0,0%)	40 (26,5%)	3 (2,0%)
A fair amount		3 (2,0%)	43 (28,5%)	2 (1,3%)
A lot		3 (2,0%)	12 (7,9%)	1 (0,7%)
Knowledge about water pollution	Chi Square = 0,024	6 (4,0%)	137 (90,7%)	8 (5,3%)

Practically nothing		0 (0,0%)	39 (25,8%)	2 (1,3%)
Only a little		0 (0,0%)	38 (25,2%)	3 (2,0%)
A fair amount		3 (2,0%)	49 (32,5%)	2 (1,3%)
A lot		3 (2,0%)	11 (7,3%)	1 (0,7%)
Knowledge about sustainability	Chi Square = 0,000	6 (4,0%)	137 (90,7%)	8 (5,3%)
Practically nothing		0 (0,0%)	79 (51,7%)	3 (2,0%)
Only a little		0 (0,0%)	29 (19,2%)	3 (2,0%)
A fair amount		3 (2,0%)	23 (15,2%)	1 (0,7%)
A lot		3 (2,0%)	7 (4,6%)	1 (0,7%)
Knowledge about the conservation of natural resources	Chi Square = 0,033	6 (4,0%)	137 (90,7%)	8 (5,3%)
Practically nothing		0 (0,0%)	55 (36,4%)	3 (2,0%)
Only a little		0 (0,0%)	26 (17,2%)	2 (1,3%)
A fair amount		3 (2,0%)	44 (29,1%)	2 (1,3%)
A lot		3 (2,0%)	12 (7,9%)	1 (0,7%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,015	6 (4,0%)	137 (90,7%)	8 (5,3%)
Yes		3 (2,0%)	40 (26,5%)	3 (2,0%)
No		3 (2,0%)	80 (53,0%)	1 (0,7%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,047	6 (4,0%)	137 (90,7%)	8 (5,3%)
Yes		1 (0,7%)	39 (25,8%)	1 (0,7%)
No		5 (3,3%)	79 (52,3%)	3 (2,0%)
Not sure		0 (0,0%)	19 (12,6%)	4 (2,6%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,005	6 (4,0%)	137 (90,7%)	8 (5,3%)
Yes		4 (2,6%)	24 (15,9%)	3 (2,0%)
No		1 (0,7%)	93 (61,6%)	2 (1,3%)
Not sure		1 (0,7%)	20 (13,2%)	3 (2,0%)
Variable of interest	Awareness of the Rural Development Strategy 2016			
	Yes	No	Not sure	

Province the household previously reside in	Chi Square = 0,000	4 (2,6%)	142 (92,8%)	7 (4,6%)
Gauteng		1 (0,7%)	0 (0,0%)	0 (0,0%)
KwaZulu Natal		3 (2,0%)	141 (92,2%)	7 (4,6%)
Eastern Cape		0 (0,0%)	1 (0,7%)	0 (0,0%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,023	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		3 (2,0%)	34 (22,2%)	1 (0,7%)
FALSE		1 (0,7%)	80 (52,3%)	2 (1,3%)
Don't know		0 (0,0%)	28 (18,3%)	4 (2,6%)
The role of Traditional leadership is involved in the budget allocation process for their communities	Chi Square = 0,008	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		3 (2,0%)	23 (15,0%)	1 (0,7%)
FALSE		0 (0,0%)	84 (54,9%)	2 (1,3%)
Don't know		1 (0,7%)	35 (22,9%)	4 (2,6%)
The role of Traditional leadership is to maintain law and order within the community	Chi Square = 0,040	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		4 (2,6%)	42 (27,5%)	2 (1,3%)
FALSE		0 (0,0%)	79 (51,6%)	3 (2,0%)
Don't know		0 (0,0%)	21 (13,7%)	2 (1,3%)
There is evidence for the right to occupy the land	Chi Square = 0,054	4 (2,6%)	142 (92,8%)	7 (4,6%)
Yes		4 (2,6%)	140 (91,5%)	6 (3,9%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)

Only a little		0 (0,0%)	40 (26,5%)	3 (2,0%)
A fair amount		0 (0,0%)	47 (31,1%)	1 (0,7%)
A lot		4 (2,6%)	11 (7,3%)	1 (0,7%)
Knowledge about water pollution	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	39 (25,8%)	2 (1,3%)
Only a little		0 (0,0%)	38 (25,2%)	3 (2,0%)
A fair amount		0 (0,0%)	53 (35,1%)	1 (0,7%)
A lot		4 (2,6%)	10 (6,6%)	1 (0,7%)
Knowledge about sustainability	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	78 (51,7%)	3 (2,0%)
Only a little		0 (0,0%)	30 (19,9%)	2 (1,3%)
A fair amount		0 (0,0%)	26 (17,2%)	1 (0,7%)
A lot		4 (2,6%)	6 (4,0%)	1 (0,7%)
Knowledge about the conservation of natural resources	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	55 (36,4%)	3 (2,0%)
Only a little		0 (0,0%)	26 (17,2%)	2 (1,3%)
A fair amount		0 (0,0%)	48 (31,8%)	1 (0,7%)
A lot		4 (2,6%)	11 (7,3%)	1 (0,7%)
Level of satisfaction with the Drainage system	Chi Square = 0,037	4 (2,6%)	140 (92,7%)	7 (4,6%)
Strongly satisfied		2 (1,3%)	80 (53,0%)	2 (1,3%)
Satisfied		0 (0,0%)	40 (26,5%)	2 (1,3%)
Neutral		0 (0,0%)	6 (4,0%)	1 (0,7%)
Strongly dissatisfied		2 (1,3%)	8 (5,3%)	1 (0,7%)
Dissatisfied		0 (0,0%)	6 (4,0%)	1 (0,7%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,011	4 (2,6%)	140 (92,7%)	7 (4,6%)
Yes		2 (1,3%)	42 (27,8%)	2 (1,3%)
No		2 (1,3%)	81 (53,6%)	1 (0,7%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,012	4 (2,6%)	140 (92,7%)	7 (4,6%)
Yes		0 (0,0%)	40 (26,5%)	1 (0,7%)
No		4 (2,6%)	81 (53,6%)	2 (1,3%)

Not sure		0 (0,0%)	19 (12,6%)	4 (2,6%)
Variable of interest		Awareness of the Northern Spatial Development Plan 2013 - 2014		
		Yes	No	Not sure
There is evidence for the right to occupy the land	Chi Square = 0,054	3 (2,0%)	143 (93,5%)	7 (4,6%)
Yes		3 (2,0%)	141 (92,2%)	6 (3,9%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,053	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)
Only a little		1 (0,7%)	39 (25,8%)	3 (2,0%)
A fair amount		0 (0,0%)	47 (31,1%)	1 (0,7%)
A lot		2 (1,3%)	13 (8,6%)	1 (0,7%)
Knowledge about water pollution	Chi Square = 0,033	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		1 (0,7%)	38 (25,2%)	2 (1,3%)
Only a little		0 (0,0%)	38 (25,2%)	3 (2,0%)
A fair amount		0 (0,0%)	53 (35,1%)	1 (0,7%)
A lot		2 (1,3%)	12 (7,9%)	1 (0,7%)
Knowledge about sustainability	Chi Square = 0,008	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		1 (0,7%)	77 (51,0%)	3 (2,0%)
Only a little		0 (0,0%)	30 (19,9%)	2 (1,3%)
A fair amount		0 (0,0%)	26 (17,2%)	1 (0,7%)
A lot		2 (1,3%)	8 (5,3%)	1 (0,7%)
Level of satisfaction with the piped water system for drinking water	Chi Square = 0,018	3 (2,0%)	141 (93,4%)	7 (4,6%)
Strongly satisfied		1 (0,7%)	84 (55,6%)	3 (2,0%)
Satisfied		0 (0,0%)	18 (11,9%)	1 (0,7%)
Neutral		0 (0,0%)	16 (10,6%)	0 (0,0%)
Strongly dissatisfied		0 (0,0%)	14 (9,3%)	1 (0,7%)
Dissatisfied		2 (1,3%)	9 (6,0%)	2 (1,3%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,007	3 (2,0%)	141 (93,4%)	7 (4,6%)
Yes		2 (1,3%)	42 (27,8%)	2 (1,3%)
No		1 (0,7%)	82 (54,3%)	1 (0,7%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)

COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,017	3 (2,0%)	141 (93,4%)	7 (4,6%)
Yes		0 (0,0%)	40 (26,5%)	1 (0,7%)
No		3 (2,0%)	82 (54,3%)	2 (1,3%)
Not sure		0 (0,0%)	19 (12,6%)	4 (2,6%)
Variable of interest		Awareness of the Northern Urban Development Corridor (NUDC) 2011		
		Yes	No	Not sure
Province the household previously reside in	Chi Square = 0,000	4 (2,6%)	142 (92,8%)	7 (4,6%)
Gauteng		1 (0,7%)	0 (0,0%)	0 (0,0%)
KwaZulu Natal		3 (2,0%)	141 (92,2%)	7 (4,6%)
Eastern Cape		0 (0,0%)	1 (0,7%)	0 (0,0%)
Years since the household moved into the current residence	Chi Square = 0,052	4 (2,6%)	142 (92,8%)	7 (4,6%)
3 years ago		2 (1,3%)	9 (5,9%)	1 (0,7%)
3-5 years ago		0 (0,0%)	22 (14,5%)	2 (1,3%)
5-10 years ago		0 (0,0%)	33 (21,7%)	1 (0,7%)
More than 10 years ago		2 (1,3%)	77 (50,7%)	3 (2,0%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,023	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		3 (2,0%)	34 (22,2%)	1 (0,7%)
FALSE		1 (0,0%)	80 (52,3%)	2 (1,3%)
Don't know		0 (0,0%)	28 (18,3%)	4 (2,6%)
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,008	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		3 (2,0%)	23 (15,0%)	1 (0,7%)

FALSE		0 (0,0%)	84 (54,9%)	2 (1,3%)
Don't know		1 (0,7%)	35 (22,9%)	4 (2,6%)
The role of Traditional leadership is to maintain law and order within the community	Chi Square = 0,040	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		4 (2,6%)	42 (27,5%)	2 (1,3%)
FALSE		0 (0,0%)	79 (51,6%)	3 (2,0%)
Don't know		0 (0,0%)	21 (13,7%)	2 (1,3%)
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,011	4 (2,6%)	142 (92,8%)	7 (4,6%)
TRUE		2 (1,3%)	16 (10,5%)	0 (0,0%)
FALSE		2 (1,3%)	101 (66,0%)	3 (2,0%)
Don't know		0 (0,0%)	25 (16,3%)	4 (2,6%)
There is evidence for the right to occupy the land	Chi Square = 0,054	4 (2,6%)	142 (92,8%)	7 (4,6%)
Yes		4 (2,6%)	140 (91,5%)	6 (3,9%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about urban sprawl	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	99 (65,6%)	5 (3,3%)
Only a little		0 (0,0%)	20 (13,2%)	1 (0,7%)
A fair amount		4 (2,6%)	17 (11,3%)	1 (0,7%)
A lot		0 (0,0%)	4 (2,6%)	0 (0,0%)
Knowledge about air pollution	Chi Square = 0,003	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)
Only a little		0 (0,0%)	40 (26,5%)	3 (2,0%)
A fair amount		1 (0,7%)	46 (30,5%)	1 (0,7%)
A lot		3 (2,0%)	12 (7,9%)	1 (0,7%)
Knowledge about water pollution	Chi Square = 0,001	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	39 (25,8%)	2 (1,3%)
Only a little		0 (0,0%)	38 (25,2%)	3 (2,0%)
A fair amount		1 (0,7%)	52 (34,4%)	1 (0,7%)
A lot		3 (2,0%)	11 (7,3%)	1 (0,7%)
Knowledge about sustainability	Chi Square = 0,000	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	78 (51,7%)	3 (2,0%)

Only a little		0 (0,0%)	30 (19,9%)	2 (1,3%)
A fair amount		1 (0,7%)	25 (16,6%)	1 (0,7%)
A lot		3 (2,0%)	7 (4,6%)	1 (0,7%)
Knowledge about the conservation of natural resources	Chi Square = 0,003	4 (2,6%)	140 (92,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	55 (36,4%)	3 (2,0%)
Only a little		0 (0,0%)	26 (17,2%)	2 (1,3%)
A fair amount		1 (0,7%)	47 (31,1%)	1 (0,7%)
A lot		3 (2,0%)	12 (7,9%)	1 (0,7%)
Level of satisfaction with social welfare	Chi Square = 0,034	4 (2,6%)	142 (92,8%)	7 (4,6%)
Strongly satisfied		0 (0,0%)	27 (17,9%)	0 (0,0%)
Satisfied		0 (0,0%)	9 (6,0%)	0 (0,0%)
Neutral		0 (0,0%)	49 (32,5%)	3 (2,0%)
Strongly dissatisfied		0 (0,0%)	27 (17,9%)	2 (1,3%)
Dissatisfied		4 (2,6%)	28 (18,5%)	2 (1,3%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,003	4 (2,6%)	140 (92,7%)	7 (4,6%)
Yes		3 (2,0%)	41 (27,2%)	2 (1,3%)
No		1 (0,7%)	82 (54,3%)	1 (0,7%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport	Chi Square = 0,031	4 (2,6%)	140 (92,7%)	7 (4,6%)
Yes		1 (0,7%)	39 (25,8%)	1 (0,7%)
No		3 (2,0%)	82 (54,3%)	2 (1,3%)
Not sure		0 (0,0%)	19 (12,6%)	4 (2,6%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,007	4 (2,6%)	140 (92,7%)	7 (4,6%)
Yes		3 (2,0%)	26 (17,2%)	2 (1,3%)
No		0 (0,0%)	94 (62,3%)	2 (1,3%)
Not sure		1 (0,7%)	20 (13,2%)	3 (2,0%)
Variable of interest	Awareness of the Greater Inanda LAP - Consolidated Report 2020			

		Yes	No	Not sure
Province the household previously reside in	Chi Square = 0,000	7 (4,6%)	139 (90,8%)	7 (4,6%)
Gauteng		1 (0,7%)	0 (0,0%)	0 (0,0%)
KwaZulu Natal		6 (3,9%)	138 (90,2%)	7 (4,6%)
Eastern Cape		0 (0,0%)	1 (0,7%)	0 (0,0%)
How information about municipal plans and programmes is received	Chi Square = 0,001	3 (2,8%)	100 (93,5%)	4 (3,7%)
Radio		0 (0,0%)	2 (1,9%)	0 (0,0%)
Newspaper		0 (0,0%)	1 (0,7%)	0 (0,0%)
Ward councilor		0 (0,0%)	0 (0,0%)	1 (0,7%)
Loud hailing		3 (2,8%)	94 (87,9%)	3 (2,8%)
Other		0 (0,0%)	3 (2,8%)	0 (0,0%)
The likelihood that the household will move away from the area	Chi Square = 0,022	7 (4,6%)	139 (90,8%)	7 (4,6%)
Very likely		0 (0,0%)	9 (5,9%)	0 (0,0%)
Likely		0 (0,0%)	6 (3,9%)	2 (1,3%)
Unlikely		5 (3,3%)	116 (75,8%)	5 (3,3%)
Don't know		2 (1,3%)	8 (5,2%)	0 (0,0%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,035	7 (4,6%)	139 (90,8%)	7 (4,6%)
TRUE		4 (2,6%)	33 (21,6%)	1 (0,7%)
FALSE		3 (2,0%)	78 (51,0%)	2 (1,3%)
Don't know		0 (0,0%)	28 (18,3%)	4 (2,6%)
The role of Traditional leadership is to influence decision-making job and economic opportunities	Chi Square = 0,003	7 (4,6%)	139 (90,8%)	7 (4,6%)
TRUE		2 (1,3%)	16 (10,5%)	0 (0,0%)
FALSE		5 (3,3%)	99 (64,7%)	2 (1,3%)

Don't know		0 (0,0%)	24 (15,7%)	5 (3,3%)
There is evidence for the right to occupy the land	Chi Square = 0,053	7 (4,6%)	139 (90,8%)	7 (4,6%)
Yes		7 (4,6%)	137 (89,5%)	6 (3,9%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about urban sprawl	Chi Square = 0,010	7 (4,6%)	137 (90,7%)	7 (4,6%)
Practically nothing		2 (1,3%)	96 (63,6%)	6 (3,9%)
Only a little		0 (0,0%)	20 (13,2%)	1 (0,7%)
A fair amount		4 (2,6%)	18 (11,9%)	0 (0,0%)
A lot		1 (0,7%)	3 (2,0%)	0 (0,0%)
Knowledge about air pollution	Chi Square = 0,000	7 (4,6%)	137 (90,7%)	7 (4,6%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)
Only a little		1 (0,7%)	39 (25,8%)	3 (2,0%)
A fair amount		1 (0,7%)	45 (29,8%)	2 (1,3%)
A lot		5 (3,3%)	11 (7,3%)	0 (0,0%)
Knowledge about water pollution	Chi Square = 0,000	7 (4,6%)	137 (90,7%)	7 (4,6%)
Practically nothing		1 (0,7%)	38 (25,2%)	2 (1,3%)
Only a little		0 (0,0%)	38 (25,2%)	3 (2,0%)
A fair amount		1 (0,7%)	51 (33,8%)	2 (1,3%)
A lot		5 (3,3%)	10 (6,6%)	0 (0,0%)
Knowledge about sustainability	Chi Square = 0,000	7 (4,6%)	137 (90,7%)	7 (4,6%)
Practically nothing		1 (0,7%)	77 (51,0%)	3 (2,0%)
Only a little		2 (1,3%)	28 (18,5%)	2 (1,3%)
A fair amount		0 (0,0%)	25 (16,6%)	2 (1,3%)
A lot		4 (2,6%)	7 (4,6%)	0 (0,0%)
Knowledge about the conservation of natural resources	Chi Square = 0,000	7 (4,6%)	137 (90,7%)	7 (4,6%)
Practically nothing		1 (0,7%)	54 (35,8%)	3 (2,0%)
Only a little		0 (0,0%)	26 (17,2%)	2 (1,3%)
A fair amount		1 (0,7%)	46 (30,5%)	2 (1,3%)
A lot		5 (3,3%)	11 (7,3%)	0 (0,0%)
Level of satisfaction with the piped water system for drinking water	Chi Square = 0,026	7 (4,6%)	137 (90,7%)	7 (4,6%)
Strongly dissatisfied		2 (1,3%)	83 (55,0%)	3 (2,0%)
Dissatisfied		1 (0,7%)	17 (11,3%)	1 (0,7%)
Neutral		0 (0,0%)	16 (10,6%)	0 (0,0%)
Strongly satisfied		1 (0,7%)	13 (8,6%)	1 (0,7%)

Satisfied		3 (2,0%)	8 (5,3%)	2 (1,3%)
Level of satisfaction with access roads	Chi Square = 0,022	7 (4,6%)	137 (90,7%)	7 (4,6%)
Strongly dissatisfied		5 (3,3%)	77 (51,0%)	1 (0,7%)
Dissatisfied		2 (1,3%)	38 (25,2%)	1 (0,7%)
Neutral		0 (0,0%)	12 (7,9%)	2 (1,3%)
Strongly satisfied		0 (0,0%)	5 (3,3%)	2 (1,3%)
Satisfied		0 (0,0%)	5 (3,3%)	1 (0,7%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,002	7 (4,6%)	137 (90,7%)	7 (4,6%)
Yes		5 (3,3%)	40 (26,5%)	1 (0,7%)
No		2 (1,3%)	80 (53,0%)	2 (1,3%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,040	7 (4,6%)	137 (90,7%)	7 (4,6%)
Yes		2 (1,3%)	38 (25,2%)	1 (0,7%)
No		4 (2,6%)	81 (53,6%)	2 (1,3%)
Not sure		1 (0,7%)	18 (11,9%)	4 (2,6%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,005	7 (4,6%)	137 (90,7%)	7 (4,6%)
Yes		4 (2,6%)	24 (15,9%)	3 (2,0%)
No		2 (1,3%)	93 (61,6%)	1 (0,7%)
Not sure		1 (0,7%)	20 (13,2%)	3 (2,0%)
Variable of interest		Awareness of the North Town Planning Scheme		
		Yes	No	Not sure
The occurrence of public meetings	Chi Square = 0,013	3 (2,0%)	142 (93,4%)	7 (4,6%)
None		0 (0,0%)	48 (31,6%)	2 (1,3%)
Once every week		1 (0,7%)	2 (1,3%)	0 (0,0%)
Once a month		0 (0,0%)	7 (4,6%)	0 (0,0%)
Once every 3 months		1 (0,7%)	34 (22,4%)	0 (0,0%)
Once every 6 months		0 (0,0%)	24 (15,8%)	3 (2,0%)

Not sure		1 (0,7%)	27 (17,8%)	2 (1,3%)
There is evidence for the right to occupy the land	Chi Square = 0,054	3 (2,0%)	143 (93,5%)	7 (4,6%)
Yes		3 (2,0%)	141 (92,2%)	6 (3,9%)
No		0 (0,0%)	2 (1,3%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,053	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		0 (0,0%)	42 (27,8%)	2 (1,3%)
Only a little		1 (0,7%)	39 (25,8%)	3 (2,0%)
A fair amount		0 (0,0%)	47 (31,1%)	1 (0,7%)
A lot		2 (1,3%)	13 (8,6%)	1 (0,7%)
Knowledge about water pollution	Chi Square = 0,032	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		0 (0,0%)	39 (25,8%)	2 (1,3%)
Only a little		1 (0,7%)	37 (24,5%)	3 (2,0%)
A fair amount		0 (0,0%)	53 (35,1%)	1 (0,7%)
A lot		2 (1,3%)	12 (7,9%)	1 (0,7%)
Knowledge about sustainability	Chi Square = 0,005	3 (2,0%)	141 (93,4%)	7 (4,6%)
Practically nothing		0 (0,0%)	78 (51,7%)	3 (2,0%)
Only a little		1 (0,7%)	29 (19,2%)	2 (1,3%)
A fair amount		0 (0,0%)	26 (17,2%)	1 (0,7%)
A lot		2 (1,3%)	8 (5,3%)	1 (0,7%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,014	3 (2,0%)	141 (93,4%)	7 (4,6%)
Yes		1 (0,7%)	43 (28,5%)	2 (1,3%)
No		2 (1,3%)	81 (53,6%)	1 (0,7%)
Not sure		0 (0,0%)	17 (11,3%)	4 (2,6%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,034	3 (2,0%)	141 (93,4%)	7 (4,6%)
Yes		1 (0,7%)	39 (25,8%)	1 (0,7%)
No		2 (1,3%)	83 (55,0%)	2 (1,3%)
Not sure		0 (0,0%)	19 (12,6%)	4 (2,6%)

Table 29 shows the cross-tabulation between households' awareness of statutory planning and variables of interest. In the different components grouped under statutory planning, significant associations were observed for each. There is a relationship between statutory planning and migration trends. Most households that were not aware of statutory planning had

previously resided in the province of KwaZulu Natal and moved into their current residence more than 10 years previously.

From Table 29, most households were not aware of the occurrence of public meetings, which makes them less involved in public participation platforms. Generally, households lack knowledge of environmental issues. The impact for municipal planning is that in the absence of this knowledge, there is no guidance in terms of erecting dwellings in areas of environmental sensitivity.

Table 29: Cross-tabulation between the variable of interest and statutory planning awareness

Variable of interest		Statutory planning Awareness	
		Awareness of the Department within eThekweni Municipality responsible for development and land use management	
		Yes	No
In which Province did the household previously reside in	Chi Square = 0,006	25 (16,3%)	128 (83,7%)
Gauteng		1 (0,7%)	0 (0,0%)
KwaZulu Natal		23 (15,0%)	128 (83,7%)
Eastern Cape		1 (0,7%)	0 (0,0%)
The occurrence of public meetings	Chi Square = 0,051	25 (16,4%)	127 (83,6%)
None		4 (2,6%)	46 (30,3%)
Once every week		0 (0,0%)	3 (2,0%)
Once a month		3 (2,0%)	4 (2,6%)
Once every 3 months		10 (6,6%)	25 (16,4%)
Once every 6 months		3 (2,0%)	24 (15,8%)
Not sure		5 (3,3%)	25 (16,4%)
The role of the Traditional leadership is to ensure development within their area of jurisdiction	Chi Square = 0,014	25 (16,3%)	128 (83,7%)
TRUE		13 (8,5%)	30 (19,6%)
FALSE		10 (6,5%)	77 (50,3%)
Don't know		2 (1,3%)	21 (13,7%)
Who is responsible for land allocation	Chi Square = 0,023	25 (16,3%)	128 (83,7%)
Induna who is delegated by the Traditional Council		24 (15,7%)	128 (83,7%)
Community Based Organization		1 (0,7%)	0 (0,0%)
Did you receive any evidence for the right to occupy the land	Chi Square = 0,017	25 (16,3%)	128 (83,7%)
Yes		23 (15,0%)	127 (83,0%)
No		2 (1,3%)	1 (0,7%)

Knowledge about air pollution	Chi Square = 0,016	25 (16,6%)	126 (83,4%)
Practically nothing		2 (1,3%)	42 (27,8%)
Only a little		7 (4,6%)	36 (23,8%)
A fair amount		10 (6,6%)	38 (25,2%)
A lot		6 (4,0%)	10 (6,6%)
Knowledge about water pollution	Chi Square = 0,022	25 (16,6%)	126 (83,4%)
Practically nothing		3 (2,0%)	38 (25,2%)
Only a little		5 (3,3%)	36 (23,8%)
A fair amount		11 (7,3%)	43 (28,5%)
A lot		6 (4,0%)	9 (6,0%)
Knowledge about sustainability	Chi Square = 0,028	25 (16,6%)	126 (83,4%)
Practically nothing		8 (5,3%)	73 (48,3%)
Only a little		5 (3,3%)	27 (17,9%)
A fair amount		8 (5,3%)	19 (12,6%)
A lot		4 (2,6%)	7 (4,6%)
Knowledge about the conservation of natural resources	Chi Square = 0,001	25 (16,6%)	126 (83,4%)
Practically nothing		4 (2,6%)	54 (35,8%)
Only a little		1 (0,7%)	27 (17,9%)
A fair amount		14 (9,3%)	35 (23,2%)
A lot		6 (4,0%)	10 (6,6%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,031	25 (16,6%)	126 (83,4%)
Yes		10 (6,6%)	21 (13,9%)
No		12 (7,9%)	84 (55,6%)
Not sure		3 (2,0%)	21 (13,9%)
Variable of interest		Awareness of the Spatial Planning and Land Use Management Act 16 of 2013	
		Yes	No
Province the household previously reside in	Chi Square = 0,000	5 (3,3%)	148 (96,7%)
Gauteng		1 (0,7%)	0 (0,0%)
KwaZulu Natal		3 (2,0%)	148 (96,7%)
Eastern Cape		1 (0,7%)	0 (0,0%)
Years since the household moved into the current residence	Chi Square = 0,051	5 (3,3%)	147 (96,7%)
3 years ago		2 (1,3%)	10 (6,6%)
3-5 years ago		0 (0,0%)	24 (15,8%)
5-10 years ago		1 (0,7%)	33 (21,7%)
More than 10 years ago		2 (1,3%)	80 (52,6%)

The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,001	5 (3,3%)	148 (96,7%)
TRUE		4 (2,6)	23 (15,0%)
FALSE		1 (0,7%)	85 (55,6%)
Don't know		0 (0,0%)	40 (26,1%)
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,003	5 (3,3%)	148 (96,7%)
TRUE		3 (2,0%)	15 (9,8%)
FALSE		2 (1,3%)	104 (68,0%)
Don't know		0 (0,0%)	29 (19,0%)
Knowledge about urban sprawl	Chi Square = 0,024	5 (3,3%)	146 (96,7%)
Practically nothing		1 (0,7%)	103 (68,2%)
Only a little		1 (0,7%)	20 (13,2%)
A fair amount		3 (2,0%)	19 (12,6%)
A lot		0 (0,0%)	4 (2,6%)
Knowledge about sustainability	Chi Square = 0,011	5 (3,3%)	146 (96,7%)
Practically nothing		1 (0,7%)	80 (53,0%)
Only a little		0 (0,0%)	32 (21,2%)
A fair amount		2 (1,3%)	25 (16,6%)
A lot		2 (1,3%)	9 (6,0%)
Level of satisfaction with social welfare	Chi Square = 0,011	5 (3,3%)	146 (96,7%)
Strongly satisfied		0 (0,0%)	27 (17,9%)
Satisfied		1 (0,7%)	8 (5,3%)
Neutral		1 (0,7%)	52 (34,4%)
Strongly dissatisfied		1 (0,7%)	29 (19,2%)
Dissatisfied		4 (2,6%)	30 (19,9%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,003	5 (3,3%)	146 (96,7%)
Yes		5 (3,3%)	41 (27,2%)
No		0 (0,0%)	84 (55,6%)
Not sure		0 (0,0%)	21 (13,9%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,002	5 (3,3%)	146 (96,7%)

Yes		4 (2,0%)	27 (17,9%)
No		0 (0,0%)	96 (63,6%)
Not sure		1 (0,7%)	23 (15,2%)
Variable of interest		Awareness of the Building regulations that require the submission of Building Plans before construction	
		Yes	No
Awareness of public meetings usually called by the representatives of the municipality to discuss issues pertaining to Municipal plans/programmes in the ward	Chi Square = 0,005	32 (21,1%)	120 (96,7%)
Yes		22 (14,5%)	49 (32,2%)
No		10 (6,6%)	71 (46,7%)
The role of Traditional leadership is to ensure development within their area of jurisdiction	Chi Square = 0,008	32 (20,9%)	121 (79,1%)
TRUE		16 (10,5%)	27 (17,6%)
FALSE		13 (8,5%)	74 (48,4%)
Don't know		3 (2,0%)	20 (13,1%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,018	32 (20,9%)	121 (79,1%)
TRUE		14 (9,2%)	24 (15,7%)
FALSE		14 (9,2%)	69 (45,1%)
Don't know		4 (2,6%)	28 (18,3%)
There is a fair consultation for public participation in development programs by either traditional leaders or councillors	Chi Square = 0,008	32 (20,9%)	121 (79,1%)
Yes		14 (9,2%)	25 (16,3%)
No		18 (11,8%)	96 (62,7%)
There is evidence for the right to occupy the land	Chi Square = 0,001	32 (20,9%)	121 (79,1%)
Yes		29 (19,0%)	121 (79,1%)
No		3 (2,0%)	0 (0,0%)
Knowledge about urban sprawl	Chi Square = 0,008	32 (21,2%)	119 (78,8%)
Practically nothing		16 (10,6%)	88 (58,3%)

Only a little		4 (2,6%)	17 (11,3%)
A fair amount		10 (6,6%)	12 (7,9%)
A lot		2 (1,3%)	2 (1,3%)
Knowledge about air pollution	Chi Square = 0,000	32 (21,2%)	119 (78,8%)
Practically nothing		1 (0,7%)	43 (28,5%)
Only a little		7 (4,6%)	36 (23,8%)
A fair amount		16 (10,6%)	32 (21,2%)
A lot		8 (5,3%)	8 (5,3%)
Knowledge about water pollution	Chi Square = 0,000	32 (21,2%)	119 (78,8%)
Practically nothing		2 (1,3%)	39 (25,8%)
Only a little		6 (4,0%)	35 (23,2%)
A fair amount		16 (10,6%)	38 (25,2%)
A lot		8 (5,3%)	7 (4,6%)
Knowledge about sustainability	Chi Square = 0,000	32 (21,2%)	119 (78,8%)
Practically nothing		9 (6,0%)	72 (47,7%)
Only a little		5 (3,3%)	27 (17,9%)
A fair amount		12 (7,9%)	15 (9,9%)
A lot		6 (4,0%)	5 (3,3%)
Knowledge about the conservation of natural resources	Chi Square = 0,000	32 (21,2%)	119 (78,8%)
Practically nothing		5 (3,3%)	53 (35,1%)
Only a little		2 (1,3%)	26 (17,2%)
A fair amount		17 (11,3%)	32 (21,2%)
A lot		8 (5,3%)	8 (5,3%)
Level of satisfaction with social welfare	Chi Square = 0,029	32 (21,2%)	119 (78,8%)
Strongly satisfied		7 (4,6%)	20 (13,2%)
Satisfied		1 (0,7%)	8 (5,3%)
Neutral		4 (2,6%)	48 (31,8%)
Strongly dissatisfied		9 (6,0%)	20 (13,2%)
Dissatisfied		11 (7,3%)	23 (15,2%)
The occurrence of public meetings	Chi Square = 0,010	32 (21,1%)	120 (96,7%)
None		8 (5,3%)	42 (27,6%)
Once every week		0 (0,0%)	3 (2,0%)
Once a month		4 (2,6%)	3 (2,0%)
Once every 3 months		13 (8,6%)	22 (14,5%)
Once every 6 months		3 (2,0%)	24 (15,8%)
Not sure		4 (2,6%)	26 (17,1%)

COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,024	32 (21,2%)	119 (78,8%)
Yes		12 (7,9%)	19 (12,6%)
No		15 (15,9%)	81 (53,6%)
Not sure		5 (3,3%)	19 (12,6%)
Variable of interest		Awareness of the development process in terms of the scheme	
		Yes	No
Years since the household moved into the residence	Chi Square = 0,015	4 (2,6%)	148 (97,4%)
3 years ago		2 (1,3%)	10 (6,6%)
3-5 years ago		0 (0,0%)	24 (15,8%)
5-10 years ago		1 (0,7%)	33 (21,7%)
More than 10 years ago		1 (0,7%)	81 (53,3%)
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,009	4 (2,6%)	149 (97,4%)
TRUE		3 (2,0%)	24 (15,7%)
FALSE		1 (0,7%)	85 (55,6%)
Don't know		0 (0,0%)	40 (26,1%)
There is fair a consultation for public participation in development programs by either traditional leaders or councillors	Chi Square = 0,021	4 (2,6%)	149 (97,4%)
Yes		3 (2,0%)	36 (23,5%)
No		1 (0,7%)	113 (73,9%)
Knowledge about urban sprawl	Chi Square = 0,000	4 (2,6%)	147 (97,4%)
Practically nothing		0 (0,0%)	104 (68,9%)
Only a little		0 (0,0%)	21 (13,9%)
A fair amount		4 (2,6%)	18 (11,9%)
A lot		0 (0,0%)	4 (2,6%)
Knowledge about sustainability	Chi Square = 0,006	4 (2,6%)	147 (97,4%)
Practically nothing		0 (0,0%)	81 (53,6%)
Only a little		0 (0,0%)	32 (21,2%)
A fair amount		3 (2,0%)	24 (15,9%)
A lot		1 (0,7%)	10 (6,6%)
Knowledge about the conservation of natural resources	Chi Square = 0,033	4 (2,6%)	147 (97,4%)
Practically nothing		0 (0,0%)	58 (38,4%)
Only a little		0 (0,0%)	28 (18,5%)

A fair amount		2 (1,3%)	47 (31,1%)
A lot		2 (1,3%)	14 (9,3%)
Awareness of any COVID-19-related cases within the area	Chi Square = 0,038	4 (2,7%)	146 (97,3%)
Yes		3 (2,0%)	40 (28,7%)
No		1 (0,7%)	106 (70,7%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,023	4 (2,6%)	147 (97,4%)
Yes		3 (2,0%)	28 (18,5%)
No		1 (0,7%)	95 (62,9%)
Not sure		0 (0,0%)	24 (15,9%)
Variable of interest		Awareness of the D'MOSS layer which is accessible from the municipality that shows areas of environmental significance	
		Yes	No
Province the household previously reside in	Chi Square = 0,033	20 (13,1%)	133 (86,9%)
Gauteng		1 (0,7%)	0 (0,0%)
KwaZulu Natal		19 (12,4%)	132 (86,3%)
Eastern Cape		0 (0,0%)	1 (0,7%)
The role of Traditional leadership is to ensure development within their area of jurisdiction	Chi Square = 0,005	20 (13,1%)	133 (86,9%)
TRUE		11 (7,2%)	32 (20,9%)
FALSE		5 (3,3%)	82 (53,6%)
Don't know		4 (2,6%)	19 (12,4%)
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,002	20 (13,1%)	133 (86,9%)
TRUE		11 (7,2%)	27 (17,6%)
FALSE		5 (3,3%)	78 (51,0%)
Don't know		4 (2,6%)	28 (18,3%)
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,015	20 (13,1%)	133 (86,9%)
TRUE		8 (5,2%)	19 (12,4%)
FALSE		7 (4,6%)	79 (51,6%)
Don't know		5 (3,3%)	35 (22,9%)

Knowledge about urban sprawl	Chi Square = 0,000	20 (13,2%)	131 (86,8%)
Practically nothing		8 (5,2%)	96 (63,6%)
Only a little		2 (1,3%)	19 (12,6%)
A fair amount		9 (6,0%)	13 (8,6%)
A lot		1 (0,7%)	3 (2,0%)
Knowledge about air pollution	Chi Square = 0,000	20 (13,2%)	131 (86,8%)
Practically nothing		2 (1,3%)	42 (27,8%)
Only a little		2 (1,3%)	41 (27,2%)
A fair amount		7 (4,6%)	41 (27,2%)
A lot		9 (6,0%)	7 (4,6%)
Knowledge about water pollution	Chi Square = 0,000	20 (13,2%)	131 (86,9%)
Practically nothing		3 (2,0%)	38 (25,2%)
Only a little		2 (1,3%)	39 (25,8%)
A fair amount		7 (4,6%)	47 (31,1%)
A lot		8 (5,3%)	7 (4,6%)
Knowledge about sustainability	Chi Square = 0,000	20 (13,2%)	131 (86,8%)
Practically nothing		4 (2,6%)	77 (51,0%)
Only a little		3 (2,0%)	29 (19,2%)
A fair amount		8 (5,3%)	19 (12,6%)
A lot		5 (3,3%)	6 (4,0%)
Knowledge about the conservation of natural resources	Chi Square = 0,000	20 (13,2%)	131 (86,8%)
Practically nothing		2 (1,3%)	56 (37,1%)
Only a little		1 (0,7%)	27 (17,9%)
A fair amount		9 (6,0%)	40 (26,5%)
A lot		8 (5,3%)	8 (5,3%)
COVID-19 regulations have changed municipal service delivery in the area	Chi Square = 0,001	20 (13,2%)	131 (86,8%)
Yes		13 (8,6%)	33 (21,9%)
No		4 (2,6%)	80 (53,0%)
Not sure		3 (2,0%)	18 (11,9%)
COVID-19 regulations have changed the communication of municipal plans/programs to the community	Chi Square = 0,010	20 (13,2%)	131 (86,8%)
Yes		9 (6,0%)	22 (14,6%)
No		10 (6,6%)	86 (57,0%)
Not sure		1 (0,7%)	23 (15,2%)

6.2.8.4. Cross-tabulation between the variable of interest and migration trends

Table 30 shows the cross-tabulations between migration trends and variables of interest. There is a statistically significant association between migration trends and variables of

interest. Most households (98,7%) that previously resided in KwaZulu Natal were either not aware (32,2%) of the occurrence of public meetings or did not know (53,0%) of environmental issues relating to sustainability.

Again, most households (53,9%) that had moved into the current residence more than 10 years ago either knew their ward councillor (41,4%), understood that the role of the traditional leadership is to reserve and allocate land for residential uses, or were not satisfied with the level of the sanitary sewer system (29,3%). Most households (90,8%) that spent most nights in their residence understood the role of the traditional leadership to be the reserving of land for residential use (p value 0,000), understood that there were no restrictions for eligibility to occupy land and that the Induna was delegated by the Traditional Council to allocate the land (90,8%).

Households (53,9%) that were unlikely to move away from the area, received information about municipal plans and programmes through loud haling (82,2%) but were not aware of the occurrence of public meetings. The level of satisfaction with cellular phone and internet coverage, internet broadband, and social welfare ranged from satisfactory to neutral. The relationship between migration trends and variables of interest is that for municipal planning to have an impact it needs to consider the population dynamics that are area specific to Mzinyathi.

Table 30: Cross-tabulation between the variable of interest and migration trends

Variable of interest		Migration trends		
		Province the household previously resided in		
		Gauteng	KwaZulu Natal	Eastern Cape
The occurrence of public meetings	Chi Square = 0,010	1 (0,7%)	150 (98,7%)	1 (0,7%)
None		1 (0,7%)	49 (32,2%)	0 (0,0%)
Once every week		0 (0,0%)	3 (2,0%)	0 (0,0%)
Once a month		0 (0,0%)	6 (3,9%)	1 (0,7%)
Once every 3 months		0 (0,0%)	35 (23,0%)	0 (0,0%)
Once every 6 months		0 (0,0%)	27 (17,8%)	0 (0,0%)
Not sure		0 (0,0%)	30 (19,7%)	0 (0,0%)

The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,051	1 (0,7%)	151 (98,7%)	1 (0,7%)	
TRUE		1 (0,7%)	25 (16,3%)	1 (0,7%)	
FALSE		0 (0,0%)	86 (56,2%)	0 (0,0%)	
Don't know		0 (0,0%)	40 (26,1%)	0 (0,0%)	
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,004	1 (0,7%)	151 (98,7%)	1 (0,7%)	
TRUE		1 (0,7%)	16 (10,5%)	1 (0,7%)	
FALSE		0 (0,0%)	106 (69,3%)	0 (0,0%)	
Don't know		0 (0,0%)	29 (19,0%)	0 (0,0%)	
Knowledge about sustainability	Chi Square = 0,034	1 (0,7%)	149 (98,7%)	1 (0,7%)	
Practically nothing		0 (0,0%)	80 (53,0%)	1 (0,7%)	
Only a little		0 (0,0%)	32 (21,2%)	0 (0,0%)	
A fair amount		0 (0,0%)	27 (17,9%)	0 (0,0%)	
A lot		1 (0,7%)	10 (6,6%)	0 (0,0%)	
Variable of interest		Years since the household moved into the current residence			
		3 years ago	3 - 5 years ago	5 - 10 years ago	More than 10 years ago
Do you know your ward councillor	Chi Square = 0,008	12 (7,9%)	24 (15,8%)	34 (22,4%)	82 (53,9%)
Yes		5 (3,3%)	11 (7,2%)	23 (15,1%)	63 (41,4%)
No		7 (4,6%)	13 (8,6%)	11 (7,2%)	19 (12,5%)
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,027	12 (7,9%)	24 (15,8%)	34 (22,4%)	82 (53,9%)
TRUE		6 (3,9%)	1 (0,7%)	3 (2,0%)	17 (11,2%)
FALSE		4 (2,6%)	15 (9,9%)	21 (13,8%)	46 (30,3%)
Don't know		2 (1,3%)	8 (5,3%)	10 (6,6%)	19 (12,5%)
Level of satisfaction with the sanitary sewer system	Chi Square = 0,024	11 (7,3%)	24 (16,0%)	34 (22,7%)	81 (54,0%)
Strongly Dissatisfied		9 (6,0%)	10 (6,7%)	23 (15,3%)	44 (29,3%)
Dissatisfied		0 (0,0%)	1 (0,7%)	4 (2,7%)	11 (7,3%)
Neutral		0 (0,0%)	6 (4,0%)	3 (2,0%)	8 (5,3%)

Satisfied		1 (0,7%)	7 (4,7%)	0 (0,0%)	11 (7,3%)
Strongly Satisfied		1 (0,7%)	0 (0,0%)	0 (0,0%)	7 (4,7%)
Level of satisfaction with cellphone and internet coverage	Chi Square = 0,045	11 (7,3%)	24 (16,0%)	34 (22,7%)	81 (54,0%)
Strongly Dissatisfied		6 (4,0%)	2 (1,3%)	6 (4,0%)	18 (12,0%)
Dissatisfied		1 (0,7%)	1 (0,7%)	6 (4,0%)	5 (3,3%)
Neutral		2 (1,3%)	5 (3,3%)	6 (4,0%)	22 (14,7%)
Satisfied		1 (0,7%)	10 (6,7%)	6 (4,0%)	24 (16,0%)
Strongly Satisfied		1 (0,7%)	6 (4,0%)	10 (6,7%)	12 (8,0%)
Level of satisfaction with social welfare	Chi Square = 0,026	11 (7,3%)	24 (16,0%)	34 (22,7%)	81 (54,0%)
Strongly Dissatisfied		4 (2,7%)	0 (0,0%)	7 (4,7%)	16 (10,7%)
Dissatisfied		0 (0,0%)	0 (0,0%)	5 (3,3%)	4 (2,7%)
Neutral		2 (1,3%)	13 (8,7%)	10 (6,7%)	26 (17,3%)
Satisfied		1 (0,7%)	8 (5,3%)	4 (2,7%)	16 (10,7%)
Strongly Satisfied		4 (2,7%)	3 (2,0%)	8 (5,3%)	19 (12,7%)
Variable of interest		The household resides in the residence for at least four nights a week and has done so for the last six months or intends to reside in this residence for at least four nights for the next six months			
		Yes		No	
The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,025	139 (90,8%)		14 (9,2%)	
TRUE		33 (21,6%)		5 (3,3%)	
FALSE		80 (52,3%)		3 (2,0%)	
Don't know		26 (17,0%)		6 (3,9%)	
The role of Traditional leadership is to be involved in the budget allocation process for their communities	Chi Square = 0,020	139 (90,8%)		14 (9,2%)	
TRUE		22 (14,4%)		5 (3,3%)	
FALSE		83 (54,2%)		3 (2,0%)	
Don't know		34 (22,2%)		6 (3,9%)	
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,000	139 (90,8%)		14 (9,2%)	
TRUE		12 (7,8%)		6 (3,9%)	
FALSE		104 (68,0%)		2 (1,3%)	
Don't know		23 (15,0%)		6 (3,9%)	

The role of the Traditional leadership is to reserve and allocate land for residential use within their jurisdiction	Chi Square = 0,000	139 (90,8%)	14 (9,2%)
TRUE		104 (68,0%)	4 (2,6%)
FALSE		24 (15,7%)	9 (5,9%)
Don't know		11 (7,2%)	1 (0,7%)
Who is eligible to apply for the occupation of land	Chi Square = 0,018	138 (90,8%)	14 (9,2%)
A person who grew up in the community		19 (12,5%)	6 (3,9%)
A person from outside the community		55 (36,2%)	3 (2,0%)
There are no restrictions		64 (42,1%)	5 (3,3%)
Who is responsible for the land allocation process	Chi Square = 0,002	139 (90,8%)	14 (9,2%)
Induna who is delegated by the Traditional Council		139 (90,8%)	13 (8,5%)
Community-based organization		0 (0,0%)	1 (0,7%)
Knowledge about air pollution	Chi Square = 0,007	137 (90,7%)	14 (9,3%)
Practically nothing		37 (24,5%)	7 (4,6%)
Only a little		40 (26,5%)	3 (2,0%)
A fair amount		48 (31,8%)	0 (0,0%)
A lot		12 (7,9%)	4 (2,6%)
Knowledge about water pollution	Chi Square = 0,009	137 (90,7%)	14 (9,3%)
Practically nothing		33 (21,9%)	8 (5,3%)
Only a little		39 (25,8%)	2 (1,3%)
A fair amount		53 (35,1%)	1 (0,7%)
A lot		12 (7,9%)	3 (2,0%)
Knowledge about sustainability	Chi Square = 0,047	137 (90,7%)	14 (9,3%)
Practically nothing		72 (47,7%)	9 (6,0%)
Only a little		32 (21,2%)	0 (0,0%)
A fair amount		25 (16,6%)	2 (1,3%)
A lot		8 (5,3%)	3 (2,0%)
Knowledge about the conservation of natural resources	Chi Square = 0,036	137 (90,7%)	14 (9,3%)
Practically nothing		49 (32,5%)	9 (6,0%)
Only a little		27 (17,9%)	1 (0,7%)
A fair amount		48 (31,8%)	1 (0,7%)
A lot		13 (8,6%)	3 (2,0%)

Businesses and industries should be responsible for solving environmental problems in the area	Chi Square = 0,034	137 (90,7%)	14 (9,3%)
Strongly Disagree		43 (28,5%)	10 (6,6%)
Disagree		5 (3,3%)	0 (0,0%)
Neutral		16 (10,6%)	2 (1,3%)
Agree		13 (8,6%)	0 (0,0%)
Strongly Agree		60 (39,7%)	2 (1,3%)
Individual citizens should be responsible for solving environmental problems in the area	Chi Square = 0,000	137 (90,7%)	14 (9,3%)
Strongly Disagree		14 (9,3%)	8 (5,3%)
Disagree		1 (0,7%)	0 (0,0%)
Neutral		10 (6,6%)	0 (0,0%)
Agree		24 (15,9%)	1 (0,7%)
Strongly Agree		88 (58,3%)	5 (3,3%)
Level of satisfaction with electricity	Chi Square = 0,024	137 (90,7%)	14 (9,3%)
Strongly Dissatisfied		10 (6,6%)	4 (2,6%)
Dissatisfied		12 (7,9%)	0 (0,0%)
Neutral		20 (13,2%)	1 (0,7%)
Satisfied		41 (27,2%)	1 (0,7%)
Strongly Satisfied		54 (35,8%)	8 (5,3%)
Level of satisfaction with Cellphone and internet coverage	Chi Square = 0,045	137 (90,7%)	14 (9,3%)
Strongly Dissatisfied		26 (17,2%)	6 (4,0%)
Dissatisfied		12 (7,9%)	1 (0,7%)
Neutral		34 (22,5%)	1 (0,7%)
Satisfied		41 (27,2%)	1 (0,7%)
Strongly Satisfied		24 (15,9%)	5 (3,3%)
Level of satisfaction with Internet/Broadband services	Chi Square = 0,039	137 (90,7%)	14 (9,3%)
Strongly Dissatisfied		27 (17,9%)	6 (4,0%)
Dissatisfied		12 (7,9%)	1 (0,7%)
Neutral		34 (22,5%)	1 (0,7%)
Satisfied		42 (27,8%)	1 (0,7%)
Strongly Satisfied		22 (14,6%)	5 (3,3%)
Level of satisfaction with social welfare	Chi Square = 0,015	137 (90,7%)	14 (9,3%)
Strongly Dissatisfied		25 (16,6%)	2 (1,3%)
Dissatisfied		9 (6,0%)	0 (0,0%)
Neutral		48 (31,8%)	4 (2,6%)

Satisfied		29 (19,2%)	0 (0,0%)		
Strongly Satisfied		26 (17,2%)	8 (5,3%)		
Variable of interest		The likelihood that the household will never move away from this area			
		Very likely	Likely	Unlikely	Don't know
How information about municipal plans and programmes is received	Chi Square = 0,000	5 (4,7%)	4 (3,7%)	92 (86,0%)	82 (53,9%)
Radio		0 (0,0%)	0 (0,0%)	2 (1,9%)	0 (0,0%)
Newspaper		0 (0,0%)	0 (0,0%)	1 (0,9%)	0 (0,0%)
Ward Councilor		0 (0,0%)	1 (0,9%)	0 (0,0%)	0 (0,0%)
Loud Hailing		4 (3,7%)	3 (2,8%)	88 (82,2%)	5 (4,7%)
Other		1 (0,9%)	0 (0,0%)	1 (0,9%)	1 (0,9%)
The occurrence of public meetings	Chi Square = 0,001	9 (5,9%)	8 (5,3%)	125 (82,2%)	10 (6,6%)
None		2 (1,3%)	3 (2,0%)	39 (25,7%)	6 (3,9%)
Once every week		0 (0,0%)	1 (0,7%)	1 (0,7%)	1 (0,7%)
Once a month		3 (2,0%)	1 (0,7%)	3 (2,0%)	0 (0,0%)
Once every 3 months		1 (0,7%)	1 (0,7%)	32 (21,1%)	1 (0,7%)
Once every 6 months		3 (2,0%)	1 (0,7%)	22 (14,5%)	1 (0,7%)
Not sure		3 (2,0%)	1 (0,7%)	28 (18,4%)	1 (0,7%)
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,000	9 (5,9%)	8 (5,3%)	125 (82,2%)	10 (6,6%)
TRUE		0 (0,0%)	0 (0,0%)	18 (11,8%)	0 (0,0%)
FALSE		7 (4,6%)	2 (1,3%)	91 (59,5%)	6 (3,9%)
Don't know		2 (1,3%)	6 (3,9%)	17 (11,1%)	4 (2,6%)
The role of Traditional leadership is to protect land for agricultural activities	Chi Square = 0,038	9 (5,9%)	8 (5,2%)	126 (82,4%)	10 (6,5%)
TRUE		1 (0,7%)	1 (0,7%)	40 (26,1%)	1 (0,7%)
FALSE		7 (4,6%)	4 (2,6%)	76 (49,7%)	6 (3,9%)
Don't know		1 (0,7%)	3 (2,0%)	10 (6,5%)	3 (2,0%)
The role of the Traditional leadership is to reserve and allocate land for residential use within their jurisdiction	Chi Square = 0,045	9 (5,9%)	8 (5,2%)	126 (82,4%)	10 (6,5%)
TRUE		3 (2,0%)	5 (3,3%)	92 (60,1%)	8 (5,2%)
FALSE		5 (3,3%)	3 (2,0%)	25 (16,3%)	0 (0,0%)
Don't know		1 (0,7%)	0 (0,0%)	9 (5,9%)	2 (1,3%)

Who is responsible for the land allocation process	Chi Square = 0,001	9 (5,9%)	8 (5,2%)	126 (82,4%)	10 (6,5%)
Induna who is delegated by the Traditional Council		8 (5,2%)	8 (5,2%)	126 (82,4%)	10 (8,5%)
Community-based organization		1 (0,7%)	0 (0,0%)	0 (0,0%)	0 (0,0%)
There is evidence for the right to occupy the land	Chi Square = 0,000	9 (5,9%)	8 (5,2%)	126 (82,4%)	10 (6,5%)
Yes		7 (4,6%)	7 (4,6%)	126 (82,4%)	10 (8,5%)
No		2 (1,3%)	1 (0,7%)	0 (0,0%)	0 (0,0%)
Level of satisfaction with Cellphone and internet coverage	Chi Square = 0,015	9 (6,0%)	8 (5,3%)	124 (82,1%)	10 (6,6%)
Strongly Dissatisfied		0 (0,0%)	5 (3,3%)	25 (16,6%)	2 (1,3%)
Dissatisfied		1 (0,7%)	2 (1,3%)	8 (5,3%)	2 (1,3%)
Neutral		5 (3,3%)	1 (0,7%)	29 (19,2%)	0 (0,0%)
Satisfied		2 (1,3%)	0 (0,0%)	36 (23,8%)	4 (2,6%)
Strongly Satisfied		1 (0,7%)	0 (0,0%)	26 (17,2%)	2 (1,3%)
Level of satisfaction with Internet/Broadband services	Chi Square = 0,003	9 (6,0%)	8 (5,3%)	124 (82,1%)	10 (6,6%)
Strongly Dissatisfied		1 (0,7%)	6 (4,0%)	24 (15,9%)	2 (1,3%)
Dissatisfied		2 (1,3%)	1 (0,7%)	8 (5,3%)	2 (1,3%)
Neutral		5 (3,3%)	0 (0,0%)	30 (19,9%)	0 (0,0%)
Satisfied		1 (0,7%)	1 (0,7%)	37 (24,5%)	4 (2,6%)
Strongly Satisfied		0 (0,0%)	0 (0,0%)	25 (16,6%)	2 (1,3%)
Level of satisfaction with social welfare	Chi-Square = 0,004	9 (6,0%)	8 (5,3%)	124 (82,1%)	10 (6,6%)
Strongly Dissatisfied		5 (3,3%)	1 (0,7%)	19 (12,6%)	2 (1,3%)
Dissatisfied		3 (2,0%)	0 (0,0%)	5 (3,3%)	1 (0,7%)
Neutral		0 (0,0%)	2 (1,3%)	48 (31,8%)	2 (1,3%)
Satisfied		0 (0,0%)	3 (2,0%)	24 (15,9%)	2 (1,3%)
Strongly Satisfied		1 (0,7%)	2 (1,3%)	28 (18,5%)	3 (2,0%)

6.2.8.5. Cross-tabulation between variables of interest and involvement of the community in municipal planning

Cross-tabulation between the involvement of the community in municipal planning with variables of interest revealed a significant association. This is shown in Table 31. Households (66,7%) that knew their ward councillor had an understanding that decision-making of job opportunities and economic opportunities as well as the reservation of land for public uses was not the role of the traditional leadership. A significant association (p value 0,007) was also

discerned among households who knew their ward councillor and who strongly agreed (48,3%) that the municipality should be responsible for solving environmental problems in the area. Some households remained neutral (25,8%) on the level of satisfaction with social welfare.

Regardless of whether the local municipal offices were easily accessible or not, most households (74,5%) thought that there was no fair consultation for public participation in development programmes by either traditional leaders or ward councillors (p value 0,001). COVID-19 regulations have not impacted on safety/security and communication of municipal plans despite the accessibility of local municipal offices.

In terms of information distribution, most households (66,7%) who received information through loud hailing, thought that the municipality should be responsible for solving environmental problems in the area (p value 0,000), were satisfied (43,8%) with the level of electricity (p value 0,006) but were strongly dissatisfied with the level of access roads (52,4%) and drainage system (49,5%).

Table 31 also shows that there was a lack of awareness of public meetings called by the representatives of the municipality to discuss issues about municipal plans/programmes. Households not aware of such meetings rated the relationship between traditional leaders and ward councillors from poor to average, based on the cases recorded (p value 0,001). Furthermore, most households (48,0%) did not agree that there is a fair consultation for public participation in development programmes by either traditional leaders or ward councillors (p value 0,000). Households were also not aware of the occurrence of these public meetings, but most agreed that individual citizens should be responsible for solving environmental problems in the area. The lack of involvement of the community in planning processes has implications on the impact of municipal planning because it means some inputs are not gathered and incorporated in the plans.

Table 31: Cross-tabulation between the variable of interest and Involvement of the community in municipal planning

Variable of interest		Involvement of the community in municipal planning	
		Do you know your ward councillor	
		Yes	No
The role of Traditional leadership is to be involved in the decision-making of job and economic opportunities	Chi Square = 0,001	102 (66,7%)	51 (33,3%)

TRUE		10 (6,5%)	8 (5,2%)
FALSE		80 (52,3%)	26 (17,0%)
Don't know		12 (7,8%)	17 (11,1%)
The role of the Traditional leadership is to reserve land for public uses within their area of jurisdiction	Chi Square = 0,028	102 (66,7%)	51 (33,3%)
TRUE		19 (12,4%)	10 (6,5%)
FALSE		77 (50,3%)	31 (20,3%)
Don't know		6 (3,9%)	10 (6,5%)
The municipality should be responsible for solving environmental problems in the area	Chi Square = 0,007	101 (66,9%)	50 (33,1%)
Strongly Disagree		8 (5,3%)	13 (8,6%)
Disagree		3 (2,0%)	3 (2,0%)
Neutral		17 (11,3%)	3 (2,0%)
Strongly Agree		73 (48,3%)	31 (20,5%)
Level of satisfaction with social welfare	Chi Square = 0,017	101 (66,9%)	50 (33,1%)
Strongly Dissatisfied		11 (7,3%)	16 (10,6%)
Dissatisfied		7 (4,6%)	2 (1,3%)
Neutral		39 (25,8%)	13 (8,6%)
Satisfied		18 (11,9%)	11 (7,3%)
Strongly Satisfied		26 (17,2%)	8 (5,3%)
Variable of interest		How accessible are the Local Municipal offices	
		Easily accessible	Not easily accessible
There is fair consultation for public participation in development programs by either traditional leaders or ward councillors	Chi Square = 0,001	87 (56,9%)	66 (43,1%)
Yes		31 (20,3%)	8 (5,2%)
No		56 (36,6%)	58 (37,9%)
COVID-19 regulations have changed municipal safety/security in the area	Chi Square = 0,032	85 (56,3%)	65 (43,0%)

Yes		19 (12,6%)	18 (11,9%)			
No		56 (37,1%)	31 (20,5%)			
Not sure		10 (6,6%)	17 (11,3%)			
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,003	85 (56,3%)	65 (43,0%)			
Yes		13 (8,6%)	18 (11,9%)			
No		64 (42,4%)	32 (21,2%)			
Not sure		8 (5,3%)	15 (9,9%)			
Variable of interest		How the information about municipal plans and programmes is received				
		Radio	Newspaper	Ward councillor	Loud Hailing	Other
The municipality should be responsible for solving environmental problems in the area	Chi Square = 0,000	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Strongly Dissatisfied		0 (0,0%)	0 (0,0%)	0 (0,0%)	11 (10,5%)	2 (1,9%)
Neutral		1 (1,0%)	0 (0,0%)	1 (1,0%)	3 (2,9%)	0 (0,0%)
Satisfied		1 (1,0%)	0 (0,0%)	0 (0,0%)	14 (13,3%)	0 (0,0%)
Strongly Satisfied		0 (0,0%)	1 (1,0%)	0 (0,0%)	70 (66,7%)	1 (1,0%)
Level of satisfaction with electricity	Chi Square = 0,006	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Strongly Dissatisfied		0 (0,0%)	0 (0,0%)	0 (0,0%)	11 (10,5%)	1 (1,0%)
Dissatisfied		1 (1,0%)	0 (0,0%)	0 (0,0%)	3 (2,9%)	1 (1,0%)
Neutral		0 (0,0%)	1 (1,0%)	1 (1,0%)	10 (9,5%)	0 (0,0%)
Satisfied		0 (0,0%)	0 (0,0%)	0 (0,0%)	28 (26,7%)	0 (0,0%)
Strongly Satisfied		1 (1,0%)	0 (0,0%)	0 (0,0%)	46 (43,8%)	1 (1,0%)
Level of satisfaction with access roads	Chi Square = 0,000	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Strongly Dissatisfied		1 (1,0%)	1 (1,0%)	0 (0,0%)	55 (52,4%)	3 (2,9%)
Dissatisfied		0 (0,0%)	0 (0,0%)	0 (0,0%)	30 (28,6%)	0 (0,0%)
Neutral		0 (0,0%)	0 (0,0%)	0 (0,0%)	8 (7,6%)	0 (0,0%)
Satisfied		0 (0,0%)	0 (0,0%)	1 (1,0%)	2 (1,9%)	0 (0,0%)
Strongly Satisfied		1 (1,0%)	0 (0,0%)	0 (0,0%)	3 (2,9%)	0 (0,0%)
Level of satisfaction with the drainage system	Chi Square = 0,011	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Strongly Dissatisfied		0 (0,0%)	1 (1,0%)	0 (0,0%)	52 (49,5%)	2 (1,9%)
Dissatisfied		1 (1,0%)	0 (0,0%)	0 (0,0%)	30 (28,6%)	0 (0,0%)

Neutral		0 (0,0%)	0 (0,0%)	0 (0,0%)	5 (4,8%)	1 (1,0%)
Satisfied		0 (0,0%)	0 (0,0%)	0 (0,0%)	7 (6,7%)	0 (0,0%)
Strongly Satisfied		1 (1,0%)	0 (0,0%)	1 (1,0%)	4 (3,8%)	0 (0,0%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,034	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Yes		2 (1,9%)	0 (0,0%)	1 (1,0%)	19 (18,1%)	1 (1,0%)
No		0 (0,0%)	0 (0,0%)	0 (0,0%)	62 (59,0%)	2 (1,9%)
Not sure		0 (0,0%)	1 (1,0%)	0 (0,0%)	17 (16,2%)	0 (0,0%)
COVID-19 regulations have changed communication of municipal plans/programmes to the community	Chi Square = 0,018	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Yes		2 (1,9%)	0 (0,0%)	1 (1,0%)	19 (18,1%)	0 (0,0%)
No		0 (0,0%)	0 (0,0%)	0 (0,0%)	65 (61,9%)	2 (1,9%)
Not sure		0 (0,0%)	1 (1,0%)	0 (0,0%)	14 (13,3%)	1 (1,0%)
Estimation of how long COVID-19 will continue affecting the area	Chi Square = 0,000	2 (1,9%)	1 (1,0%)	1 (1,0%)	98 (93,3%)	3 (2,9%)
Less than a year		0 (0,0%)	0 (0,0%)	1 (1,0%)	1 (1,0%)	1 (1,0%)
1-3 years		0 (0,0%)	0 (0,0%)	0 (0,0%)	20 (19,0%)	0 (0,0%)
More than 3 years		2 (1,9%)	0 (0,0%)	0 (0,0%)	36 (34,3%)	0 (0,0%)
Do not know		0 (0,0%)	1 (1,0%)	0 (0,0%)	41 (39,0%)	2 (1,9%)
Variable of interest		Awareness of any public meetings which are usually called by the representatives of the municipality to discuss issues pertaining to municipal plans/programmes				
		Yes			No	
The role of Traditional leadership is to ensure development within their area of jurisdiction	Chi Square = 0,000	71 (46,7%)			81 (53,3%)	
TRUE		31 (20,4%)			12 (7,9%)	
FALSE		36 (23,0%)			51 (33,6%)	
Don't know		5 (3,3%)			18 (11,8%)	

The role of Traditional leadership is to influence decision-making and actions of the municipality within their area of jurisdiction	Chi Square = 0,014	71 (46,7%)	81 (53,3%)
TRUE		24 (15,8%)	14 (9,2%)
FALSE		38 (25,0%)	44 (28,9%)
Don't know		9 (5,9%)	23 (15,1%)
The role of Traditional leadership is to maintain law and order within the community	Chi Square = 0,009	71 (46,7%)	81 (53,3%)
TRUE		29 (19,1%)	19 (12,5%)
FALSE		37 (24,3%)	44 (28,9%)
Don't know		5 (3,3%)	18 (11,8%)
Perception of the relationship between traditional leaders and ward councillors	Chi Square = 0,001	71 (46,7%)	81 (53,3%)
Poor		19 (12,5%)	41 (27,0%)
Average		41 (27,0%)	38 (25,0%)
Good		11 (7,2%)	2 (1,3%)
Is there fair consultation for public participation in development programs by either traditional leaders or ward councillors	Chi Square = 0,000	71 (46,7%)	81 (53,3%)
Yes		31 (20,4%)	8 (5,3%)
No		40 (26,3%)	73 (48,0%)
Knowledge about the conservation of natural resources	Chi Square = 0,037	71 (47,0%)	80 (53,0%)
Practically nothing		25 (16,6%)	33 (21,9%)
Only little		14 (9,3%)	14 (9,3%)
A fair amount		29 (19,2%)	20 (13,2%)
A lot		3 (2,0%)	13 (8,6%)
Level of satisfaction with the drainage system	Pearson Chi Square = 0,028	71 (47,0%)	80 (53,0%)
Strongly Dissatisfied		30 (19,9%)	54 (35,8%)

Dissatisfied		27 (17,9%)			15 (9,9%)		
Neutral		3 (2,0%)			4 (2,6%)		
Satisfied		7 (4,6%)			4 (2,6%)		
Strongly Satisfied		4 (2,6%)			3 (2,0%)		
Variable of interest		The occurrence of public meetings					
		None	Once every week	Once a month	Once every 3 months	Once every 6 months	Not sure
The role of Traditional leadership is to reserve and allocate land for residential use within the community	Chi Square = 0,044	50 (32,9%)	3 (2,0%)	7 (4,6%)	35 (23,0%)	27 (17,8%)	30 (19,7%)
TRUE		32 (21,1%)	1 (0,7%)	3 (2,0%)	30 (19,7%)	18 (11,8%)	23 (15,1%)
FALSE		13 (8,6%)	2 (1,3%)	4 (2,6%)	3 (2,0%)	8 (5,3%)	3 (2,0%)
Don't know		5 (3,3%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	1 (0,7%)	4 (2,6%)
Perception of the relationship between traditional leaders and ward councillors	Chi Square = 0,001	50 (32,9%)	3 (2,0%)	7 (4,6%)	35 (23,0%)	27 (17,8%)	30 (19,7%)
Poor		28 (18,4%)	3 (2,0%)	3 (2,0%)	10 (6,6%)	5 (3,3%)	11 (7,2%)
Average		21 (13,8%)	0 (0,0%)	4 (2,6%)	20 (13,2%)	15 (9,9%)	19 (12,5%)
Good		1 (0,7%)	0 (0,0%)	0 (0,0%)	5 (3,3%)	7 (4,6%)	0 (0,0%)
Is there fair consultation for public participation in development programs by either traditional leaders or ward councillors	Chi Square = 0,012	50 (32,9%)	3 (2,0%)	7 (4,6%)	35 (23,0%)	27 (17,8%)	30 (19,7%)
Yes		6 (3,9%)	0 (0,0%)	2 (1,3%)	16 (10,5%)	9 (5,9%)	6 (3,9%)
No		44 (28,9%)	3 (2,0%)	5 (3,3%)	19 (12,5%)	18 (11,8%)	24 (15,8%)
Did you receive any evidence for the right to occupy the land	Chi Square = 0,036	50 (32,9%)	3 (2,0%)	7 (4,6%)	35 (23,0%)	27 (17,8%)	30 (19,7%)
Yes		50 (32,9%)	3 (2,0%)	6 (3,9%)	35 (23,0%)	25 (16,4%)	30 (19,7%)
No		0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	2 (1,3%)	0 (0,0%)
The municipality should be responsible for solving environmental problems in the area	Chi Square = 0,040	49 (32,5%)	3 (2,0%)	7 (4,6%)	35 (23,2%)	27 (17,9%)	30 (19,9%)
Strongly Disagree		12 (7,9%)	1 (0,7%)	1 (0,7%)	4 (2,6%)	1 (0,7%)	2 (1,3%)

Neutral		2 (1,3%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	1 (0,7%)	0 (0,0%)
Agree		4 (2,6%)	2 (1,3%)	0 (0,0%)	7 (4,6%)	2 (1,3%)	5 (3,3%)
Strongly Agree		31 (20,5%)	0 (0,0%)	5 (3,3%)	22 (14,6%)	23 (15,2%)	23 (15,2%)
Individual citizens should be responsible for solving environmental problems in the area	Chi Square = 0,012	49 (32,5%)	3 (2,0%)	7 (4,6%)	35 (23,2%)	27 (17,9%)	30 (19,9%)
Strongly Disagree		13 (8,6%)	0 (0,0%)	1 (0,7%)	1 (0,7%)	5 (3,3%)	2 (1,3%)
Disagree		0 (0,0%)	0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,7%)	0 (0,0%)
Neutral		3 (2,0%)	0 (0,0%)	1 (0,7%)	1 (0,7%)	3 (2,0%)	2 (1,3%)
Agree		6 (4,0%)	3 (2,0%)	0 (0,0%)	8 (5,3%)	2 (1,3%)	6 (4,0%)
Strongly Agree		27 (17,9%)	0 (0,0%)	5 (3,3%)	25 (16,6%)	16 (10,6%)	20 (13,2%)
Level of satisfaction with cellphone and internet coverage	Chi Square = 0,047	49 (32,5%)	3 (2,0%)	7 (4,6%)	35 (23,2%)	27 (17,9%)	30 (19,9%)
Strongly Dissatisfied		14 (9,3%)	0 (0,0%)	1 (0,7%)	5 (3,3%)	5 (3,3%)	7 (4,6%)
Dissatisfied		4 (2,6%)	2 (1,3%)	0 (0,0%)	2 (1,3%)	2 (1,3%)	3 (2,0%)
Neutral		9 (6,0%)	0 (0,0%)	4 (2,6%)	11 (7,3%)	5 (3,3%)	6 (4,0%)
Satisfied		15 (9,9%)	1 (0,7%)	1 (0,7%)	8 (5,3%)	12 (7,9%)	5 (3,3%)
Strongly Satisfied		7 (4,6%)	0 (0,0%)	1 (0,7%)	9 (6,0%)	3 (2,0%)	9 (6,0%)
COVID-19 regulations have changed the status of public transport in the area	Chi Square = 0,011	49 (32,5%)	3 (2,0%)	7 (4,6%)	35 (23,2%)	27 (17,9%)	30 (19,9%)
Yes		11 (7,3%)	3 (2,0%)	5 (3,3%)	7 (4,6%)	7 (4,6%)	8 (5,3%)
No		32 (21,2%)	0 (0,0%)	1 (0,7%)	25 (16,6%)	15 (9,9%)	14 (9,3%)
Not sure		6 (4,0%)	0 (0,0%)	1 (0,7%)	3 (2,0%)	5 (3,3%)	8 (5,3%)

6.2.8.6. Cross-tabulation between variables of interest and effectiveness of municipal planning

Cross-tabulations between the effectiveness of municipal planning and COVID-19 showed a significant association as presented in Table 32. Most households (70,7%) understood the role of traditional leadership to be concerned with the reservation and allocation of land for residential use within their area of jurisdiction. During the period of COVID-19 mandates, households were either not aware of COVID-19-related cases in the area or felt that the status of public transport was not affected (p value 0,007).

Table 32 also shows the significant association between COVID-19 and the perception of the relationship between traditional leaders and ward councillors. Most households (51,7%)

perceived that this relationship was average and that COVID-19 regulations did not change the status of public transport or that of safety/security. There was also no fair consultation for public participation in development programmes by either traditional leaders or ward councillors. A significant association was reflected (p value 0,000).

Regarding the knowledge of environmental issues and who should solve environmental problems, households generally had limited knowledge on the subject but were in favour (68,7%) of the municipality solving environmental problems with most of those (30,7%) not able to estimate the duration on the implications of COVID-19 in the area. Regardless of whether households were satisfied with the level of services, they generally felt that COVID19 did not affect municipal service delivery, the status of public transport, safety/security, or communication of municipal plans/programmes to the community. The relationship between COVID-19 and municipal planning in Mzinyathi was that households had no barometer to measure the impact between the two. At most, households had not witnessed any significant impact because they had not seen much progress in the area that would have been affected by the pandemic.

Table 32: Cross-tabulation between the variable of interest and effectiveness of municipal planning

Variable of interest		Effectiveness of municipal planning		
		The role of traditional leadership is to ensure development within their area of jurisdiction		
		TRUE	FALSE	Don't know
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,053	43 (28,5%)	85 (56,3%)	23 (15,2%)
Yes		5 (3,3%)	29 (19,2%)	7 (4,6%)
No		29 (19,2%)	47 (31,1%)	11 (7,3%)
Not sure		9 (6,0%)	9 (6,0%)	5 (3,3%)
Variable of interest		The role of traditional leadership is to influence decision-making and actions of the municipality within their jurisdiction		
		TRUE	FALSE	Don't know
		COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,032	38 (25,2%)
Yes		11 (7,3%)	19 (12,6%)	1 (0,7%)
No		23 (15,2%)	51 (33,8%)	22 (14,6%)
Not sure		4 (2,6%)	11 (7,3%)	9 (6,0%)

Variable of interest		The role of traditional leadership is to be involved in the budget allocation process for their communities		
		TRUE	FALSE	Don't know
Awareness of any COVID-19-related cases within the area	Chi Square = 0,046	27 (18,0%)	83 (55,3%)	40 (26,7%)
Yes		11 (7,3%)	17 (11,3%)	15 (10,0%)
No		16 (10,7%)	66 (44,0%)	25 (16,7%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,002	27 (17,8%)	84 (55,6%)	40 (26,5%)
Yes		9 (6,0%)	21 (13,9%)	1 (0,7%)
No		18 (11,9%)	49 (32,5%)	29 (19,2%)
Not sure		0 (0,0%)	14 (9,3%)	10 (6,6%)
Variable of interest		The role of traditional leadership is to maintain law and order within the community		
		TRUE	FALSE	Don't know
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,037	48 (31,8%)	80 (53,0%)	23 (15,2%)
Yes		9 (6,0%)	23 (15,2%)	5 (3,3%)
No		32 (21,2%)	46 (30,5%)	9 (6,0%)
Not sure		7 (4,6%)	11 (7,3%)	9 (6,0%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,033	48 (31,8%)	80 (53,0%)	23 (15,2%)
Yes		14 (9,3%)	17 (11,3%)	0 (0,0%)
No		28 (18,5%)	52 (34,4%)	16 (10,6%)
Not sure		8 (4,0%)	11 (7,3%)	7 (4,6%)
Variable of interest		The role of traditional leadership is to be involved in the decision-making of job and economic opportunities		
		TRUE	FALSE	Don't know

COVID-19 regulations have changed municipal service delivery within the area	Chi Square = 0,047	18 (11,9%)	104 (68,9%)	29 (19,2%)
Yes		9 (6,0%)	32 (21,2%)	5 (3,3%)

No		8 (5,3%)	60 (39,7%)	16 (10,6%)
Not sure		1 (0,7%)	12 (7,9%)	8 (5,3%)
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,016	18 (11,9%)	104 (68,9%)	29 (19,2%)
Yes		7 (4,6%)	26 (17,2%)	4 (2,6%)
No		10 (6,6%)	63 (41,7%)	14 (9,3%)
Not sure		1 (0,7%)	15 (9,9%)	11 (7,3%)
Variable of interest		The role of traditional leadership is to protect land and agricultural activities		
		TRUE	FALSE	Don't know
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,020	43 (28,5%)	91 (60,3%)	17 (11,3%)
Yes		8 (5,3%)	28 (18,5%)	1 (0,7%)
No		26 (17,2%)	52 (34,4%)	9 (6,0%)
Not sure		9 (6,0%)	11 (7,3%)	7 (4,6%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,007	43 (28,5%)	91 (60,3%)	17 (11,3%)
Yes		11 (7,3%)	20 (13,2%)	0 (0,0%)
No		22 (14,6%)	63 (41,7%)	11 (7,3%)
Not sure		10 (6,6%)	8 (5,3%)	6 (4,0%)
Variable of interest		The role of traditional leadership is to protect and conserve the environment		
		TRUE	FALSE	Don't know
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,007	44 (29,1%)	89 (58,9%)	18 (11,9%)
Yes		10 (6,6%)	21 (13,9%)	0 (0,0%)
No		25 (16,6%)	60 (39,7%)	11 (7,3%)
Not sure		9 (6,0%)	8 (5,3%)	7 (4,6%)
Variable of interest		The role of the traditional leadership is to reserve land for residential use within their area of jurisdiction		
		TRUE	FALSE	Don't know

Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	106 (70,7%)	32 (21,3%)	12 (8,0%)
Yes		22 (14,7%)	18 (12,0%)	3 (2,0%)
No		84 (56,0%)	14 (9,3%)	9 (6,0%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,017	106 (70,2%)	33 (21,9%)	12 (7,9%)
Yes		22 (14,6%)	15 (9,9%)	4 (2,6%)
No		68 (45,0%)	15 (9,9%)	4 (2,6%)
Not sure		16 (10,6%)	3 (2,0%)	4 (2,6%)
Variable of interest		The role of the traditional leadership is to reserve land for public uses within their area of jurisdiction		
		TRUE	FALSE	Don't know
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,003	29 (19,2%)	106 (70,2%)	16 (10,6%)
Yes		13 (8,6%)	23 (15,2%)	1 (0,7%)
No		14 (9,3%)	65 (43,0%)	8 (5,3%)
Not sure		2 (1,3%)	18 (11,9%)	7 (4,6%)
Variable of interest		The perception of the relationship between traditional leaders and ward councillors		
		Poor	Average	Good
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,023	60 (39,7%)	78 (51,7%)	13 (8,6%)
Yes		25 (16,6%)	13 (8,6%)	3 (2,0%)
No		29 (19,2%)	50 (33,1%)	8 (5,3%)
Not sure		6 (4,0%)	15 (9,9%)	2 (1,3%)
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,018	60 (39,7%)	78 (51,7%)	13 (8,6%)
Yes		23 (15,2%)	11 (7,3%)	3 (2,0%)
No		28 (18,5%)	50 (33,1%)	9 (6,0%)
Not sure		9 (6,0%)	17 (11,3%)	1 (0,7%)
Variable of interest		Is there any fair consultation for public participation in development programs by either traditional leaders or ward councillors		
		Yes	No	

COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,039	39 (25,8%)	112 (74,2%)		
Yes		5 (3,3%)	36 (23,8%)		
No		25 (16,6%)	62 (41,1%)		
Not sure		9 (6,0%)	14 (9,3%)		
Variable of interest		Who is eligible to apply for the occupation of land			
		A person who grew up in the community	A person from outside the community	There are no restrictions	
Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	23 (15,4%)	57 (38,3%)	69 (46,3%)	
Yes		14 (9,4%)	5 (3,4%)	24 (16,1%)	
No		9 (6,0%)	52 (34,9%)	45 (30,2%)	
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,013	24 (16,0%)	57 (38,0%)	69 (46,3%)	
Yes		8 (5,3%)	7 (4,7%)	25 (16,7%)	
No		15 (10,0%)	37 (24,7%)	35 (23,3%)	
Not sure		1 (0,7%)	13 (8,7%)	9 (6,0%)	
Variable of interest		Knowledge about Air pollution			
		Practically nothing	Only a little	A fair amount	A lot
Awareness of any COVID-19-related cases within the area	Chi Square = 0,014	44 (29,3%)	42 (28,0%)	48 (32,0%)	16 (10,7%)
Yes		19 (12,7%)	5 (3,3%)	15 (10,0%)	4 (2,7%)
No		25 (16,7%)	37 (24,7%)	33 (22,0%)	12 (8,0%)
COVID-19 regulations have changed municipal service delivery within the area	Chi Square = 0,018	44 (29,1%)	43 (28,5%)	48 (31,8%)	16 (10,6%)
Yes		10 (6,6%)	10 (6,6%)	18 (11,9%)	8 (5,3%)
No		29 (19,2%)	21 (13,9%)	26 (17,2%)	8 (5,3%)
Not sure		5 (3,3%)	12 (7,9%)	4 (2,6%)	0 (0,0%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,005	44 (29,1%)	43 (28,5%)	48 (31,8%)	16 (10,6%)
Yes		12 (7,9%)	12 (7,9%)	11 (7,3%)	6 (4,0%)

No	26 (17,2%)	17 (11,3%)	34 (22,5%)	10 (6,6%)
Not sure	6 (4,0%)	14 (9,3%)	3 (2,0%)	0 (0,0%)

Variable of interest		Knowledge about Water pollution			
		Practically nothing	Only a little	A fair amount	A lot
COVID-19 regulations have changed municipal service delivery within the area	Chi Square = 0,043	41 (27,2%)	41 (27,2%)	54 (35,8%)	15 (9,9%)
Yes		9 (6,0%)	10 (6,6%)	20 (13,2%)	7 (4,6%)
No		26 (17,2%)	20 (13,2%)	30 (19,9%)	8 (5,3%)
Not sure		6 (4,0%)	11 (7,3%)	4 (2,6%)	0 (0,0%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,001	41 (27,2%)	41 (27,2%)	54 (35,8%)	15 (9,9%)
Yes		8 (5,3%)	14 (9,3%)	14 (9,3%)	5 (3,3%)
No		27 (17,9%)	13 (8,6%)	37 (24,5%)	10 (6,6%)
Not sure		6 (4,0%)	14 (9,3%)	3 (2,0%)	0 (0,0%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,041	41 (27,2%)	41 (27,2%)	54 (35,8%)	15 (9,9%)
Yes		6 (4,0%)	7 (4,6%)	14 (9,3%)	4 (2,6%)
No		29 (19,2%)	21 (13,9%)	36 (23,8%)	10 (6,6%)
Not sure		6 (4,0%)	13 (8,6%)	4 (2,6%)	1 (0,7%)
Variable of interest		Knowledge about Sustainability			
		Practically nothing	Only a little	A fair amount	A lot
COVID-19 regulations have changed municipal service delivery within the area	Chi Square = 0,009	81 (53,6%)	32 (21,2%)	27 (17,9%)	11 (7,3%)
Yes		20 (13,2%)	6 (4,0%)	16 (10,6%)	4 (2,6%)
No		50 (33,1%)	19 (12,6%)	8 (5,3%)	7 (4,6%)
Not sure		11 (7,3%)	7 (4,6%)	3 (2,0%)	0 (0,0%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,010	81 (53,6%)	32 (21,2%)	27 (17,9%)	11 (7,3%)

Yes	23 (15,2%)	4 (2,6%)	11 (7,3%)	3 (2,0%)
No	47 (31,1%)	17 (11,3%)	15 (9,9%)	8 (5,3%)
Not sure	11 (7,3%)	11 (7,3%)	1 (0,7%)	0 (0,0%)
Variable of interest	Knowledge about the Conservation of natural resources			
	Practically nothing	Only a little	A fair amount	A lot

COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,006	58 (38,4%)	28 (18,5%)	49 (32,5%)	16 (10,6%)	
Yes		15 (9,9%)	6 (4,0%)	16 (10,6%)	4 (2,6%)	
No		35 (23,2%)	11 (7,3%)	29 (19,2%)	12 (7,9%)	
Not sure		8 (5,3%)	11 (7,3%)	4 (2,6%)	0 (0,0%)	
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,019	58 (38,4%)	28 (18,5%)	49 (32,5%)	16 (10,6%)	
Yes		16 (10,6%)	6 (4,6%)	11 (7,3%)	4 (2,6%)	
No		29 (19,2%)	12 (7,9%)	34 (22,5%)	12 (7,9%)	
Not sure		13 (8,6%)	10 (6,6%)	4 (2,6%)	0 (0,0%)	
Variable of interest	Businesses and industries should be responsible for solving environmental problems					
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	53 (35,3%)	5 (3,3%)	18 (12,0%)	13 (8,7%)	61 (40,7%)
Yes		17 (11,3%)	3 (2,0%)	5 (3,3%)	10 (6,7%)	8 (5,3%)
No		36 (24,0%)	2 (1,3%)	13 (8,7%)	3 (2,0%)	53 (35,3%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,040	53 (35,1%)	5 (3,3%)	18 (11,9%)	13 (8,6%)	62 (41,1%)
Yes		12 (7,9%)	3 (2,0%)	5 (3,3%)	8 (5,3%)	13 (8,6%)
No		34 (22,5%)	2 (1,3%)	12 (7,9%)	4 (2,6%)	35 (23,2%)
Not sure		7 (4,6%)	0 (0,0%)	1 (0,7%)	1 (0,7%)	14 (9,3%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,011	53 (35,1%)	5 (3,3%)	18 (11,9%)	13 (8,6%)	62 (41,1%)
Yes		11 (7,3%)	4 (2,6%)	1 (0,7%)	3 (2,0%)	12 (7,9%)

No		32 (21,2)	1 (0,7%)	16 (10,6%)	10 (6,6%)	37 (24,5%)
Not sure		10 (6,6%)	0 (0,0%)	1 (0,7%)	0 (0,0%)	13 (8,6%)
Estimation of how long COVID-19 will continue affecting the area	Chi Square = 0,031	53 (35,3%)	5 (3,3%)	18 (12,0%)	13 (8,7%)	61 (40,7%)
Less than a year		2 (1,3%)	0 (0,0%)	1 (0,7%)	2 (1,3%)	0 (0,0%)
1-3 years		9 (6,0%)	0 (0,0%)	3 (2,0%)	5 (3,3%)	10 (6,7%)
More than 3 years		11 (7,3%)	3 (2,0%)	5 (3,3%)	3 (2,0%)	27 (18,0%)

Don't know		31 (20,7%)	2 (1,3%)	9 (6,0%)	3 (2,0%)	24 (16,0%)
Variable of interest		The municipality should be responsible for solving environmental problems				
		Strongly Disagree	Neutral	Agree	Strongly Agree	
Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	21 (14,0%)	6 (4,0%)	20 (13,3%)	103 (68,7%)	
Yes		4 (2,7%)	5 (3,3%)	11 (7,3%)	23 (15,3%)	
No		17 (11,3%)	1 (0,7%)	9 (6,0%)	80 (53,3%)	
Estimation of how long COVID-19 will continue affecting the area	Chi Square = 0,001	21 (14,0%)	6 (4,0%)	20 (13,3%)	103 (68,7%)	
Less than a year		0 (0,0%)	1 (0,7%)	2 (1,3%)	2 (1,3%)	
1-3 years		2 (1,3%)	1 (0,7%)	7 (4,7%)	17 (11,3%)	
More than 3 years		1 (0,7%)	2 (1,3%)	8 (5,3%)	38 (25,3%)	
Don't know		18 (12,0%)	2 (1,3%)	3 (2,0%)	46 (30,7%)	
Variable of interest		Individual citizens should be responsible for solving environmental problems				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	22 (14,7%)	1 (0,7%)	10 (6,6%)	25 (16,7%)	92 (61,3%)
Yes		12 (8,0%)	1 (0,7%)	5 (3,3%)	15 (10,0%)	10 (6,7%)
No		10 (6,7%)	0 (0,0%)	5 (3,3%)	10 (6,7%)	82 (54,7%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,004	22 (14,6%)	1 (0,7%)	10 (6,6%)	25 (16,6%)	93 (61,6%)
Yes		4 (2,6%)	1 (0,7%)	5 (3,3%)	13 (8,6%)	18 (11,9%)
No		17 (11,3%)	0 (0,0%)	5 (3,3%)	10 (6,6%)	55 (36,4%)
Not sure		1 (0,7%)	0 (0,0%)	0 (0,0%)	2 (1,3%)	20 (13,2%)

Estimation of how long COVID-19 will continue affecting the area	Chi Square = 0,000	22 (14,7%)	1 (0,7%)	10 (6,7%)	24 (16,0%)	93 (62,0%)
Less than a year		0 (0,0%)	1 (0,7%)	0 (0,0%)	2 (1,3%)	2 (1,3%)
1-3 years		3 (2,0%)	0 (0,0%)	3 (2,0%)	7 (4,7%)	14 (9,3%)
More than 3 years		6 (4,0%)	0 (0,0%)	2 (1,3%)	7 (4,7%)	34 (22,7%)
Don't know		13 (8,7%)	0 (0,0%)	5 (3,3%)	8 (5,3%)	43 (28,7%)
Variable of interest		Level of satisfaction with the sanitary sewer system				
		Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
Awareness of any COVID-19-related cases within the area	Chi Square = 0,000	85 (56,7%)	16 (10,7%)	18 (12,0%)	19 (12,7%)	12 (8,0%)
Yes		36 (24,0%)	4 (2,7%)	1 (0,7%)	1 (0,7%)	1 (0,7%)

No		49 (32,7%)	12 (8,0%)	17 (11,3%)	18 (12,0%)	11 (7,3%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,043	86 (57,0%)	16 (10,6%)	18 (11,9%)	19 (12,6%)	12 (7,9%)
Yes		31 (20,5%)	4 (2,6%)	2 (1,3%)	3 (2,0%)	1 (0,7%)
No		48 (31,8%)	10 (6,6%)	11 (7,3%)	10 (6,6%)	8 (5,3%)
Not sure		7 (4,6%)	2 (1,3%)	5 (3,3%)	6 (4,0%)	3 (2,0%)
Variable of interest		Level of satisfaction with electricity				
		Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
Awareness of any COVID-19-related cases within the area	Chi Square = 0,043	14 (9,3%)	11 (7,3%)	21 (14,0%)	42 (28,0%)	62 (41,3%)
Yes		7 (4,7%)	5 (3,3%)	8 (5,3%)	6 (4,0%)	17 (11,3%)
No		7 (4,7%)	6 (4,0%)	13 (8,7%)	36 (24,0%)	45 (30,0%)
COVID-19 regulations have changed the communication of municipal plans/programmes to the community	Chi Square = 0,029	14 (9,3%)	12 (7,9%)	21 (13,9%)	42 (27,8%)	62 (41,1%)
Yes		4 (2,6%)	2 (1,3%)	7 (4,6%)	2 (1,3%)	16 (10,6%)
No		10 (6,6%)	8 (5,3%)	8 (5,3%)	31 (20,5%)	39 (25,8%)
Not sure		0 (0,0%)	2 (1,3%)	6 (4,0%)	9 (6,0%)	7 (4,6%)
Variable of interest		Level of satisfaction with Cellphone and internet coverage				
		Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied

Awareness of any COVID-19 related cases within the area	Chi Square = 0,000	32 (21,3%)	13 (8,7%)	34 (22,7%)	42 (28,0%)	29 (19,3%)
Yes		15 (10,0%)	8 (5,3%)	12 (8,0%)	3 (2,0%)	5 (3,3%)
No		17 (11,3%)	5 (3,3%)	22 (14,7%)	39 (26,0%)	24 (16,0%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,050	32 (21,2%)	13 (8,6%)	35 (23,2%)	42 (27,8%)	29 (19,2%)
Yes		11 (7,3%)	8 (5,3%)	10 (6,6%)	8 (5,3%)	4 (2,6%)
No		19 (12,6%)	3 (2,0%)	18 (11,9%)	27 (17,9%)	20 (13,2%)
Not sure		2 (1,3%)	2 (1,3%)	7 (4,6%)	7 (4,6%)	5 (3,3%)
Variable of interest		Level of satisfaction with Internet/Broadband services				
		Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
Awareness of any COVID-19-related cases within the area	Chi Square = 0,001	33 (22,0%)	13 (8,7%)	34 (22,7%)	43 (28,7%)	27 (18,0%)
Yes		14 (9,3%)	8 (5,3%)	12 (8,0%)	4 (2,7%)	5 (3,3%)
No		19 (12,7%)	5 (3,3%)	22 (14,7%)	39 (26,0%)	22 (14,7%)
COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,016	33 (21,9%)	13 (8,6%)	35 (23,2%)	43 (28,5%)	27 (17,9%)
Yes		13 (8,6%)	8 (5,3%)	9 (6,0%)	9 (6,0%)	2 (1,3%)
No		18 (11,9%)	3 (2,0%)	19 (12,6%)	27 (17,9%)	20 (13,2%)
Not sure		2 (1,3%)	2 (1,3%)	7 (4,6%)	7 (4,6%)	5 (3,3%)
Variable of interest		Level of satisfaction with social welfare				
		Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
Awareness of any COVID-19-related cases within the area	Chi Square = 0,002	26 (17,3%)	9 (6,0%)	52 (34,7%)	29 (19,3%)	34 (22,7%)
Yes		15 (10,0%)	4 (2,7%)	8 (5,3%)	7 (4,7%)	9 (6,0%)
No		11 (7,3%)	5 (3,3%)	44 (29,3%)	22 (14,7%)	25 (16,7%)
COVID-19 regulations have changed municipal service delivery within the area	Chi Square = 0,046	27 (17,9%)	9 (6,0%)	52 (34,4%)	29 (19,2%)	34 (22,5%)
Yes		7 (4,6%)	2 (1,3%)	12 (7,9%)	7 (4,6%)	18 (11,9%)
No		18 (11,9%)	5 (3,3%)	31 (20,5%)	15 (9,9%)	15 (9,9%)
Not sure		2 (1,3%)	2 (1,3%)	9 (6,0%)	7 (4,6%)	1 (0,7%)

COVID-19 regulations have changed the status of public transport within the area	Chi Square = 0,003	27 (17,9%)	9 (6,0%)	52 (34,4%)	29 (19,2%)	34 (22,5%)
Yes		11 (7,3%)	4 (2,6%)	4 (2,6%)	9 (6,0%)	13 (8,6%)
No		15 (9,9%)	4 (2,6%)	37 (24,5%)	12 (7,9%)	19 (12,6%)
Not sure		1 (0,7%)	1 (0,7%)	11 (7,3%)	8 (5,3%)	2 (1,3%)
COVID-19 regulations have changed the status of safety/security within the area	Chi Square = 0,009	27 (17,9%)	9 (6,0%)	52 (34,4%)	29 (19,2%)	34 (22,5%)
Yes		9 (6,0%)	4 (2,6%)	3 (2,0%)	7 (4,6%)	14 (9,3%)
No		16 (10,6%)	4 (2,6%)	37 (24,5%)	15 (9,9%)	15 (9,9%)
Not sure		2 (1,3%)	1 (0,7%)	12 (7,9%)	7 (4,6%)	5 (3,3%)

6.3. Qadi Traditional Authority perceptions on the role of municipal planning in the Mzinyathi study area

The interview with the Qadi Traditional Council was conducted with the Induna who was the representative of the Inkosi. The traditional leadership structure is headed by an Inkosi who is assisted by izinduna who administers different areas called izigodi (villages). Izinduna are also assisted by iphoyisa lesizwe (community watchmen). The identification of izigodi and settlements is informed by the history of the area which is represented by different clans. All the areas administered by izinduna fall under the jurisdiction of Qadi Traditional Council.

Mzinyathi is a predominantly residential area. Historical events which have had an impact on the settlement patterns can largely be attributed to political instability and taxi violence. However, changes in the settlement patterns depend mainly on the nature of social cohesion within izigodi. In some areas that have not been affected by violence, the settlements have not significantly changed. Settlements that have been established in areas of environmental importance have also contributed to certain changes within the area. Previously, people were prohibited from building near a river or stream because when there are heavy rains the river/stream expands. Residents have continued to ignore this even though this issue is stressed before the land is allocated to a person. Although the process is largely managed by izinduna, it is also influenced by financial benefits on the part of the seller who decides to subdivide his/her plot of land.

The ward boundaries and the traditional boundaries are distinct. Once the ward councillor is elected, an introductory meeting is held with the Inkosi, which also sheds light on where the municipal boundaries overlap with the traditional boundaries. The relationship between the

councillor and the Inkosi is important because there are contrasting views on how development should be prioritized in the area. The focus of the councillor is usually restricted to the ward, while the Inkosi is conscious of the service delivery issues that affect all the people that reside within the jurisdiction of the traditional authority. Traditional boundaries go over and beyond ward boundaries. This is also compounded by local politics because service delivery of ward councillors may differ from one councillor to another but both could be within Qadi Traditional Council. At times, the poor service delivery of a ward councillor might require political intervention which might not be forthcoming because Inkosi cannot interfere with the work of councillors.

In terms of burial space, most people opt to move away from the city and settle in this area because it offers large areas which also accommodate burials within the yard. There is also land still available in Senzokuhle (a settlement nearby) for public burial. Community members are allowed to bury their loved ones in this area, but it is not compulsory. It can be witnessed that the demand for land in Mzinyathi is increasing, meaning that space for burial within the yard is also decreasing.

When probed about development in the area, the Induna responded that the Inkosi has reserved various areas for development, including public facilities. There have been several applications for commercial uses which include a butchery, tourist attraction, etc. The Inkosi appoints an induna to keep the place in good condition. Agriculture and businesses that will grow the economy are encouraged. For example, there is an ongoing project by a women's organization that deals with traditional attire and beadwork, which was allocated an area and is sponsored by a big firm. There is a hall that has been built which can be used to host cultural events. However, there are many projects which do not happen due to funding issues. Crime is minimal in the area because there are different platforms for reporting a crime. According to the Induna, it is important to align the strategic spatial and statutory planning of the municipality with the land allocation function of traditional leaders. In terms of municipal services, water is a major problem in the area, access roads are in bad condition which makes it difficult to use with private vehicles, and waterborne sewerage is required due to the increase of people within the area.

6.4. Ward 3 councillor's perceptions on the role of municipal planning in the Mzinyathi area

The Ward 3 councillor answered questions through his assistant, who also explained when this was needed. The ward councillor was asked about the population changes within the ward and their impact. He replied that population changes affect utilities. For example, in the past,

the municipality supplied water to a smaller number of people. As the number of people and essentially larger types of houses under construction increase, households do not get enough water. A shared Jojo tank was placed in a central location for easy access by all residents, but it had been stolen. In some areas, a mobile municipal water tanker could not be accessed due to the terrain. This is partly due to the process of distribution, where some people live in places that are not easily accessible.

Changes in the municipal boundaries affect many settlements in the region. This also affects the ward councillor from the point of view of development because some areas are developed and others less so. At the end of the boundary process, the councillor will have to welcome new areas that may not all be developed to the same extent.

The relationship between the office of the councillor and the Inkosi was good. Projects in the ward were presented to the Traditional Council, to which they also provided inputs in terms of the employment and recruitment of local labour. Communities were also involved when there were job opportunities available. This was also done through frequent community meetings. These meetings were held every weekend and they rotated in different voting districts (VD) as there were 13 VDs in the ward in total. The councillor explained that development was a contested subject. The community did not have full control over the direction of the development because the land was owned by the traditional authority.

There were various ongoing and future projects in the ward which included housing, installation of piped water, sanitation, recreation, and so on. Challenges included water shortages, even though the area is situated next to the dam, electricity outages, poor road conditions, areas that required bridges, houses susceptible to climate change, and the disaster department's slow reaction to cases of disaster were all highlighted by the councillor.

6.5. eThekwini municipal officials' perceptions on the role of municipal planning in Mzinyathi area

eThekwini municipal officials from the Development Planning, Environmental and Management Unit who represented the Projects Branch, Spatial Planning Branch, and Land Use Management Branch North took part in the survey. The roles of these three branches in municipal planning within the municipality are different yet intertwined. There are several specializations because of the big area and the need for efficiency and performance of the processes.

The Projects Branch, which deals with scheme development, provided a brief historical background of statutory planning within the municipality. Before the municipality was formed as a metropolitan area, there were local areas or towns such as Tongaat, Isipingo, Pinetown, Umhlanga, and so forth, all governed by local authorities or boards. When maintenance and service delivery became difficult due to a lack of funds, regions were formed. This culminated in the formation of the metropolitan municipality after the municipal elections in 2001, which was divided into five regions, which include the North, Central, Inner West, Outer West and South regions. As a result, the metropolitan municipality inherited 32 urban town planning schemes, comprising 11 (north), 9 (south), 11 (inner west), 1 (outer west) and 1 (central). The work to try to combine all the plans and prepare one plan for the municipality started in 2005.

This work that started in 2005 was aimed at combining all of the existing town planning schemes in order to prepare a single land use scheme for the municipality. The changes in national legislation also contributed to the scheme's development, with a ripple effect that eventually changed the Town Planning Ordinance and Development Facilitation Act to the Kwazulu Natal Planning Act and more recently to the Spatial Planning and Land Use Management Act (SPLUMA) (RSA, 2013). When the SPLUMA came into effect, it required municipalities to have a single land use scheme. Until now, however, there were very few areas that did not have a system, including traditional authorities that were not zoned.

The implementation of the SPLUMA was negotiated with several different stakeholders including KZN COGTA and the ITB. To adhere to the schedule, the unit created zones with development facilitation tables. Two zones (holding zones) for traditional authorities and the 6 existing schemes were converted into a single land use scheme. The single land use scheme is reviewed annually, and amendments to the scheme are added as new zones.

The first question posed to the municipal officials related to the relationship between the traditional authority in the area and the municipality. The Projects Branch indicated that their relationship with the traditional authority was positive and had been forged years ago when they started the process of engaging Amakhosi (the chiefs) on the scheme development. During this process, it was discovered that land was leased out to residents who had received Permission to Occupy certificates. However, most of the land settled on is unstable, with floodplain areas and wetlands. The engagement with Amakhosi is continuous, and people are discouraged from settling on environmentally sensitive land. Preliminary studies on tribal land suggest that for these areas to be developed optimally, they need to be divided into grids. The density and infrastructure development were calculated at 40 to 50 dwelling units per hectare within a grid. The Spatial Planning Branch indicated that the relationship built with the

traditional authority was cordial and this was displayed during the preparation of the Northern Rural Settlement Plan (NRSP). The engagement with the traditional authority was facilitated by the Amakhosi Support Office, which assisted with building the relationship with the Inkosi and the Izinduna. The IDP, SDF public participation, and budget processes are other means of engaging with the TA. The relationship is ongoing. The department was aware of the importance of growing the relationship especially when both parties understood their roles.

The Spatial Planning Branch viewed the area of Mzinyathi as peri-urban as opposed to rural. The municipality had developed the NRSP which was adopted in the 2020/21 financial year. Fieldwork and land use surveys were undertaken to ascertain the type of future interventions required in the area. The outcomes of this study indicated that the area of Mzinyathi could no longer be classified as rural but had rather taken on a peri-urban character due to the development changes that had occurred in the last 5 to 10 years. The proposed interventions were in line with a peri-urban character. The experience of land use management was that the lines were very blurred regarding how they viewed settlements, and whether the settlements outside the former formal areas were rural, semi-rural or informal.

The second question was about the challenges that were experienced by the municipality. The challenges which were cited for spatial planning related to infrastructure, environmental management, rural-urban migration, planning boundaries, and collaboration with relevant stakeholders. Firstly, infrastructural challenges were mainly due to the historical context of the area designated as rural, as there was no consistent level of service, in terms of water and sanitation (capacity constraints), waste removal, or access roads. For example, some roads falling under eThekweni were dirt roads – local roads which were gravel as opposed to tarred provincial roads. The investment appetite was low due to the level of service provided. This had an impact on the local economy, putting the area at a disadvantage. Secondly, people had settled in areas of environmental significance. It was difficult to move people who had settled on wetlands. According to respondents, moving people from these areas was a separate process altogether. Existing plans for rural areas were too broad and there was a lack of awareness in areas of environmental conservation. However, the conservation plans that had been drawn up by the Environmental Planning Branch, working together with various community groups, were aimed at creating awareness. Thirdly, there was a push and pull factor which was generally common in the city. People wanted to find space to occupy so that they could be close to amenities. Some people preferred to relocate from deep-lying rural areas to the rural areas closer to economic opportunities. This brought about more informality in rural spaces, and dense development and the need to densify in areas that were not designated to absorb the amount of density occurring. Part of the intervention was for the

municipality to develop a plan to appreciate those dynamics and acknowledge these changes, and to understand how the Amakhosi and Izinduna approach development and how they respond to private development and entities through plans. The respondents explained that the traditional leaders needed to work alongside the municipality to guide development so that it happened in areas that were designated for development. Fourthly, the key boundary change in the recent past has been that the NRSP amended the Urban Development Line (infrastructure servicing line) and now incorporates areas that were not previously incorporated, thus improving the level of service of areas such as Mzinyathi. Finally, the delays in strengthening or developing a clear partnership with the TA have resulted in people resorting to using indigenous knowledge. People want to settle in these areas but want to also benefit from services provided by the municipality, such as electricity, water, and sanitation at a certain standard. According to respondents, the issues that relate to land use management were also intertwined with the overall challenges. These included the financial burden caused by the delays in development, which in turn contributed to the high cost of materials. They explained that people avoid the planning processes because they believe these are timeconsuming; the lack of understanding of underlying land issues has resulted in people settling in areas unsuitable for development; the demand for basic services is very high, which makes it difficult to prioritize; there are different mandates from internal departments which conflict with each other, i.e., Spatial Planning deals with spatial plans, the Land Use office deals with the compilation of the scheme, the SPLUMA office deals with SPLUMA Bylaws and its amendments, and there is a mismatch in terms of the number of regions and the area of jurisdiction between the Land Use Management Branch (LUMB) and the Spatial Branch. The LUMB has five regions while the Spatial Planning Branch has four regions (North, Outer West, Central, and South). While this issue is being resolved internally, it does create concerns for planning in terms of overlapping boundaries. Furthermore, there are different processes between formal towns and tribal land, and a lack of awareness of planning processes for people in traditional authority areas.

The third question was whether the existing municipal plans are effective in addressing the spatial planning and land use management challenges in rural settlements. The respondents stated that existing spatial plans were aimed at achieving coordinated development. This required coordination of line service departments because future planning had to be informed by constraints and needs and should direct where bulk infrastructure should be located. The development of spatial plans was a gradual process due to budget constraints. Spatial plans could be effective if they were implemented but required buy-in from service departments. They could also be effective if they were implemented. The municipality recognized the

Traditional Authorities to understand their aspirations for the area which were seen as incorporating indigenous knowledge systems in municipal plans.

The fourth question related to community involvement in the process of developing spatial plans and schemes. Generally, according to the respondents, there was community involvement during the development of both spatial plans and land use schemes. The standard operating procedure was that all planning work underwent public participation processes which were factored into the project phasing. This was to ensure that the development aspirations of communities were considered. Advertising in newspapers (both English and Isizulu) and circulating in each area was a standard requirement. Adverts were placed in public institutions such as schools, clinics, etc., and flyers were handed out.

Stakeholder engagement, wherein proposals were workshopped with communities to establish whether these were in line with their development aspirations and needs, was implemented, according to the municipal respondents. This was exemplified by the Spatial Development Framework as well as in lower-level plans. There were other processes, like community based plans, that were conducted by the Public Participation Branch, which did not fall under the Planning Department, but provided a platform for collaborative planning whereby communities could deliberate and provide inputs on how their areas could grow. At a project level, they had also engaged extensively, however, the main challenge was the project timelines which had specific timeframes that had to be executed within a particular financial year.

COVID-19 brought about protocols such as social distancing, but this did not hinder the Planning Department as a whole, to engage with critical stakeholders. However, this had its challenges because safety had to be adhered to. The principle is that community participation is an integral part of developing municipal plans.

Finally, the municipal officials were asked whether the municipal plans were addressing the issue of settlements located in environmentally sensitive areas. The municipality develops plans which consider environmentally sensitive areas through analysis of the spatial environment, and identifies site constraints; it does not propose land uses that are contrary. Respondents emphasized that the issue of environmental protection was a joint effort between the town and environmental planners. The D'MOSS on the map was sometimes not seen to the fullest extent on the ground. The Environmental Planning Department assisted in editing out areas already settled, focusing on areas that had not been affected, and areas no longer considered environmentally sensitive. There were awareness programmes about

environmentally sensitive areas. There were existing spatial plans which demarcated environmentally sensitive areas. but these were not utilized by the Izinduna when they allocated land to people.

6.6. Discussion of findings

The findings which emanated from the research study are discussed in this section. The findings are assessed in terms of the quantitative data collected from the community members and qualitative data collected from the Induna of Qadi Traditional Council, the Ward 3 councillor, and eThekwini municipal officials. This information was integrated to make inferences derived from the empirical evidence concerning the municipal planning interventions of eThekwini Municipality in Mzinyathi. Based on the findings of the quantitative data that was collected from the community members, key aspects relating to municipal planning concepts and theories are evident.

The first is the dual governance system of eThekwini Municipality and Ingonyama Trust Board (in the form of Qadi Traditional Council), which largely informs municipal planning in Mzinyathi. The boundaries of the municipal wards and those of the Traditional Council overlap each other. This happens as a result of the delimitation process conducted by the Municipal Demarcation Board (MDB) every five years which was established under the Local Government: Municipal Demarcation Act of 1998. Although the Municipal Demarcation Board has their own objectives for conducting this process, this often results in the Traditional Council having more than one ward councillor because municipal wards change every 5 years. This is the case in Mzinyathi where respondents came from two wards, namely Ward 3 and Ward 108. This has implications for service delivery because the area is served by two ward councillors. The profile of respondents is largely African/black, the majority being female between the ages of 18 and 35 years (23,5%).

Secondly, the population density is determined by the number of people within the household. The results show that on average there are approximately six people within a single household in Mzinyathi. Poverty and inequality are directly proportional to the size of the household and source of income. Unemployment is high within larger households where the total household monthly income is between R1001 and R3000. On the other hand, employment is high within smaller households where the total household monthly income is from R10 001 upwards. Most of the households are female-headed and dominated and consist of young and elderly people, which means the municipal planning initiatives must prioritise gender representation and programmes aimed at a young and ageing population.

The third aspect relates to the lack of knowledge or awareness of municipal planning concepts which include strategic spatial planning and statutory planning. The results show that most households were not aware of municipal planning concepts. This varied from municipal plans which were meant to deal with spatial challenges faced by the community and located in the physical departmental building, where the community could source the information from municipal officials. Due to the technical and comprehensive nature of these plans, the broader community was however merely consulted when the product had been completed. This necessitates that the broader community be represented by a nominated person. Proper streamlining of the information to the community is required to ensure a higher level of awareness. The municipality must prioritise awareness campaigns of municipal plans in the community. This will minimize the undertaking of activities by the people, that are in contravention of municipal plans. Another contributing factor is the roles of the municipality and the traditional authority regarding land use management. There is a need for continuous engagement between the municipality and the traditional authority to integrate existing indigenous knowledge systems and practices into municipal plans. There must be mutual understanding and agreement on a shared vision of the area at an institutional level. The lack of coordination at an institutional level during the development of strategic and spatial plans means that implementation will not be realized at the grassroots level.

Fourthly, migration trends are not influenced by the total household income. While rural-urban migration has different manifestations, it can be inferred that many households in Mzinyathi treat their residence as their permanent home, because (a) residents of the province of Kwazulu-Natal have stayed for more than 10 years in the same residence; (b) have stayed for at least four nights a week and have done so for the last six months; (c) are unlikely to move away from this area; and (d) have received evidence for their right to occupy the land. The impact on municipal planning relates to the changes in population trends that affect the provision of infrastructure services because municipal plans are based on population statistics which are not representative of the current trends. Migration trends also influence changes in the homogeneity of the community due to the diversity of backgrounds and beliefs. Public participation can be affected because some households might not be willing to participate in planning processes as they consider themselves or others as outsiders.

The fifth aspect relates to community involvement in municipal planning, where most of the households, and mainly those that have an elderly household member, know their ward councillor. Generally, households in Mzinyathi find the local municipal offices (in this case the councillor's offices) easily accessible and receive information about municipal plans and programmes through loud hailing. However, it was observed that the local municipal office is

not easily accessible and information through loud hailing might not be received by households that are not located centrally in Mzinyathi or are located away from access roads. Mobilisation of the community requires innovative ideas to inform the public about municipal plans and future developments.

The sixth addresses the effectiveness of municipal planning. The community's perception of (a) the roles and responsibilities of the Qadi Traditional Authority, (b) the relationship between the traditional leaders and ward councillors, (c) the land allocation process, (d) environmental conservation and protection, and (e) level of satisfaction on infrastructure and municipal services, are all fundamental for community development within the Mzinyathi study area. Most households perceive the role of the traditional leadership to be largely focused on the reservation and allocation of land for residential use within their area of jurisdiction. Ultimately, the traditional authority does not play an effective role in municipal planning, yet they are the custodians of tribal land. Some of the roles - such as the preservation and conservation of agricultural land and natural resources, should be executed by the traditional authority because they are responsible for land allocation. However, the encroachment of settlements on agricultural and environmentally sensitive land has possibly contributed to this perception because it is seen as a legacy of land allocation practices. Most households are not aware of their responsibility for environmental protection and conservation. This means that more awareness campaigns are needed to capacitate both the traditional authority and the broader community about environmental issues. Most of the households are strongly dissatisfied with the level of infrastructure and municipal services such as piped water systems for drinking water, the sanitary sewerage system, access roads, and drainage systems, but are satisfied with cellphone and internet coverage and largely neutral on internet/broadband services and social services.

Lastly, the impact of COVID-19 on municipal planning within the study was not significant according to the results. Generally, COVID-19 did not affect municipal service delivery, the status of public transport, safety/security, or communication of municipal plans/programmes to the community. The relationship between COVID-19 and municipal planning in Mzinyathi is that households have no indicator to gauge the progress that has been made in terms of infrastructural service provision in the area. They rely on their daily lived experiences which in their view were not impacted severely by the pandemic.

The findings from qualitative data reveal that the Traditional Council, the ward councillor, and eThekwini municipal officials have different views on municipal planning in Mzinyathi. Generally, there is a working relationship between these different stakeholders, and they know

their roles in the processes of municipal planning. There is consensus on the existing challenges within the area. The induna and the ward councillor pointed out that the major issue in Mzinyathi is the lack of water. Both stakeholders acknowledged the growth of the population has been the main cause for the shortage because previously the water system accommodated several households. Recently, the number and size of households had grown, and the type of housing required an improved standard. Other services which required improvement included access roads, sanitation, and stormwater drainage.

The municipality appreciated that Mzinyathi falls within an area that was not prioritized in the past. According to municipal plans, Mzinyathi fell outside the Urban Development Line. More recently, the municipality has made attempts in the NRSP to incorporate all areas which were not prioritized for development, including Mzinyathi. The development of a single land use scheme has also incorporated all areas under traditional leadership that have been zoned as Rural Residential. There is a common understanding because the traditional authority regards Mzinyathi as a predominantly residential area.

Environmental concerns were also appreciated by all the stakeholders. The induna indicated that the population increase had changed the settlement patterns in the area. This had been influenced largely by political instability and taxi violence, which contributed to the movement of people out of the area. Now there has been a migration of people into the area. This has resulted in some settlements encroaching on the D'MOSS area due to the lack of space in Mzinyathi. Previously, there were control measures that prohibited people from erecting structures near river banks and streams, but now the process of allocation is sometimes not in the control of the induna but rather of the residents who decide to subdivide their plots. The ward councillor indicated that housing service delivery which relates to natural disasters is overburdened because many houses have been affected by the recent storms. This will cater to the affected low-income households in the area who qualify for government subsidies.

The municipality identified that municipal planning related to environmental protection and conservation was at a broad and high level. More detailed plans such as rural settlement plans should be used as planning tools in these areas. This requires a buy-in from the Traditional Council to consider the plans when allocating land to people for residential and other purposes. Currently, there are no conservation zones in place. Enforcement of these schemes is required and in the case of encroachment in those zones, the legal aspect must be considered. However, there are current municipal interventions in this regard such as the stewardship programme with eThekwini and Ndwedwe, where there are areas in need of conservation and protection (grasslands that could be endangered) with the involvement of the community.

There were contrasting views in terms of the prioritization of development in the area. The issue of boundaries is critical in this process for all the stakeholders. For instance, the inkosi is interested in the development of the whole jurisdiction of Qadi Traditional Council which overlaps in two municipalities, i.e., eThekweni and Ndwedwe, as well as over wards within the respective municipalities. The tribal boundaries are determined through physical features such as rivers, streams, trees, and rocks. In the context of eThekweni Municipality where the study area is based, the inkosi would have to consult with different ward councillors for municipal services due to the overlapping boundaries. This is also compounded by local politics, where the ward councillors may have different leadership styles for the ward. One councillor might be more efficient than the other, for example, which will create uneven progress in terms of service delivery within the area. For the ward councillor, the ward demarcation process that happens every five years and which relates to the voting threshold within the voting districts has meant that a new councillor that takes over might inherit a ward that is unevenly developed. This might be due to the different levels of municipal service standards within voting districts that comprise the ward. These voting districts will be taken from other wards and incorporated into the new ward to meet the voting threshold. This is also a political process that could be aimed at trying to ensure that all wards reach the same level of municipal service standards by incorporating undeveloped voting districts with developed ones.

For the eThekweni Municipality, the spatial and land use management boundaries are not the same. This creates misalignment and inefficiencies in municipal planning processes because the Spatial Planning Branch has four regions while the Land Use Management Branch has five regions. There are also contrasting views in terms of community involvement in municipal planning. The ward councillor consults with inkosi whenever there is a project in the ward. This is communicated by both the inkosi and the ward councillor through their respective platforms to the community. The municipality also engages the public through different platforms. Stakeholders are involved in the development of the plans through the Amakhosi support office, which assists with engagements with the traditional leadership. At a project level, stakeholders are selected to participate and sometimes the process does not reach the intended targets because it is not robust enough due to budget constraints and timeframes for projects. There are also gatekeepers such as the ward councillor and ward committees, upon whom the mobilization of the community relies.

6.7. Conclusion

This chapter has outlined the findings emanating from the quantitative and qualitative data collection process of the Mzinyathi case study. It has also provided an analysis of the findings

and unpacked the results. Inferences from the findings were informed by cross-tabulations. The next chapter provides the conclusion of the study and the recommendations for further action and/or research.

7. Conclusion and recommendations

7.1. Introduction

This study has made a reasonable attempt to provide the different aspects of municipal planning which include strategic spatial planning and statutory planning. At the centre of this discussion is whether municipal planning is reaching the intended recipients and the impact this has made in rural settlements. The efforts by eThekweni Metropolitan Municipality have not been realized due to a lack of detailed planning in rural areas under tribal land. This has coincided with increasing population densities in rural areas due to past planning and current trends. eThekweni Metropolitan Municipality has been made to reflect, evaluate, and seek a different approach in terms of municipal planning in dense rural settlements.

The study aimed to assess the role and impact of municipal planning in dense rural settlements in post-Apartheid South Africa. The case of Mzinyathi, a dense rural settlement in eThekweni Metropolitan Municipality, was used for this assessment. In Chapter 1, the study introduced the research problem, main objective and sub-objectives, main question and subquestions, and the hypothesis. Chapter 2 presented the conceptual and theoretical frameworks, followed by local and international precedents in Chapter 3, which all relate to the study. The fourth chapter outlined the research methodology, which includes the sources of data, techniques for collecting the data, analysis of the data, and limitations of the study. Chapter 5 highlighted the background of the study area, and Chapter 6 provided the findings. The forthcoming chapter provides a synopsis of the findings followed by the recommendations and conclusion.

7.2. Synopsis of the findings

The study has assessed the role and impact of municipal planning in the context of dense rural settlements in post-democratic South Africa and observations are based on the following empirical findings:

The study area of Mzinyathi is a dense rural settlement located in Ward 3 of the eThekweni Metropolitan Municipality under the jurisdiction of Qadi Traditional Council. It is strategically located near the Inanda Dam and surrounded by Phoenix, Inanda, Ntuzuma, and Kwamashu. Mainly, respondents were aware of their ward boundaries and their local ward councillors.

The overall statistics of the area show that the dominant ethnic group in Mzinyathi is black African, isiZulu is the most spoken home language, and the gender distribution reveals that there are more females than males with the average age group being young people from 15-

35. The average education level is secondary education with the average monthly household income between R9600-R38 200. However, the high number of households with no income signals a high unemployment rate which is generally amongst young people. It is important to note that the demographics and socio-economic status of the respondents correlate with the statistics of the area.

From the literature review, the important concepts and theories that inform this study were defined and classified. Municipal planning as a concept has different aspects but is largely a function or responsibility of the local municipality or local government. It involves a system or process of developing municipal plans, it is a combination of both statutory and spatial strategic planning, and it relies on consultation and public participation of interested and affected parties for plans to be more realistic.

The international precedents revealed that municipal planning in developed and developing nations has been largely influenced by national planning policies. The overcrowding of cities has implications on the rural periphery which have led local municipalities to adopt different approaches such as city compaction, urban renewal, and community mobilisation, to address challenges associated with population trends. In the case of eThekweni Metropolitan Municipality, there have been attempts to deal with issues in rural areas by adopting different approaches such as area-based management and through long-term and short-term plans by developing a hierarchy of plans including the Spatial Development Framework, Spatial Development Plans, Local Area Plans, Precinct Plans, and Schemes. Generally, most households in the study area are not aware of the different aspects and concepts of municipal planning, meaning that they are not aware of these plans. This could be attributed to a lack of participation in the planning processes of these various municipal plans.

Rural-urban migration is also an important concept for this study because it informs the population growth that is experienced within dense rural settlements. This is influenced by the push and pull factors of people migrating to bigger cities to be closer to amenities. Due to the lack of availability of affordable land in urban areas, rural areas become their option because of the tenure arrangement. However, migration in the study area has taken the shape of permanent residency as opposed to people staying closer to the city but having another residence elsewhere. Most of the households who reside in the study area have migrated from the province of KwaZulu Natal, have stayed for more than 10 years, and stay in the residence continuously. Therefore, the implication for municipal planning is the need for service delivery for more people than might be reflected in municipal plans.

Collaborative forms of planning have been entrenched in legislation where public participation is a legislative requirement in terms of the Constitution and that makes it the bedrock of municipal planning. In the study area, most households find the local councillor office easily accessible, which also means that the information should also be accessible. However, they are not aware of public meetings or the occurrence of such meetings. The community is mainly informed of any meetings that pertain to their involvement in community development by means of loud hailing.

Municipal planning in the case of Mzinyathi must be understood within the context of a dual governance system of municipal government, being eThekweni Metropolitan Municipality, and the traditional authority (TA), represented by Qadi Traditional Council (TC). The relationship between ward councillors and traditional leaders can be rated as average with no fair consultation or public participation in development programmes by either ward councillors or traditional leaders. Mainly, households understand that the role of traditional leadership is to reserve and allocate land for residential uses. In terms of eligibility for the occupation of land, most households have the view that there are no restrictions that support the notion that the high population increase has been contributed to people from outside the area. Izinduna are responsible for the land allocation process where residential boundaries are fixed and most of the households have received a Permission to Occupy (PTO) certificate as evidence for the right to occupy the land.

Due to the high-density population in the study area, some settlements have encroached on the D'MOSS area. Generally, most respondents have limited knowledge on issues such as urban sprawl, air pollution, water pollution, sustainability, and conservation of natural resources, ranging from knowing a fair amount to knowing practically nothing. In terms of the responsibility of solving environmental problems, most respondents lean towards the municipality and individual citizens.

Existing public facilities include the tribal court, the community hall with councillors' office, local clinic, schools, and churches. Concerning infrastructure services, piped water is scarce, with many people relying on rivers/streams, the main form of sanitation being pit toilets with no ventilation, electricity as the main source of energy, and with most households exposed to their waste.

The level of satisfaction with services is mainly low, with respondents mostly dissatisfied with water for drinking, sanitation, waste removal, access roads, and the drainage system. Water is a challenge in the study area, with the municipality supplementing existing capacity with

water tankers that supply water daily. A piped water system where households receive water within their yards is necessary to address the water challenge. There is an absence of waterborne sewerage, with most households using either pit toilets or septic tanks. The erf sizes are no longer large enough for septic tanks due to increasing densities. While the level of satisfaction is better with electricity since it is supplied in most households, regular interference is a challenge. This happens even outside the schedules of loadshedding. Access roads are generally poor with most being gravel. There is no proper stormwater management, which becomes a problem for road users on rainy days. The level of satisfaction with cellphone and internet networks is generally good.

COVID-19 regulations and mandates required innovative ways of doing business. Municipal planning was no exception, particularly in terms of communication of information to the community. Generally, respondents were not aware of any COVID-19-related cases and did not believe there was much impact on service delivery, public transport, safety/security, or communication of municipal plans.

7.3. Recommendations

The recommendations of the study are based on the findings that have been presented and include preparation of detailed plans for dense rural settlements, institutional alignment and coordination of stakeholders in municipal planning, promotion of collaborative forms of planning between stakeholders of municipal planning, strengthening of the relationship between the municipality and traditional leadership, adoption of flexible planning procedures in traditional areas, and incorporation of marginalized groups in municipal planning processes.

The preparation of detailed strategic spatial plans for dense rural settlements is needed to guide future development. The key informants to these plans are population and settlement structure. Firstly, population statistics are important for making future projections and calculating the infrastructural needs and demand. In the case of Mzinyathi, population is largely associated with migration trends. The difficulty with projecting accurate population densities is that the official source of data is the National Census data and Community Surveys, which are undertaken every 10 years and 5 years respectively. However, areaspecific population statistics should also be considered in municipal planning projects. Secondly, the settlement structure is influenced by the housing typology and growth of the area. Generally, future plans will have to follow existing settlements but there has been a certain level of planning that has been adopted such as space being left for road servitudes and infrastructure.

Institutional alignment and coordination must start between the different spheres of government, because national and provincial imperatives influence the outcomes of municipal plans. The legislative and policy changes have largely been positioning and strengthening municipal planning within local or municipal government. However, these changes have adversely affected local or municipal governments because there has been a lack of consistency. There must be a fair representation of key stakeholders, especially from local government, to influence planning within the national sphere of government because they are the ones who better understand local issues. The constant changes in policy direction also require political leaders to be clear and firm to ensure the effectiveness of municipal plans.

Promotion of collaborative forms of planning entails creating synergy between government, traditional leaders, business, and civil society as a fundamental component to ensuring that all the different perspectives are aligned. Alignment at the local level can be achieved by ensuring that all the line departments of the municipality are working closely together and not in silos. Coordination of activities between the line departments must be improved to ensure that the outcomes of municipal plans are achieved. This can also prevent possible duplication of limited financial resources on the implementation of similar programmes. The municipality must implement different ways of involving the public. The municipality has a strong presence on social media, which is good for reaching a wider population. The target audience of social media platforms is mainly young people. This was also seen during the COVID-19 pandemic: when physical communication was limited, the municipality had to find other ways to reach the public. Municipal planning is often a matter of compliance, and processes are strained by tight schedules and budget constraints. Information campaigns should be part of the process after the preparation of urban plans. Mobilization of political and traditional leaders is also important to ensure that such commitments are communicated to the public.

Strengthening the relationship between the municipality and traditional leaders through continuous engagement is essential to ensure that the objectives are aligned between both parties for the area. This can be achieved by equipping traditional leaders with the necessary support to conduct their work. The municipality can also incorporate indigenous knowledge systems into municipal plans to ensure effectiveness and responsiveness in traditional areas. The communal ownership of land should also be seen as a strategic advantage when both the municipality and traditional leadership agree on the direction of development within the area. A social compact can be developed to remind all the stakeholders of the agreements that have been made.

Flexible planning procedures are needed for traditionally managed rural areas. Although applicants must submit their business proposals to the municipality to obtain consent for the ITB application, people in rural areas do not need to submit any land use application. The SPLUMA makes provisions for shortened land use procedures and is recommended in areas such as Mzinyathi.

The inclusion of marginalized groups in municipal planning processes is crucial. In Mzinyathi, it was found that most households are headed by women. Women in rural areas under traditional leadership belong to marginalized groups due to pre-existing traditional and cultural patriarchy. The importance of municipal planning is that women can express themselves freely in forums that require input from various interest groups. Representation of women in municipal planning processes is not necessarily enough. For this, it is necessary to study in more detail how marginalized people, for example, women can be included in municipal planning. This can happen by electing more women to leadership positions in community structures.

7.4. Conclusion

This chapter has presented a summary of the findings and recommendations that could contribute to municipal planning having more impact in dense settlements. These recommendations reiterate the role of municipal planning to be used as a tool for transforming the spatial structures, with areas that have been previously neglected to be incorporated in municipal plans. The overall findings are that, while there are efforts done by the municipality to address challenges in dense rural settlements, there are still institutional issues that have hindered progress. Public participation is also critical in this process of translating the aspirations of the communities into more realistic and implementable plans because most people are not aware of the municipal plans which are aimed at integrating and transforming these areas.

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Appendix 1

QUESTIONNAIRE FOR COMMUNITY RESIDENTS

Questionnaire number:

Interviewer name:

Date of Interview:

Dear Respondent,

You are requested to participate in a research study which aims to understand the impact of municipal planning in dense rural settlements in a post-apartheid South Africa using the case of Mzinyathi dense rural settlement in eThekweni Municipality. This questionnaire is thus intended to assist the researcher to acquire the necessary information from you. You are therefore kindly requested to offer the interviewer some minutes of your time to gather the necessary information. The questionnaire should take approximately 15-20 minutes to complete. The responses are completely anonymous and information will be kept confidential. Should you choose to participate in this survey, please answer the questions as honestly as possible. Participation is strictly voluntary and you may withdraw at any time. Completion and return of the questionnaire will indicate your willingness to participate in the research study. In case of any questions regarding the questionnaire, do not hesitate to contact the Data Collection Coordinator on the details below.

Yours sincerely,

S.N. Gwala

Department of Town and Regional Planning

Durban University of Durban

Tel: 031 510 1412 (Home)

Cell: 074 737 4344

Email: gwalaczwe@gmail.com

INSTRUCTIONS: Please indicate your response by making a cross (X) in the appropriate box or typing in the spaces provided.

SECTION 1: INTERVIEWEE PROFILE

1.1. Ward/Isigodi:

1.2. Gender

Female		Male	
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1.3. Age

< 18 Years		18 – 25 Years		26 -30 Years	
31 – 35 Years		36 – 40 Years		41 – 45 Years	
46 – 50 Years		51 – 55 Years		56 – 60 Years	
> 60 Years					

1.4. Population group

African/ Black		Coloured		White		Indian	
Other (Specify)							

1.5. Citizenship

South African		Non-South African	
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SECTION 2: DEMOGRAPHICS FOR THE FAMILY

2.1. Position within the household

Head or acting of the household		Spouse	
Close relative		Child	
Other (Specify)			

2.2. Gender of the head of the house

Female		Male	
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2.3. Age group of the head of the house

Younger than 18 years		18 – 25 years	
26 – 30 years		31 – 35 years	
36 – 40 years		41 – 45 years	
45 – 50 years		51 – 55 years	
56 – 60 years		Older than 60 years	

2.4. Citizenship of the head of the house

South African		Non-South African	
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2.5. Population group of the head of the house

African/ Black		Coloured		White		Indian	
Other (Specify)							

2.6. Home language of the head of the house

English		isiZulu		isiXhosa	
Afrikaans		Other (Specify)			

2.7. Marital s**tus of the head o**

Single		Married		Divorced/Separated	
Widow		Cohabiting		Other (Specify)	

2.8. (a) Is there anyone with disability within the household

Yes		No	
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2.8 (b). If Yes, specify the type of disability

2.9. Education level of head of house

No education		Primary education (Grade R-7)	
Secondary education (Grade 8-12)		Post Matric qualification	
Other (Specify)			

2.10. Source of income of the head of house

No income		Formal employment	
Informal employment		Government grants	
Other (Specify)			

SECTION 3: HOUSEHOLD CHARACTERISTICS

3.1. Number of people living in the household

1 – 2 persons		3 – 4 persons	
5 – 6 persons		7 or more persons	

3.2. Age groups of different household members (You may select one or more answers):

Age category (years)	Number
0-5	
6-10	
11-14	
15-20	
21-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
Over 60	

3.3. Dwelling type

Formal dwelling house		Traditional dwelling/hut/structure made of traditional materials	
Flat or apartment in a block of flats		Semi-detached house	
Dwelling Other (Specify)			

3.4. What is the tenure system that best describes the ownership of your dwelling unit?

Rented		Owned but not yet paid off	
Occupied rent-free		Owned and fully paid off	
Other (Specify)			

3.5. Estimated value of property

Less than R50 000		R50 001-R100 000	
R100 001-R200 000		R200 001-R300 000	
R300 001-R400 000		R400 001-R500 000	
More than R500 000			

3.6. Household members currently employed

None		1 – 2 people	
3 – 5 people		More than 5 people	

3.7. Household members currently unemployed

None		1 – 2 people	
3 – 5 people		More than 5 people	

3.8. Household members who are school going or doing some skills training courses

None		1 – 2 people	
3 – 5 people		More than 5 people	

3.9. Total household monthly income

No income		Less than R1 000	
R1 001-R3 000		R3 001-R5 000	
R5 001-R10 000		R10 001-R15 000	
R15 001-R20 000		More than R20 000	

SECTION 4: STRATEGIC SPATIAL PLANNING AND STATUTORY PLANNING AWARENESS

4.1. Strategic Spatial Planning

Are you aware of the following municipal plans by eThekweni Municipality? <i>(Please simply mark your answer with an 'X')</i>	Yes	No	Not sure
eThekweni Integrated Development Plan 2019-2020			

eThekwini Spatial Development Framework 2019-2020			
Rural Development Strategy 2016			
Northern Spatial Development Plan 2013-2014			
Northern Urban Development Corridor (NUDC) 2011			
<u>Greater Inanda LAP - Consolidated Report 2020</u>			
North Town Planning Scheme			

4.2. Statutory Planning

Are you aware of the following which relate to statutory planning? <i>(Please simply mark your answer with an 'X')</i>	Yes	No
The Department within eThekwini Municipality responsible for development and land use management		
Spatial Planning and Land Use Management Act 16 of 2013?		
Building regulations which require the submission of building plans before construction?		
The development process in terms of the scheme		
D'MOSS layer which is accessible from the municipality which shows areas of environmental significance		

SECTION 5: MIGRATION TRENDS

5.1. In which province did the household previously reside?

Gauteng		Western Cape	
KwaZulu Natal		North West	

Mpumalanga		Northern Cape	
Eastern Cape		Limpopo	
Free State			

5.2. When did your household move into the residence?

1-3 years ago		3-5 years ago	
5-10 years ago		More than 10 years ago	

5.3. Does the household reside in the residence for at least four nights a week and have they done so for the last six months OR intend to reside in this residence for at least four nights for the next six months?

Yes		No	
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5.4. How likely or unlikely is it that you will never move away from 'this area'?

Very likely		Likely		Unlikely		Don't know	
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SECTION 6: INVOLVEMENT OF COMMUNITY IN MUNICIPAL PLANNING

6.1. Do you know your ward councillor?

Yes		No	
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6.2. How accessible are the Local Municipal Offices (e.g. Sizakala Centre) from your area?

Easily accessible		Not easily accessible	
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6.3. How do you receive information about municipal plans and programmes?

Mode of communication with the municipality <i>(Please simply mark your answer with an 'X')</i>	Yes	No
Radio		
Newspaper		
Ward councillor		

Imbizo		
Bulk SMS		
Loud hailing		
Other		

6.4. Are you aware of any public meetings which are usually called by the representatives of the municipality to discuss issues pertaining the municipal plans/programmes in your ward?

Yes		No	
-----	--	----	--

6.5. What is the occurrence of such public meetings?

None		Once every week	
Once a month		Once every 3 months	
Once every 6 months		Not sure	

SECTION 7: EFFECTIVENESS OF MUNICIPAL PLANNING

7.1. Traditional leadership

Do you understand the following aspects concerning the role of traditional leadership within your area? (Please simply mark your answer with an 'X')	True	False	Don't know
7.1.1. Ensure development within their area of jurisdiction			
7.1.2. Influence decision making and actions of the municipality within their area of jurisdiction			
7.1.3. Involved in the budget allocation process for their communities			
7.1.4. Maintain law and order within the community			
7.1.5. Involved in the decision making of job and economic opportunities			
7.1.6. Protection of land for agricultural activities			
7.1.7. Protection and conservation of the environment			
7.1.8. Reserve and allocate land for residential use within their area of jurisdiction			
7.1.9. Reserve and allocate land for residential uses within their area of jurisdiction for public uses			

7.2. How would you rate the relationship between traditional leaders and ward councillors?

Poor		Average		Good	
------	--	---------	--	------	--

7.3. Is there any fair consultation for public participation in development programmes by either traditional leaders or ward councillors?

Yes		No	
-----	--	----	--

7.4. Land allocation process

7.4.1. Who is eligible to apply for the occupation of land?

Person who grew up in the community		Person from outside the community	
There are no restrictions			

7.4.2. Who is responsible for the land allocation process?

Induna who is delegated by the Traditional Council		Ward councillor	
Community based organization		I do not know	

7.4.3. Are your residential boundaries fixed?

Yes		No	
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7.4.4.

Did you receive any evidence for the right to occupy the land?

Yes		No	
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7.5. Environmental protection and conservation

In general, how much do you feel you know about environmental issues and problems? (Please simply mark your answer with an 'X')	Practically nothing	Only a little	A fair amount	A lot
7.5.1. Urban sprawl? (This is when a city or town and the area around it develops in a way that leaves a lot of space between homes and businesses)				

7.5.2. Air pollution				
7.5.3. Water pollution				
7.5.4. Sustainability				
7.5.5. Conservation of natural resources				

7.6. Responsibility for solving environmental problems

To what extent would you agree or disagree with each of the following statements on a scale ranging from Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 to Strongly Agree = 5 on the responsibility of solving environmental problems. (Please simply mark your answer with an 'X')						
7.6.1	Business and industry should be responsible for solving environmental problems in your area	1	2	3	4	5
7.6.2	The municipality should be responsible for solving environmental problems in your area?	1	2	3	4	5
7.6.3	Individual citizens should be responsible for solving environmental problems in your area.	1	2	3	4	5

7.7. Infrastructure and municipal services

To what extent are you satisfied or dissatisfied with each of the following statements on a scale ranging from Strongly Dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4 to Strongly Satisfied = 5 with level of infrastructure and municipal services. (Please simply mark your answer with an 'X')						
7.8.1	Piped water system for drinking water	1	2	3	4	5
7.8.2	Sanitary sewer system	1	2	3	4	5
7.8.3	Waste removal/recycle services	1	2	3	4	5
7.8.4	Electricity	1	2	3	4	5
7.8.5	Access roads	1	2	3	4	5
7.8.6	Drainage system	1	2	3	4	5
7.8.7	Cellphone and internet coverage	1	2	3	4	5
7.8.8	Internet/Broadband services	1	2	3	4	5

7.8.9	Social Welfare	1	2	3	4	5
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SECTION 8: COVID-19 AND MUNICIPAL PLANNING

8.1. Are you aware of any COVID-19 related cases within your area?

Yes		No	
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8.2. Have COVID-19 regulations changed the following within your area?

<i>Please simply mark your answer with an 'X'</i>	Yes	No	Not sure
Municipal service delivery			
Status of public transport			
Safety/security			
Communication of municipal plans/programmes to the community?			

8.3. For how long do you estimate COVID-19 will continue affecting your area?

Less than a year		1-3 years	
More than 3 years		Do not know	

Thank you so much for taking the time to complete this questionnaire!

INTERVIEW QUESTIONS FOR MUNICIPAL OFFICIALS – SPATIAL PLANNING BRANCH

1. What is the relationship between the traditional authority and the municipality (your department)? Good or bad? Elaborate. Can we still regard the area of Mzinyathi as rural?
2. What are the challenges of spatial planning in rural settlements which are becoming densely populated? How have population changes and migration affected the settlement? How have municipal boundary changes affected the settlement? Are there areas experiencing pressure for land (growth areas)? What is the impact of growth on land use and sustainable livelihoods?
3. Are the municipal plans in place, effective in addressing the spatial planning challenges in rural settlements? Which are those plans? What are you hoping to achieve with this plan? Basic services and infrastructure? How is the integration and implementation on municipal planning concepts in the context of rural settlements?
4. Is the community involved in the process of developing municipal plans? Does community involvement influence the development outcomes of the settlement? How has COVID-19 affected community participation?
5. Are the municipal plans in place addressing the issue of settlements located on environmentally sensitive areas? How can the settlement pattern be improved?

INTERVIEW QUESTIONS FOR MUNICIPAL OFFICIAL – PROJECTS BRANCH -

1. What is the relationship between the traditional authority and the municipality (your department)?
2. What are the challenges of land use management in rural settlements which are becoming densely populated?
3. Are the municipal plans available, effective in addressing the land use management challenges in rural settlements?
4. Is the community involved in the process of developing the scheme?
5. How are municipal plans addressing the issue of settlements located on environmentally sensitive areas?

MUNICIPAL PLANNING IN DENSE RURAL SETTLEMENTS - INTERVIEW QUESTIONS FOR THE WARD COUNCILLOR

1. How have population changes affected the settlement?
2. How have municipal boundary changes affected the settlement?
3. How can service delivery be improved in the settlement?
4. How is the relationship between yourself and the traditional authority in terms of development?
5. How do you make sure that local people are aware of the development taking place in their area?
6. How do you think community participation influences development outcomes?
7. Do you think that municipal plans are achieving their stated objectives?

MUNICIPAL PLANNING IN DENSE RURAL SETTLEMENTS – INTERVIEW WITH THE INDUNA FROM QADI TRADITIONAL AUTHORITY

1. Traditional leadership structure.
2. Identification of izigodi and settlements within each isigodi.
3. Historical evolution of the area. Are there any historical events that have had an influence on the settlement patterns? Significant changes that have occurred over time (e.g., rivers drying up)? Areas that are experiencing pressure for land (growth areas)?
4. Land allocation process
 - a. Residential
 - b. State domestic (public facilities)
 - c. Arable land for food production
 - d. Grazing land
 - e. Community projects
 - f. Commercial uses
 - g. Other
5. Land use management
 - a) Protection of agricultural land from settlement.
 - b) Reservation of land for public facilities.
 - c) Protection of environment.
- h.
6. Key land marks and heritage sites
 - a) Historical buildings
 - b) Historical sites
 - c) How are these sites managed?
7. How can the settlement pattern be improved?
 - a. New link roads required/ suggested.
 - b. Major link roads that require upgrading because of intensity of use.
 - c. Development and location of service centres.
 - d. Settlements that should be prioritized for bulk services.
8. How to align the spatial planning function of the municipality with the land allocation function of traditional leaders.

