

**CHALLENGES POSED BY URBANISATION FOR SUSTAINABLE HUMAN
SETTLEMENTS PROVISIONS: THE CASE OF MANGAUNG METROPOLITAN
MUNICIPALITY**

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Declaration

I declare that the work in this dissertation titled: “Challenges Posed by Urbanisation for Sustainable Human Settlements Provisions: The Case for Margaung Metropolitan Municipality” has been carried out by me in the Centre for Development Support. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other institution.

V.C Malaku
(Signed)

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Dedication

I dedicate this dissertation to my late brother, Zoyisile Webster Malaku. You left us too soon, but the lessons you taught me remain embedded in my entire life. I will always look up to you Mpondo.

ABSTRACT

This dissertation investigated challenges posed by urbanisation for sustainable human settlement provisions, with Mangaung Metropolitan Municipality being a case in point. Applying the systems thinking, this study proves the correlation between sustainable human settlements and urbanisation in Mangaung Metropolitan Municipality in the Free State. Essentially therefore, the study proves that unplanned or uncontrollable urbanisation can pose challenges to the provision of sustainable human settlements in Mangaung. Sustainable human settlements in this instance denoting the some total aspects contributing to sustainable living, such as housing, provision of services and concomitant developmental considerations.

In proving the above statement, the study applied a qualitative study approaches, using the case study method to dissect this phenomenon for Mangaung Metropolitan Municipality in the Free State Province, South Africa as a case in point. The interviews conducted proved that indeed, there is such correlation as the respondents reflected on how various aspects of sustainable human settlements are impacted by unplanned urbanisation in the Metro.

The study proved how unplanned urbanisation puts both the city's resources and the broader environment under pressure. Services such as the provision of water and waste removal, amenities such as roads and the environment broadly are impacted if urbanisation is planned or not sufficiently provided for. The correlation is proven through systems thinking, ie Situation as is, Situation as will be if not altered and situation as it should be. A model to address the situation as it should be comes out as the final recommendation of the study.

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List of Acronyms

BBT	Bloemfontein, Botshabelo and Thaba Nchu
GDP	Gross Domestic Product
GHREC	General Human Research Ethics Committee
N8	National Road 8
SDG	Sustainable Development Goal
UN-Habitat	United Nations Habitat
SA	South Africa

1 CHAPTER 1 – INTRODUCTORY OVERVIEW

1.1 INTRODUCTION

This thesis sought to investigate the challenges posed by urbanisation on Mangaung Metropolitan Municipality's sustainable human settlements. The study is based on systems thinking as a theoretical grounding. Systems thinking investigated the situation of Mangaung as a system from the current challenges posed by urbanisation on sustainable human settlement, the situation as it will be if not altered, and the situation as it should be. This was done through qualitative methods, more specifically the case study approach, with Mangaung being a case in point.

The above was investigated by first assessing the theory and practice in other countries in relation to urbanisation and sustainable human settlements, this was then narrowed to South Africa and ultimately Mangaung Metropolitan Municipality. Reese (2018) states that the growth in urban populations can expose cities to a deficit in jobs, increase pollution, threaten biodiversity, and increase exposure to disease and crime levels. Other impacts of urbanisation include overpopulation, overcrowding, housing, unemployment issues, development of slums, poor sanitation, water shortage issues, health risks, deteriorating environmental quality, poor waste management, urban crime, transportation issues, and rising poverty rates (Rinkesh, 2022).

In the past, the government gave housing "top structures" for the weak and impoverished a lot of attention. In an effort to fulfill its constitutional obligation, the government has provided Reconstructions and Development Programme (RDP) dwellings to millions of citizens. However, as it seemed that there had been no appreciable change in the standard of living, the efficacy of this housing product has been questioned. The government then realized that merely giving a family a good home doesn't significantly raise their standard of living. The lives of beneficiaries can only be sufficiently enhanced when a home is situated close to centers of employment, schools, hospitals, recreational

facilities, etc. Therefore, the focus on housing supply has changed from only constructing homes to acknowledging the significance of providing sustainable human settlements.

The concept of sustainable human settlements is a fairly new concept, as reflected in the paragraphs above. As reflected in the paragraphs above, the focus has mainly been on the provision of housing. The study, therefore, was aimed at investigating the concept of urbanisation on sustainable human settlements, not housing per se, and therefore, the concept forms the basis of analysis for this study applying the theory of systems thinking.

1.2 Problem Statement

In South Africa and globally, there has been an exponential increase in the number of people migrating to urban areas. The reasons for this influx can be attributed to the pursuit of opportunities for development, such as for housing, work, studies and business. Mangaung, a city situated in the central province of Free State, South Africa exhibits growing trends in urbanisation. The movement of people to urban areas is unlikely to abate and therefore provision of sustainable human settlements is even more critical.

Urbanisation directly pressures basic services such as water, sanitation, refuse removal, and the broader service delivery infrastructure, which are central elements of sustainable human settlements. Unplanned and unanticipated urbanisation puts services under immense pressure.

According to Mangaung's Mangaung Metropolitan Municipality five years Integrated Human Settlement Plan ((2019/20 – 2024/25), the following issues are raised by the communities when it comes to sustainable human settlements:

- Acquisition of land to house households living in uninhabitable informal settlements;
- Significant backlog in access to basic services like water, sewer, roads, and stormwater in the old township areas;

- Access to various housing typologies, such as BNG housing, rental housing, and affordable housing opportunities;
- Improvement of informal settlements with a focus on the provision of basic services, particularly access to water and sewer to individual households;
- Registration and issuance of title deeds to individual households to address tenure security.

A study conducted by the Department of Cooperative Governance and Traditional Affairs (2021) revealed the following statistics about Mangaung:

- In 2016, Mangaung had 265 560 households. 11,7% of them were informal settlements.
- 10% of households had water backlogs.
- Sewer backlogs constituted 27% of households in Mangaung.
- Mangaung had 31 149 housing backlogs.
- 60% of households received weekly curb side refuse removal.

As shown above, Mangaung is a growing metropolis that is struggling to provide basic services. Growing urban migration pressure will continue to pile on sustainable human settlements, with aspects such as the provision of water, electricity, refuse removal, and sanitation services suffering the most due to unplanned urbanisation. According to Khoza and Makamura (2024) poverty, unemployment, and inequality remain disparate development issues for Mangaung, these issues according to the authors (ibid), stem from the Covid-19 epidemic and the fast rate of urbanization, which made integrated planning more difficult and community development less effective.

Whilst there is literature on the impact of urbanisation on sustainable human settlements broadly, there is a dearth of research as to how Mangaung Metropolitan Municipality seeks to address this urgent matter. This study, therefore, sought to provide an assessment of Mangaung Metropolitan Municipality's current approach to sustainable human settlements, point out current deficiencies, and provide proposals on how to deal

with them. How does urbanisation impact sustainable human settlements in Mangaung Metropolitan Municipality?



Figure1 Map of Mangaung Metropolitan Municipality

The map above is a graphical representation of Mangaung Metropolitan Municipality. Mangaung is a case in point for this study and its constituted by the urban areas of Bloemfontein, Mangaung township, Thabanchu, Botshabelo, Dewetsdorp, Wepener and Van Stadensrus.

1.3 AIMS AND OBJECTIVES OF THE STUDY

The study aimed to assess the impact of urbanisation on Mangaung's capacity to provide sustainable human settlements. Therefore, the main objective was to investigate the effect of urbanisation on the provision of sustainable human settlements in Mangaung Metropolitan Municipality.

The study was based on systems thinking, which addresses the system as it is currently, the system as it will be if not corrected, and the system as it should be, in order for it to function properly.

The sub-objectives were as follows:

1. To outline the challenges posed by urbanisation on the capacity of Mangaung Metropolitan Municipality to provide sustainable human settlements.
2. To outline the situation as it will be if Mangaung does not address the challenges posed by urbanisation on sustainable human settlements.
3. To propose a model that will respond to Mangaung's urbanisation challenges in response to sustainable human settlements.

1.4 Theoretical Framework: Systems Thinking

Systems Thinking is an approach to problem-solving that regards issues as components of an extensive, dynamic system (Alliance, 2024). Understanding the connections, interconnections, interactions, and interdependencies between a system's constituent parts that result in the system's observed behaviour, is acknowledged and given priority. Arnold and Wade (2015) define the three critical elements of the systems approach: purpose, elements, and critical interconnectedness.

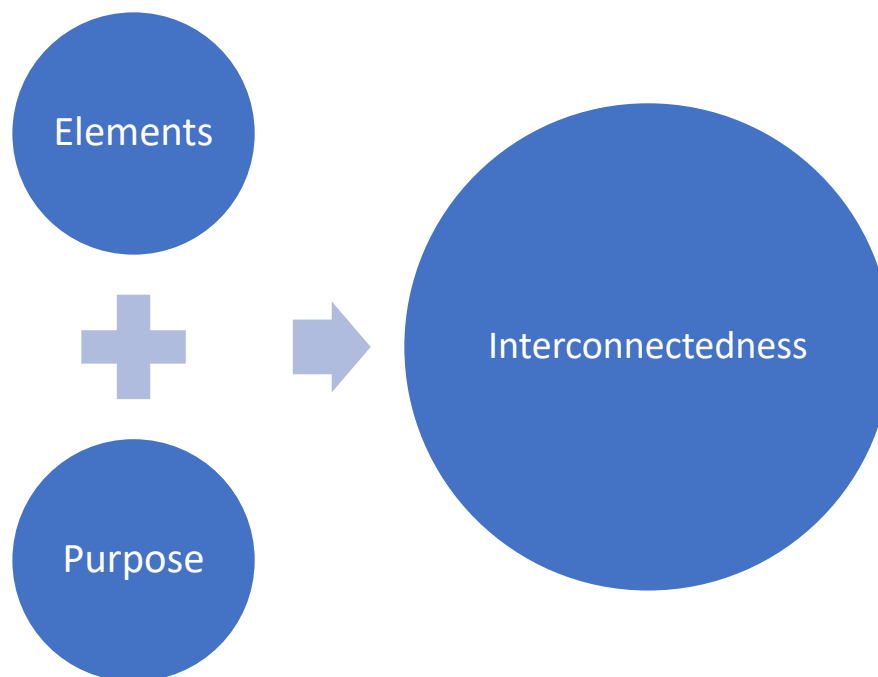


Figure 1: Characteristics of Systems Thinking

(Arnold & Wade, 2015)

As Arnold and Wade (2015) proffer, recognising interconnectedness is at the centre of systems thinking. In other words, the foundation of systems thinking is the recognition of interconnectivity. The ability to recognise interconnectedness involves being able to recognise important relationships between system components. In this study, systems thinking was applied to establish the interconnectedness between urbanisation and sustainable human settlements. This as the study sought to suggest solutions to challenges posed by urbanisation on sustainable human settlements in Mangaung from a systems perspective.

1.5 RESEARCH APPROACH AND DESIGN

The study employed a qualitative case study design. The qualitative research method is distinguished mainly by its goals (Patton and Cochran, 2002). By generating words instead of numbers for data analysis purposes, qualitative research enables the researcher to gain greater insight into social life and social practices. It is based more on information gathered from recognised research subjects.

At its core, a case study design is a focused investigation of a specific case (Bryman, 2012). The case can be defined in several ways. Most commonly cases are defined either by a geographic location or institution. This case study focuses on a single institution, that is, Mangaung Metropolitan Municipality. According to Shanks and Bekmadedova (2018), the case study technique comprises various data-gathering methods, and data can be gathered from convenient sources. A case study design's potential lies in achieving high theoretical legitimacy, solid procedures for enforcing a hypothesis, practicability for assessing the assumed role of underlying mechanisms in the framework of various cases, and their capacity for tackling fundamental complexities.

Case studies have several benefits. Firstly, case studies are suitable for generating novel hypotheses that quantitative research may lack. They are more suitable in the analysis of

qualitatively compound events which take into account several variables. Unlike quantitative studies, they do not necessitate many examples. Secondly, case studies can be utilised examine the operation of underlying systems in specific cases. They can examine many intervening variables inside a single example, inductively examine any unforeseen element of an underlying mechanism's activity or help identify what conditions in a case are responsible for the activation of the causative mechanism (Starman, 2013). Finally, a case study's advantage is its ability to model and analyse complex causal relationships (Starman, 2013). Such complex relations include equality, elaborate interaction effects, and path dependency.

1.6 DATA COLLECTION METHODS

Interviews are one of the most effective methods of gathering primary data. In comparison to a questionnaire, an interview is conducted to reveal in-depth details of the interviewee's experience and perception of a subject (Showkat & Parveen, 2017). The advantage of in-depth interviews is their ability to uncover more comprehensive and in-depth information than other data collection methods. Therefore, this study's data was collected through 10 face-to-face in-depth interviews with officials. (See Appendix 2).

1.7 SAMPLING

In qualitative research, according to Palinkas, Green, Permanente, Wisdom, and Hoagwood (2013), purposeful sampling is a popular strategy for finding and choosing cases with a wealth of information while making the most use of little resources. This , according to Palinkas et al. (2013) entails finding and choosing people, or groups of people, who have specialized expertise or experience with phenomena of interest. Purposive sampling is a non-probability sample chosen based on the qualities of a subject as it relates to the study's purpose (Crossman, 2020). Purposive sampling involves a selection of units (which might include organisations, persons, departments, and documents) that directly relate to the research questions being answered (Bryman, 2012).

The study purposefully identified officials who have specialised expertise and experience in urbanisation and sustainable human settlements in Marga Mangrove Metropolitan Municipality’s sustainable human settlements, which is the case in point. The respondents were chosen because of their years of experience in the municipality. The sample of this study was accessed through the Marga Mangrove Metropolitan Municipality website. Key officials within the departments regarded as critical to sustainable human settlements were approached and agreed to participate in the study. The following table shows the departments from which purposefully sampled participants were selected.

Department	Number of Participants
Department of Human Settlements	3
Department of Roads and Infrastructure	2
Department of Water and Sanitation	2
Department of Waste Management	3
Department of Economic Development	1
Department of Planning	1
Responsible Councillors (Members of the Mayor Committee)	3
Total	15

Table 1: Planned sampling of officials representing the departments

1.8 LIMITATIONS OF THE STUDY

Fifteen individuals were initially identified for the study, using purposeful sampling. However, limitations relating to political circumstances in Marga Mangrove when the data was collected put some constraints on acquiring responses from mainly the political respondents (Members of the Mayoral Committee). The Executive Mayor resigned, and his Mayoral Committee Members automatically ceased to be MMCs. The researcher was fortunate to get one MMC before the resignation of the Executive Mayor. Therefore, only

10 out of 15 respondents were available and participated in the study. The number was deemed sufficient to enable researcher to make generalised findings. The researcher was able to interview respondents who practically deal with urbanisation on a day-to-day basis.

1.9 RESEARCH ETHICS

According to Patton and Cochran (2002), obtaining consent and ensuring confidentiality are critical factors for any research. Patton and Cochran emphasise the need to obtain informed consent from all participants in a study (See Appendix 4). This was to ensure that the study took place without the use of coercion or pressure. The second concern is confidentiality, which serves as a form of protection for those being interviewed (Patton and Cochran, 2002).

Both consent and secrecy were essential to this study because participants were personnel involved in the city's day-to-day operations in selected departments relevant to sustainable human settlements. Advising respondents about these ethical considerations allowed them to respond freely to the issues raised. Prior authorisation to conduct the research was acquired from the City, prior to the interviews. (See Appendix 3)

The ethical considerations included those as prescribed by the University of the Free State's General Human Research Ethics Committee (GHREC, 2022), which are as follows:

- A researcher must include sample copies of all consent and information forms when applying to the ethics committee.
- Upon receipt of such, the researcher will keep such on record for at least five years after completion of the study.
- Consent forms must be issued in the respondent's preferred language.
- Participants must understand what the study comprises, why it is being conducted, the risks and advantages of participating, and the fact that they can leave the study at any time.

- Finally, there is the issue of confidentiality to consider.

The study went through GHREC processes and was cleared, a critical condition of the university's approval process (See Appendix 1). The researcher has never worked in Mangaung Metropolitan Municipality and therefore, there was no conflict of interest.

2 CHAPTER 2: URBANISATION AND PROVISION OF SUSTAINABLE HUMAN SETTLEMENTS: A LITERATURE REVIEW

2.1 Introduction

The literature review chapter provides an overview of the extant literature on urbanisation and its accompanying impacts on sustainable human settlements. Key sources of literature, drawn mainly from the Global South, were summarized and synthesized to give context to the study.

2.2 SUSTAINABLE HUMAN SETTLEMENTS AND CITIES

Spatial features, geographic position, settlement dimensions, environmental conditions, economic viability, institutional ability and structure, human growth, social interactions, values, and ambitions and more, are all factors that affect the sustainability of human settlements. This infinite and complex set of concerns, which are interconnected and interdependent, necessitate a systems approach to planning and problem-solving. (Duplessis and Landman, 2002).

The following criteria reflect what is regarded as key to ensuring that human settlements are sustainable (United Nations, 2016):

- i. Ensuring that everyone has adequate housing.
- ii. Improving the management of human settlements.
- iii. Encouraging sustainable land-use planning and management.
- iv. Promoting sustainable energy and transportation systems in human populations by encouraging integrated environmental infrastructure provision, including water, sanitation, drainage, and solid waste management.
- v. Boosting disaster-prone areas human settlement planning and management.
- vi. Encouraging actions in the building industry that are sustainable; and
- vii. Ensuring that human resource development and capacity building are adequate for the growth of human settlements.

Sustainable cities are characterised by improvements in quality of life. According to Camagni, Capello, and Nijkamp (1998) a sustainable city is one where citizens and businesses strive to enhance their natural, physical, and cultural surroundings at the regional and neighbourhood levels in ways that serve the global Sustainable Development Goals (SDGs). A sustainable city is multidimensional and a microcosm of diverse urban realities. Futurize (2024) characterises sustainable cities as urban regions that encourage social, economic, and environmental changes. The goal of sustainable cities is to give residents a good standard of living while ensuring that future generations are enabled to meet their needs. Through an all-encompassing approach to urban development, multiple facets of life are taken into consideration. This approach is essential to building resilient, secure, and welcoming communities that support environmentally and culturally diverse living conditions.

According to Sustainable City (2024), there are three foundational elements that define a sustainable city;

Social: The foundation of the sustainable city is a people-centric ideology that fosters variety, social interaction, and a feeling of community.

Environmental: The sectors of food, energy, water, products, mobility, and waste must all have the lowest emissions. These actions preserve natural biodiversity while also fostering a desirable microclimate.

Economic: Smart systems and effective design techniques save operating costs. The sustainable city encourages a circular economy, supports innovation, helps small businesses, and creates jobs through commercial areas.

Futurise (2024) enhances the discourse on what constitutes a sustainable city by setting out five core elements that characterise sustainable cities. As can be seen from the elements below, Futurise (2024) places a strong emphasis on the environmental pillar.

Energy and resource efficiency: Sustainable cities prioritize implementing renewable energy sources, including hydroelectric, solar, and wind. Smart networks, energy-efficient buildings, and innovative technologies all contribute to sustainability and lower energy

use. For example, Tata Steel is testing dye-sensitive photovoltaic coverings on buildings in Swansea to facilitate electricity production.

Decreased pollution and waste: Urban sustainability depends on management and control. To protect the environment and the health of their citizens, these cities also use clean technology to reduce pollution of the air, water, and soil.

Options for sustainable transportation: Sustainable cities support transit networks that lessen traffic jams and dependency on fossil fuels. The use of private vehicles is discouraged in favour of walking, bicycling, and public transportation.

Affordable and clean housing: Sustainable cities depend on providing access to both affordable and clean housing. This entails constructing affordable, energy-efficient homes for people from various socioeconomic backgrounds. Initiatives for sustainable housing seek to lower energy expenses, enhance quality of life, and advance social justice.

Communities that are inclusive and equitable: Social inclusion and fairness are goals of sustainable cities. This entails establishing settings in which every resident has access to necessary services, engagement opportunities, and the capacity to flourish. In order to promote a feeling of community and belonging, policies and initiatives are created to meet the needs of vulnerable and marginalised groups.

As the aforementioned literature demonstrates, sustainable human settlements are not solely about the provision of shelter but include all services that ensure that the quality of life is improved. In addition to the provision of housing units, sustainability is about the provision of services and the cognisance of the importance of environmental factors. As Futurise (2024) emphasises, environmental factors should be the primary consideration when planning for sustainable human settlements.

This study took into account the new context of human settlements, which goes beyond solely providing housing but is inclusive of amenities that make human living much more sustainable. Five out of the seven elements for the establishment of a sustainable city, as spelled out by Hall, Du Plessis and Landman (2002), were deemed key to this study.

These include;

- i. A thriving urban economy that generates income and jobs.

- ii. A socially cohesive and cohesive urban society that is sustainable.
- iii. A sustainable urban shelter that offers everyone decent, reasonably priced accommodation.
- iv. A stable ecology in a sustainable metropolitan setting.
- v. Sustainable urban access via mobility that conserves resources.

2.3 URBANISATION

Urbanisation is a global phenomenon that has impacted and continues to impact both the developed and developing world. In industrialised regions, urbanisation can be traced back to the Industrial Revolution and the resulting economic progress which significantly increased the overall urban population (Attawairi, 2017). In the developing world urbanisation can be traced to the advent of colonisation. Urban centres in colonial times were built mainly for commercial and security interests and reflected the colonialists' lifestyles and goals rather than that of the indigenous populations (Attawairi, 2017).

Urbanisation can significantly impact an area's resources that are necessary for the provision of sustainable human settlements. Migrants to urban areas often bring with them a high demand for water services, health care, jobs, food, housing and other amenities, thus putting a strain on cities' limited resources. The outcomes of such strain include, reduced access and affordability of land and housing units, pressure on land and housing markets for citizens, increased resource use and a need for better services, and reduced provision of utilities and services such as power, telecommunications, clean water and sanitation (World Economic Forum, 2017).

A growing migrant population can also stimulate significant social infrastructure investments which divert resources from directly productive assets. Larger cities are more likely to attract migrants but with negative prospects for a city's human settlement development plans. For instance, a city may have planned to build housing units for a population of 50,000 but this may need to be doubled if there is an influx of migrants. As a result of the doubling of housing demand, there will also be an increase in direct and

indirect demand for other services such as refuse collection, provision of lights and water etc. Major cities across the world face similar challenges in regard to sustainable human settlements provision (World Economic Forum, 2017).

2.4 Urbanisation in Africa and Sustainable Human Settlements

Africa's structural development and the realization of Agenda 2063 depend on planned urbanization, according to United Nations Habitat (2020). Suppose urban planning and design, explicit urban laws and regulations, incorporating urban economies into national development plans, and empowering cities and local governments to generate wealth and prosperity are all in place. In that case, urbanization can be a vehicle for development. According to Urban Gateway (2021), over half of the world's population lives in cities and towns. The highest degree of urbanisation is expected to occur in Asia and Africa, changing landscapes socially, economically, and environmentally.

With over 67% of its people living in cities and that number expected to rise to almost 80% by 2050, the Republic of South Africa, according to UN-Habitat (2025), is one of the most urbanized nations in Africa (UN-Habitat, 2025). Rural-urban migration has a number of effects on both regions, including uneven development, skill erosion, the growth of informal settlements, overcrowding, and rising rates of unemployment and crime. In order to achieve more balanced development and social equality throughout the nation, one of the biggest challenges is addressing the issues brought about by uneven development and rural-urban migration.

Africa's fast urban population expansion is directly attributed to a change in the urban-rural economy ratio (Hope, 1998). This change is intimately related to both economic expansion and evolving employment trends. Urban bias in development plans has led to an expansion in industry and commerce and the construction of infrastructure related to education, transportation, and communication in urban regions (Hope, 1998).

The idea of making human settlements and cities inclusive, secure, resilient, and sustainable as a main principle for sustainable human settlements is espoused by UN

Habitat in its endeavour to achieve SDG 11 in Africa (UN Habitat, 2015). In this regard, new developmental policies that view urbanisation as a crucial instrument for economic growth and industrialisation are required. This means that economic expansion, industrialisation, and urbanisation should not be viewed in isolation. Urbanisation can be a weapon for development through effective urban planning and design, clear urban laws and regulations, the incorporation of urban economies into national development plans and the empowerment of cities and local governments to generate wealth and prosperity. In other words, Africa's structural change and the realisation of Agenda 2063 depend on planned urbanisation (UN-Habitat, 2015).

2.4.1 Patterns of Urbanisation in Africa

Bowmans (2020) describes Africa as the world's fastest-urbanising continent, with enormous growth potential despite its status as the world's least urbanised continent. For instance, statistics show that Lagos is likely to become the world's largest city by 2100 and is expected to grow by 77 people every hour between now and 2030. By 2050, approximately 1.5 billion residents will live in cities in Africa, the majority of whom will be young. By 2035, Africa's population is predicted to be 50% urban, with most of this growth occurring in informal settlements or slums (Bowmans, 2020).

The recent pattern of urbanisation in Africa is geographically disparate. According to Attawairi (2017), the age of the people living in cities increased significantly in west and Southwest Africa, while most of East Africa remained relatively undeveloped. South Africa has the most significant proportion of people who live in cities (60.7%), followed by Northern Africa (57.3%) and Western Africa (52.3%) (Attawairi, 2017). This pattern considerably matches the economic development levels of each respective region. Southern and northern Africa are the most economically developed regions.

Poverty and inequality have characterised African urbanisation thus far. This is attributed to maladministration, weak local authorities without a clear and unquestioned mandate to oversee the city. Even in African cities with comparatively good service standards and

average wages, such as Accra, Johannesburg, or Gaborone, the average urban inhabitant suffers from structural poverty and institutional exclusion (Bowmans, 2020). Africa is experiencing massive population growth, which it has not adequately planned for (Attawairi, 2017; Bowmans, 2020; Dodman et al., 2017). In addition to poor planning, there is a lack of technical or financial capacity to make large-scale infrastructure investments required for liveable density. Countries in Africa have also not invested sufficiently in peripheral cities to provide services, amenities, and economic development, hence the rapid movements to the cities. According to Dodman et al. (2017), by 2050, the area of Sub-Saharan Africa will have grown twelvefold.

Natural population growth rates in cities and rural-to-urban migration are the primary causes of Africa's rising urbanisation and slum expansion rates. Instead of fostering inclusive growth, urbanisation in Africa is giving rise to urban poverty and growing inequality (Africa Urban Forum, 2015). African cities continue to have the second-highest levels of inequality, with an average Gini coefficient of about 0.58, far higher than the global average of 0.4 (Africa Urban Forum, *ibid*).

According to Subramanyam and Marais (2022), there are many challenges which have been brought about by urbanisation in Sub-Saharan Africa. In comparison to urbanisation in other parts of the world, African urbanisation is largely unplanned, unregulated, and characterised by structural adjustments, as well as neoliberalism, which produced weak urban planning institutions (Güneralp et al., 2017). In this context, many municipalities are undertaking reforms to deal with these challenges. These reforms include; territorial reorganisation, reallocation of national and provincial tasks to local government, and the assignment of greater territories assigned to metropolitan governments.

One of the leading causes of urbanisation in Africa is population expansion (Attawairi, 2017). Fertility rates in rural areas in comparison, are generally lower than in metropolitan areas. Higher fertility rates are associated with the improved economic, social, cultural, and political changes in urban spaces. People frequently seek city jobs to earn more money and to access and utilize various services that are available in the city. Rural

residents frequently quit their traditional lifestyles, which are primarily related to agriculture, in favour of jobs in cities (Attawairi, 2017). Rural to urban migration can cause harm to the continent's GDP because it results in high unemployment rates with jobs mostly in the non-formal sector, which cannot be taxed or regulated by the government. The economic activity in the informal sector cannot be measured accurately and therefore causes the continent's GDP to be underestimated. The major determinants of productivity, including the expansion of small and medium-sized enterprises, the advancement of human capital and expertise, and technological innovation, have also been disregarded by African governments (African Urbanisation Forum, 2015).

2.4.2 Development Challenges of Urbanisation in Africa

The following developmental challenges of urbanisation are identified by Teye (2018): inadequate resources for the enhancement of urban-based infrastructure which prevents access to services such as water, housing, health, electricity, and social amenities; insufficient investments for job creation; absence of an effective policy for incorporating migration as part of urban development programmes; insufficient policy logic; the African land tenancy system which in some cases is controlled by chiefs, who in turn can affect planning.

According to Ilead (2018), the most significant impact of urbanisation is the rapid growth of informal settlements. Ilead (ibid) argues that as people move into urban areas, demand for various services such as waste removal, water, transportation, energy, job opportunities, and housing grows. Slum expansion, increased crime, and instability are issues that many African cities face (Africa Urbanisation Forum, 2015). Many informal settlements have grown due to dysfunctional housing and land markets brought on by weak institutions and inadequate urban enforcement.

2.4.3 Socio-Economic Challenges

The challenges of urbanisation for Africa were brought about by various factors. Page et al., (2020) contend that these challenges were brought about by being in a worse state than other developing regions at the start of the urbanisation process. Latin American and Caribbean countries lead with a 40% urban population that achieved \$1,860 per capita GDP. In contrast, at a rate of 40% urbanisation, the Middle East and African countries have almost an identical performance with \$1800 per capita GDP (Page et al., 2020). Contrary to popular belief, Africa's GDP per capita only surpassed \$1,000 as it became more urbanised (Page et al. 2020). As a result, private-public investments in infrastructure, housing, and other capital investments have decreased. Many African cities cannot benefit from urbanisation, and this is due to their inability to lead organisational transformation, boost growth, create jobs, and contribute to national economic growth compared to cities in other countries like China (Madden and Gutman, 2020).

The costliness of goods and services in African cities is another barrier to economic growth. Statistics show, for example, that African households are likely to pay 20-30% more for services and products than households in other emerging countries (Page et al., 2020). Other services that are costly include transportation and housing in urbanised locations - estimated to be roughly 55 % more expensive than in other urbanised places. Other concerns for African cities include insufficient and unpredictable electricity, transportation costs, weak international competitiveness and low investment returns (Page et al. 2020). Developing countries increase their risk and weaken their resilience if rapid urbanisation is not effectively managed and occurs in the context of widespread poverty.

2.4.4 Ecological Challenges

Urban cities also face various ecological concerns. Human settlements are the main points of an integrated combination of all human activity, including employment, education, health, culture, leisure, production, and consumption, resulting from urbanisation. As a result, ecological impacts of urbanisation include insufficient physical

structure and services, health repercussions due to overcrowding and increased exposure to concentrated waste, unsustainable usage, and increased settlement in ecologically sensitive regions. The urban poor have been unreasonably affected by these constantly deteriorating conditions.

Lack of adequate infrastructure is an ecological concern and cities without enough infrastructure for service delivery may be unprepared for urbanisation and potential calamities (Saghir and Santoro, 2018). African cities are often characterised by fragmented land use, i.e. it is dispersed and disjointed (Page et al., 2020). This fragmentation can lead to higher infrastructure expenditures and longer travel times.

Teye (2015) identified the following challenges as impacting on access to sustainable human settlements:

- Insufficient funding to improve urban infrastructure quality and advance urban residents' access to reasonably priced housing, water, power, medical facilities, and other social amenities.
- Insufficient funding to create job opportunities.
- Inadequate legislative framework for integrating migration into initiatives for sustainable urban development.
- Weak policy coherence: planning is impacted by land tenure systems (chiefs control land in some nations); and municipalities are weak.

2.4.5 Service Delivery Challenges in African Cities

Bowmans (2020) explains that Africa's sprawling, fragmented, and hyper-informal cities have resulted from a lack of urban infrastructure, limited of urban planning, disorganised land use, regulatory obstructions, and vested interests. Informal settlements are becoming a more common reality for African city dwellers. According to UN-Habitat, over 47% of Africa's urban population (around 257 million people) resided in informal settlements or slums in 2019 (UN-Habitat 2019).

Poor service provision characterises many cities throughout Africa. For instance, Cairo in Egypt, has a population of 10 million people but only has enough water and sanitation to service 2 million. Abidjan in Côte d'Ivoire has 70% of its population without sanitation and 30% without piped water (Todaro 1997).

In Nigeria, many of the challenges of migration on human settlements are linked to poor governance (Olajide 2013), resulting in low-cost labour and increased unemployment in urban areas. Urbanisation places additional strain on current infrastructure, resulting in higher maintenance expenses. Olajide (2013) argues that if unchecked, the flood of immigrants in Nigeria will challenge city planning for long-term growth, leading to further expansion of informal settlements and slums.

Systemic shortfalls, access to basic sanitation and potable water, waste collection, stable and reasonable energy, and public transportation will continue to be a concern for urban dwellers due to a lack of planning and management (Bowman, 2020). Increasing urbanisation will only put pressure on already stressed service-delivery mechanisms. In many countries 'pirate cities,' whose citizens rely on pirate operations, have emerged.

Unplanned urbanisation leads to the spread of diseases like tuberculosis and the persistence of diseases like malaria. Such diseases are likely to have a disproportionate impact on the urban poor. Infectious disease development is associated with environmental change and perturbations of natural habitat balance, human demographics and behaviour, and the collapse of public health systems all lead to new infectious disease risks (Hope and Lekgorwe, 2012).

Such dire outcomes make it imperative for countries to improve their governance frameworks. For instance, there should be taxation measures put in place to ensure that those utilising amenities compensate for their use. Equally so, the cities may need to plan for the provision of services that go beyond their current population projections, i.e. there should be projections of more numbers of people coming into cities.

2.4.6 Positive Impacts of Urbanisation in Africa

While there are many negative aspects to urbanisation, Teye (2018) highlights some of the positive aspects of urbanisation. Urban living can aid access to education, health care, family planning services and enhanced access to social services. Various entrepreneurial companies and activities, especially in the informal sector, tend to grow in informal settlements and migrants' earnings may be irregular but higher than in their home countries. While development policies continue to view rural-urban migration as a negative force that is largely responsible for an increase in urban poverty, urban slums are not only places of despair and misery but also places where migrants are optimistically making the most of their abilities in spite of the many challenges they face to escape poverty.

2.4.7 Policy Proposals for Urbanisation in Africa

If done well, urban planning can be a powerful tool for long-term economic prosperity (Saghir and Santoro, 2018). Good planning entails creating balanced investments in services and infrastructure due to rising demand. It can also entail the use of smart land-use reforms which can be implemented based on density changes (Saghir and Santoro, *ibid*).

Rapid urbanisation necessitates that developing and rapidly expanding cities make decisions about managing their expansion and shaping their urban density in a sustainable manner (Bowmans, 2020). A sustainable vision of densified cities includes compact urban growth structured spatially to create highly accessible cities, relatively high densities, and widespread networks with affordable and on-time public transportation. Neighbourhoods would be liveable, useful, and socially mixed, with diverse dwelling designs for different income classes, close work opportunities, soft mobility driving and dense and connected grids of streets (Bowmans, 2020).

McCarney (1995) cited in Hope & Lekgorwe (2010) identifies the following policy proposals for the environment. First is an environmental approach focusing on the 'green city' (an idea of linking nature with human activities in cities or bringing the concepts of

urbanism and nature together); specific aspects of the 'greening process' (urban forestry, agriculture, and natural systems as they pertain to sustainability); and the ecology principle of city planning and design.

The second major strategy takes a development-oriented approach to poverty. The primary premise is that urban amenities and growth concerns tend to take precedence over environmental concerns. Many individuals do not perceive the ecological component of the urban environment to be a priority compared to other pressing demands, such as access to drinkable water and sanitation services. As a result, urban environmental concerns are frequently rejected as a problem of, or for the higher classes. The urban poor are primarily preoccupied with their economic survival, as has been demonstrated in Southern Africa and throughout the rest of Africa (Hope & Lekgorwe, 2010).

The third policy area focuses on improving service delivery by better managing the urban environment. Environmental management in cities is recognised as essential for economic development and protecting the disadvantaged from the negative effects of environmental degradation. In both developed and developing countries, developing an urban environmental management strategy and action plan that includes a city-specific design for large cities or a common strategy that covers smaller and intermediate cities or towns, has proven to be an effective approach for dealing with urban environmental issues. The following elements should be included in such an approach: (i). organised public support and engagement; (ii). tactical decisions; (iii). city-organised capabilities; (iv). strengthened service delivery; (v). the knowledge gap regarding the urban environment; and (vi). strategic planning (Hope and Lekgorwe, 2010).

The third factor relates to difficulties with governance. Intrinsic to this, is the understanding that while environmental challenges can be technical in nature, they raise important political issues about power and societal resources. The 'green politics' movement in the 1980s, which connected the fight against poverty and social injustice with the fight against environmental abuse, gave birth to the governance viewpoint on cities and the environment. The view that urban housing and land are environmental

resources has ramifications for the nature of civil society-state relations, for example. The contemporary urban debate in South Africa addresses critical issues for both current political liberalisation and future political development (Hope and Lekgorwe, 2010).

2.5 URBANISATION IN SOUTH AFRICA

South Africa has by far the biggest proportion of people who live in urban areas. Similar to population trends in other parts of Africa, South Africa is experiencing large population growth in the face of poor infrastructure.

Urbanisation in South Africa that began in the late nineteenth and early twentieth centuries was unusual in several ways (Turok, 2012). Until the 1990s, the government intervened heavily in the progress of urbanisation. First, to hasten a specific type of temporary rural-urban movement and then to inhibit people from shifting to cities. Various policy mechanisms, laws, and organisations were used to influence domestic mobility, including racially inequitable government controls on people's ability to own the land and their capacity to settle where they wanted, employment regulation, and the system of education and preparation.

During this period, urbanisation was closely related to industrial development and involved the abuse of both natural assets (minerals) and human capital in the form of mainly rural migrants. Urbanisation was sparked by the unearthing of diamonds in the country inland in 1867 and subsequently the discovery of gold in 1884 (Turok, 2012). The resultant "Mineral Revolution" accelerated industrialisation and extensive international and national migration, particularly in the Witwatersrand. The mining boom necessitated the rapid creation of a massive labour force and recruitment of labour, which strengthened urbanisation.

According to Turok (2012), the promulgation of 1918 Bill on Natives in Urban Areas was intended to coerce Black people into outlying townships or 'locations' specifically set aside for them within towns and cities. The 1923 Urban Areas Act established the concept of

racial residential segregation. Todes et al. (2008) present a historical context of urbanisation in South Africa which was determined by policies to regulate the settlement of primarily black people. According to Todes et al. (ibid), policies aimed to limit and control Africans' access to cities, forcing many of them to return to their "homelands," which were mostly rural and had little or no economic base.

Turok (2012) argues that the alluring pull exerted by the expansion of gold mining and urban manufacturing during the 1930s and 1940s was one of the significant reasons why the government's attempts to steer, manage, and limit the scale of black urbanisation were futile. Industry required more labour and people in rural areas required the jobs and earnings that were available. Wages outweighed political pressures to limit black urbanisation.

2.5.1 Characterising Urbanisation in Post Apartheid South Africa

Colonial and apartheid racial segregation policies left a dreadful legacy – a disjointed urban form with uneven access to services, jobs, and public amenities (Turok, 2012). Because of the resilience of the built form, the power of bestowed interests, tenacious income inequities between races, and a lack of upward mobility, the legacy has not vanished in the aftermath of apartheid Turok (ibid). The dispersed built environment necessitates long journeys, increases carbon discharges, reduces city efficiency, and threatens municipal financial sustainability due to high service costs. The population intensities within each city are also uneven.

Central to the urbanisation of South Africa is the concept of metro-politicisation. Subramanyam and Marais (2022) reflect on the following unique character of South Africa's approach to creating metropolitan municipalities: The Constitution of the Republic of South Africa recognises municipalities as an autonomous sphere of government, equating it to both provincial and local governments, with metropolitan municipalities distinctively having autonomy on areas such as housing, land use planning, transport as well as healthcare.

O'Neill (2022) projected that by 2020, approximately 67.35% of the South African population will be residing in cities and metropolitan areas. According to O'Neill (2022), work and leisure possibilities are the primary motivators for people to migrate to metropolitan areas. Other factors that drive urbanisation in South Africa include the fact that it is one of Africa's most industrialised countries due to its status as a service destination.

To this day, urbanisation in South Africa follows the pattern of the Apartheid spatial frameworks. Middle and upper-income families live in low-density conurbations that are expensive to service with public transport and bulk infrastructure and are heavily focused on car-based commuting. In comparison, lower-income households are mostly confined to townships and overcrowded informal settlements, which have overstretched schools and community facilities (Turok, 2012) and remain vulnerable to the spread of fires and diseases. Furthermore, land restrictions in these areas make connecting stormwater systems, electricity, sewers, and other infrastructure more difficult. As Turok (2012) further explains, many slum areas are poorly located on unstable waste grounds and are susceptible to floods.

Marais and Krige (1999) proffer that the South African housing policy is overtly influenced by international trends in providing low-income shelters. However, regardless of the impact of international actors such as the World Bank, local factors continue to be critical in defining the success of housing delivery.

2.5.2 Policy Framework for Human Settlement Development in South Africa

As reflected above, South Africa moved from a housing policy approach to a human settlements approach. However, it remains critical that the policy framework also considers the historical context of the SA housing policy, which preceded the country's human settlements policy.

Sustainable human settlements are defined by the following criteria: access to relevant, suitable, suitably located, affordable, and financially sustainable housing; access to

essential amenities such as water, sanitation, refuse collection, and power security of tenure, whether through leasing or ownership, informal or formal systems; within a reasonable distance, access to social services and economic possibilities (Department of Human Settlement, 2021).

2.5.3 Central push factors for urbanisation in South Africa

Economic reasons are major pull factors for urbanisation in South Africa. As in the majority of regions in the world, economic opportunity differences are the fundamental motivation for rural to urban migration in South Africa (Turok, 2021). Cities in SA have consistently outperformed the rest of the country in terms of economic employment growth. Cities are more productive in terms of both the value of services and products produced and the efficiency by which they are produced. The 'Agglomeration economies' derived from large concentrations of economic activity are the result of matching business requirements for premises, labour, and other resources, as well as sharing infrastructure, services, and information (Turok, 2012). Cities typically also house more valuable functions such as financial and business services, corporate headquarters, manufacturing, and public services, including provincial and national departments, universities, and hospitals.

2.5.4 Impacts of Urbanisation in South African Cities

There are various studies that show the negative impacts of urbanisation on cities in SA. These include increased population growth which strains water infrastructure, resulting in poor urban dwellers consuming unclean water. Illegal land occupation which is fuelled by immigration because cities are unable to meet the demand for human settlements (Hollander and Bruce, 2013). South African Local Government Association (SALGA) (2009:9) identifies the following urbanisation challenges;

- Migration encourages the formation of smaller households, resulting in a higher demand for housing units. As a result, the demand for long-term human settlements is not uniformly distributed across South Africa. This necessitates the allocation of resources to the most stressed locations (metros, secondary cities).

- There are limited local resources to meet rising housing, and basic service demands and this leads to illegal land use and occupation, poor health conditions, and tenure instability. In addition, the ability to upgrade the existing settlements.
- There is no one tool to track migration, making it impossible to prepare effectively.
- A development planning framework that secures land demarcation for certain uses and speeds up township formation is needed.
- Human settlement delivery traverses the functional mandates of three realms of government, necessitating function devolution.

Weather protection, privacy and security are critical for human endurance, dignity, and community stability. But as Turok (2012) notes, the rapid stride of urbanisation and hereditary backlogs have made it difficult to provide lasting housing for everyone. Residents in such areas are more likely to face overcrowding, limited access to services, and hunger. In addition, flooding, soil instability, fires, and water-borne pollution are all more likely in shack areas.

2.5.5 Responding to South African Urbanisation

Turok (2012) believes that effective urban planning and management depend on city governments' strategic capabilities. These capabilities are defined in political, technical, and administrative terms. Cities must therefore manage complex tensions and trade-offs and make the right choices, and these must be balanced against local responsiveness and popular support.

The historical framework of metro politicisation in South Africa was fulfilled in December 2000, when the government established a vision for metropolitan administration, acknowledging the importance of cities in tackling many of the country's most pressing challenges. Turok (2012) claims that disparate administrations were built to serve various racial populations and then united to form enormous, fully democratic municipalities that covered large territories. There were three causes for the founding of 'developmental local governments': a more equitable distribution of municipal resources across each city, the development of spatial integration through careful planning and infrastructure investment, and the strengthening of local economies in light of their national importance (Turok, *ibid*).

Municipalities were then recognised as a distinct sphere of government in the 1996 Constitution, with the right to govern on their initiative. They took the lead in providing essential household services. Municipalities were expected to be mostly self-sufficient, with fees for services and property taxes. The principle of 'cooperative government' demanded that the three spheres collaborate in good faith (Turok, 2012). This was necessary for national sectoral programs (such as housing, transportation, schools, and health) to align with municipal spatial plans, regulatory functions, and basic infrastructure. One of these key municipalities was the Mangaung Metropolitan municipality.

2.6 Mangaung Metropolitan Municipality

The Mangaung Metropolitan Municipality is a Category A Municipality located in the central interior of South Africa, in the province of the Free State. The 2022 census put the population figure of the city at 811 000.

The impact of urbanisation on sustainable human settlements in Mangaung cannot be understood without understanding the historical context of urbanisation in the metropolitan municipality's areas. Both Apartheid and colonial planning swayed Bloemfontein's spatial planning (Marais, 2021). The Bloemfontein–Botshabelo– Thaba Nchu (BBT) region is described by Marais (2021) as a "microcosm of apartheid planning." Thaba Nchu is described as "an enclave of 'independent' Bophuthatswana," and Botshabelo as "an ethnic city for the Sotho, a catchment area for canalised urbanisation and surplus black people in the province." There was an attempt through typical apartheid planning topographies, to integrate Botshabelo into the QwaQwa Bantustan. However, this attempt failed in failed in 1990. The three industrial development hubs serve daily and weekly commuters and long-distance migrants, and the Bloem Area Regional Services Council (Marais, 2021).

Bloemfontein's spatial development was fragmented. As an "ideal apartheid city," its suburbs were segmented by race, with wide buffer strips inserted between them. The railway line and industries were used to divide white and black conurbations; and the

Black suburbs (the townships) were ethnically zoned, with no tenure allowed (Marais, 2021). A small number of resettlements were established within the city to implement the Group Areas Act, and there was extensive resettlement from the Mangaung township to Botshabelo (Marais, 2021).

Between 1980 and 1991, according to Marais (2021), there was a significant increase in the number of people settling in Botshabelo, demonstrating how the apartheid state redirected urbanisation away from Bloemfontein. Following apartheid's rapid growth, there was negative growth between 1991 and 1996. Botshabelo's population finally began to increase again slowly from 1991 to 2011 (Marais, 2021). The annual increase of 0.3 % between 2001 and 2011 was much lower than South Africa's annual national population growth of about 1.4%. The population of Thaba Nchu, on the other hand increased from 1991 to 2001 but decreased between 2001 and 2011 (Marais, 2021).

2.6.1 The Amalgamation Process

The anchor of urbanisation in the Mangaung area are the towns constituting the BBT region. The Municipality went on to accommodate other towns such as Soutpan (formerly with Masilonyana Municipality), Dewetsdorp, Van Stadensrus and Wepener (Formerly with Naledi Municipality). When the Demarcation Board merged the BBT region into one local authority in 2001, the region was officially renamed 'Mangaung.' The amalgamation was an effort to address the region's uneven apartheid planning by instituting a single political and planning structure (Marais, 2021).

The amalgamation process was the key driver for urbanisation in Mangaung. Mangaung Local Municipality was constituted in 2001 as part of what the Municipal Demarcation Board called "wall-to-wall demarcation" (Subramanyam and Marais, 2022:8). In 2011, the designation was changed to a metropolitan municipality with the inclusion of Thaba Nchu and Botshabelo. In 2016, the areas of Van Stadensrus, Wepener and Dewetsdorp were subsequently added to the municipality. According to Subramanyam and Marais (2022), the municipality included the traditionally Black townships of Mangaung, Botshabelo, and

Thaba Nchu, as well as the historically white town of Bloemfontein. Bloemfontein (including Mangaung) has more residences than Thaba Nchu and Botshabelo, with Bloemfontein housing around 55% of the population, Botshabelo 30%, and Thaba Nchu 15% respectively (Subramanyam and Marais, 2022).

Bloemfontein is the Mangaung Municipality's administrative capital and boasts a variety of services, including health, shopping, and academic institutions. The city is also the administrative and commercial centre of the Free State's province. Bloemfontein's urbanisation was mostly influenced by the preceding factors. The settlements of Thaba Nchu and Botshabelo were constructed as buffers to preserve Bloemfontein from urbanisation. According to Marais et al., (2014), the goal was to divert Sesotho and Setswana speakers away from Bloemfontein. As a result, the design of economic plans for both Botshabelo and Thaba Nchu was augmented by a subsidised bus system, guaranteeing that individuals working in Bloemfontein will return to Botshabelo and Thaba Nchu.

In 1982, Botshabelo was designated as an industrial growth point (Marais et al., 2014). The textile industry, which had virtually collapsed due to cheap outside imports that flooded the market when apartheid ended, was the focus of this industrialisation (Marais et al. 2014). This brought the entire amalgamation arrangement to a halt, resulting in the further industrialisation of Bloemfontein as people of these towns chose to relocate to the considerably more developed Bloemfontein.

Mangaung became a Metropolitan Municipality in 2011 and 2016. The three original towns were joined by the former Naledi Local Municipality, which brought with it three very poor towns and the peripheral town of Soutpan.

The planning policy after apartheid encouraged higher densities while discouraging sprawl (Todes et al., 2018, as cited by Marais, 2021). As Marais (2021) explains, the prevention of sprawl and discouragement of low densities are also important aspects of Mangaung's integrated development plan (IDP). However, it is difficult to put to

implement. Since the early 1990s, two major urban growth inclinations have been visible. First, high-income growth has occurred in the west. This includes the CBD's westward expansion, which included business encroachment in Westdene. Second, as predicted by Krige (1999), low-income sprawl would occur to the east, with much of it being the result of the normalisation of urbanisation following apartheid. Bloemfontein has grown, whereas Botshabelo and Thaba Nchu have grown at a very moderate rate. In 2014, Bloemfontein's urban settlement was 35% higher than it was in 1990.

2.6.2 Sustainable Human Settlements in Mangaung

A study conducted by the Department of Cooperative Governance in 2021 found that out of 265 560 households in Mangaung in 2016, 6.5% resided in a backyard apartment, 11.7% lived in shacks or other informal housing, and 47% lived in houses. There were 53 informal settlements in the Mangaung region, housing 28,737 people. The same study showed that the municipality serves 193 558 houses with sewer services, but 71 856 (27%) of those households lack adequate sanitation. The study further showed that 22% of people still use pit toilets, whilst 71.9% of people have access to flush or chemical toilets. Access to a chemical or flush is 10% more common than in South Africa (63.5%) and less common than in the Free State (74%). Toilets are not available in 1.4% of households, which is almost three-fifths of the rate in South Africa (2.39%). In Bloemfontein, Thaba Nchu, Botshabelo, 300 Dewetsdorp, 230 Van Stadensrus, and Soutpan, there are 10,505 of the 17 555 stands (10%) that now have a water backlog. The metro's ageing infrastructure has not been adequately maintained and poses a significant challenge to development.

The statistics above paint a grim picture of some of the key challenges to sustainable human settlements in Mangaung. These will only become worse if the pace of urbanisation continues unhindered.

2.6.3 Impact of Urbanisation in Mangaung

According to Ncube (2019), there were 53 433 legal migrants in the Free State in 2016. 740 of them lived in Mangaung. Migrants are not confined to one region of residence. They typically work and live in several Mangaung areas and townships. The CBD is hub for many migrant groups including Ghanaians, Nigerians, Cameroonians, Somalis, Basotho, Congolese, Ethiopians, and Bangladeshis (Ncube, 2019).

According to Ncube (2019), the economic implications are that migrants own a variety of small enterprises, including grocery stores, wholesale firms, furniture stores, mobile businesses, and hair salons. They are, however, absent from large malls, except for conglomerates controlled by white European and American businessmen who are not considered aliens by some (Ncube, 2019:8). Basothos find doing business in Mangaung easier because of their deep historical ties with the locals (Ncube, 2019).

Ncube (2019) noted that there was an expression of gratitude for the positive impact that migrants bring into the city, including providing jobs, scarce skills, and affordable retail products particularly in township areas. The relationship between natives and migrants is “normalised and they generally coexist amicably. As a result, xenophobic attacks are not as common in Mangaung as in other parts of the country (Ncube, 2019).

2.6.4 Policy Response for Urbanisation in Mangaung in Relation to Sustainable Human Settlements

Mangaung uses its Integrated Human Settlements Plan and Spatial Development Framework as policy tools to manage unplanned urbanisation. The Human Settlements Development Plan has the following key elements:

According to Mangaung (2012), the N8 Development Corridor's main focus areas are improving mobility, igniting nodal development, and facilitating linear expansion.

Mangaung (2015) states that this corridor aims to increase movement and build interdependence and links across the Metro's three major centres.

Mangaung has adopted the idea of smart growth as one of the foundations for spatial change (Mangaung 2012). The goal of this strategy is to prevent urban sprawl or outward expansion. According to Mangaung (2012), the goal is to prohibit any urban township development “beyond the edge” while also encouraging maximum use of existing infrastructure to achieve urban efficiency and a more solid and integrated urban shape and structure. In this way, the city intends to integrate smart growth in all of the municipality's towns.

Mangaung Metro has designated seven land parcels for mixed-use development in strategic locations in order to connect the communities further. These are municipally held lands on the outskirts of town (Mangaung 2012). These pieces of land are positioned between the city's rich and impoverished areas, providing opportunities to integrate the city socially, physically, and economically in order to break apartheid's racial boundaries.

The Mangaung Spatial Development Framework (2020) identifies the following urban management tools: Ongoing implementation of approved land use management procedures in the area; Interdepartmental and institutional coordination regarding service delivery and intervention, as well as the identification of appropriate institutional planning for the management and implementation of programmes and projects; Enhancing the importance of public space (environment) in urban settings through appropriate design interventions and continuous maintenance; Documentation and implementation of strategic public investments, such as housing, infrastructure, and economic and social facilities; guiding and directing planned private sector investments; and facilitating private sector access to instruments such as city improvement districts (CIDs), funding sources, and tax incentives.

2.7 KEY FINDINGS FROM LITERATURE

The concept of sustainable human settlements implies that an urban area must be able to provide housing and provides adequate ancillary services, such as sufficient water services, waste removal, economic opportunities and infrastructure. These provisions must be extended to sufficiently meet the needs of migrants. A city's sustainability is premised on its ability to provide for its current inhabitants and its ability to accept and provide for new migrants.

Urbanisation is characterised by the movement of people from rural areas into urban areas in search of various opportunities for sustainable human settlements. There are various push factor that drive people to move into urban areas. Patterns of urbanisation in Africa are characterised by massive movements of people who want to leave urban areas in search of better opportunities as most African countries are poor. However, most African cities are characterised by insufficient investments in social infrastructure, which is fragile and is threatened by movements of people. Urbanisation in Africa is characterised as being under-planned, unregulated, and based on weak urban planning, which results in the development of informal dwellings.

Africa finds itself in the worst possible state as it urbanises in comparison to other continents. African countries must implement policies and plans to address urbanisation. In South Africa, urbanisation still carries the vestiges of the apartheid spatial framework. Metro politicisation of conglomerations is the main pattern that South Africa follows.

The South African government has already defined a framework for sustainable human settlements, which enshrines the constitutional right for adequate housing or sustainable human settlement opportunities. The South African framework provides government assistance to all those who cannot afford access to adequate human settlements through various subsidy programmes.

As with the broader African context, the push factors for urbanisation in Mangaung are also largely economic and social. The City has various plans for development, such as the N8 Development Corridor activities and infrastructure. However, urbanisation by nature stretches the resources of the host town of migrants as it directly impacts the resources that may be required to provide sustainable human settlements in an area. As new people move into an urban area, the area must provide more services such as water services, health care, jobs, food, housing, and other amenities, thus putting a strain on the cities' limited resources.

Urbanisation poses both challenges and opportunities for development in urban areas. Key among the challenges is Africa's unreadiness to deal with the various challenges of urbanisation including the provision of sustainable human settlements. The same challenges also affect both South Africa and Mangaung. Mangaung is currently unable to provide services relating to sustainable human settlements to its citizens. Urbanisation could put even much more pressure on the services. Cities therefore require a proper policy response when faced with urbanisation challenges. This is central to better planning by municipalities.

3 CHAPTER 3: DATA ANALYSIS

3.1 Introduction

This study assessed the impact of urbanisation on Mangaung’s capacity to provide sustainable human settlements. This chapter deals with the analysis of the qualitative data. The core content of participants’ responses was articulated and categorised into significant themes that emerged during the analysis. The data was collected from participants who are the serving officials of Mangaung Metropolitan Municipality. The participants were assigned pseudonyms to ensure confidentiality and anonymity.

3.2 Profile and Sampling

The sampled participants for this study were purposefully drawn from Mangaung, a non-delegated municipality. The participants were drawn from the sections that form part of the integrated human settlements, i.e., planning, economic development, human settlements, infrastructure, and waste management. Whilst the information on who the respondents are, for confidentiality purposes, is not disclosed, a summary of which department each works in, is provided in the table below.

OFFICIAL	ROLE PROFILE
Participant 1	Land and Property (in the Department of Human Settlements)
Participant 2	Department of Human Settlements.
Participant 3	Mixed Development
Participant 4	Waste Management
Participant 5	Disposal Sites
Participant 6	Economic Development
Participant 7	Geographical Services
Participant 8	Roads and stormwater

Participant 9	Water and Sanitation
Participant 10	Member of Mayoral Committee

Table 2: An overview of research participants

3.3 Preparing Data

After the interviews were completed and transcribed, the researcher used thematic analysis to analyse the data. The transcriptions were taken verbatim and then translated into English. The process began with the researcher reading and re-reading the transcripts to become familiar with the data and gain a comprehensive understanding. The researcher then organised the specific facts about the case logically and identified the data categories. This made grouping a combination of codes identified in the data into meaningful clusters easier. Furthermore, the researcher examined specific data for specific meanings, and these meanings were analysed in relation to the research question. The text was further investigated by labelling it with codes describing the various transcribed text pieces.

Coding was done by assigning a category label to the pieces of data. A combination of codes identified in the data were then grouped into categories. Similar codes were grouped to form the category. Moreover, the researcher carefully searched for patterns (from codes to themes) by combining initial codes into main themes. This meant that the patterns in the data were then linked into relationships among the cases, and themes emerged from these patterns. While doing so, the researcher shifted to a deductive mode of thinking—moving back and forth among codes, categories and tentative patterns for confirmation, and themes emerged from these patterns. The themes were then checked against quotations from the data. The researcher formulated the significant themes, all focused on the research question. Furthermore, each theme was supported using verbatim examples obtained from the interview. The recurring themes that emerged from the data are discussed in the next sections.

3.4 Findings

The study's main objective was to investigate the effects on urbanisation on provision of sustainable human settlements in Margaung. The table below shows the themes and subthemes that emerged from a collected data.

THEME	SUB-THEMES
Theme 1: Impact of urbanisation on local infrastructure	<ul style="list-style-type: none"> • Effects of urbanisation on economic infrastructure. • Effects of urbanisation on service delivery infrastructure. • Infrastructure disparities caused by urbanisation. • Positive impact of urbanisation on Infrastructure.
Theme 2: Impact of Urbanisation on Urban Planning	<ul style="list-style-type: none"> • Rapid urbanisation impacts on planning instead of service delivery. • Rapid urbanisation leads to improper planning. • A slow planning process impedes initiatives to deal with the challenges of urbanisation.
Theme 3: Impact of Urbanisation on the Economy of Margaung	<ul style="list-style-type: none"> • Economic opportunities drive urbanisation. • Expectations of economic opportunities lead people to urban areas.
Theme 4: Impact of Urbanisation on Service Delivery	<ul style="list-style-type: none"> • Urbanisation puts strain on existing services of the Municipality. • Urbanisation compels cities to plan for future service needs.
Theme 5: Land invasion characterises patterns of	<ul style="list-style-type: none"> • Incapacity to address human settlement challenges leads to land invasions. • Land invasions characterise urbanisation in Margaung.

THEME	SUB-THEMES
Urbanisation in Margaung	
Theme 6: Limited Funding for Urbanisation Hampers Positive Response to Urbanisation	<ul style="list-style-type: none"> • The Government's payment of services to the Municipality constrains the City from meeting its urbanisation challenges. • Funding for Margaung does not meet demands posed by urbanisation. • The Equitable Share Model Favours Bigger Municipalities

Table 3: An overview of the themes and subthemes of the study

3.4.1 Theme 1: Impact of Urbanisation on Local Infrastructure

The literature has shown that infrastructure is critical to providing essential services to manage urbanisation. As Saghir and Santoro (2018) state, “Cities without enough infrastructure for service delivery may not be sufficiently prepared for urbanisation and the resulting potential calamities”. During the interview, the impact of infrastructure development and its provision was strong. Below are the participants' reflections, and the following sub-themes emerged. The findings show that rapid and unplanned urbanisation harms the infrastructure of the Margaung Metropolitan Municipality. One of the study's findings is that infrastructure constraints in the municipal area are worsened by rapid urbanisation.

Sub-theme 1 - Impact of Urbanisation on Economic Infrastructure

The literature shows that large-scale infrastructure investments are required for liveable density (Subramanyam and Marais, 2022). This means that the combination of rapid urbanisation and poor planning for urbanisation can collapse economic infrastructure.

The link between basic and economic infrastructure was a common theme from the interviews. From the economic development perspective, emphasis was put on the broader economic infrastructure like roads and water infrastructure. For example, Participant 4 stated that rapid urbanisation without sufficient economic infrastructure was a sign of poor planning. For this, he put the blame squarely on the city's urban planners. This reflects the historical development of financial infrastructure, particularly the road infrastructure.

Sub-theme 2 - Impact of Urbanisation on Infrastructure

According to Nkabinde, Lekhanya and Dorasamy, (2018), urbanisation places additional strain on the existing infrastructure of cities, resulting in higher maintenance expenses. The results from the interview largely confirmed this concern. The networks for services such as sewer and broader sanitation were said to be overloaded to the extent that they have collapsed. This results in businesses moving away and leads to unhygienic environments (Participant 8). Most participants were of the view that there is insufficient funding in Margaung to provide infrastructure for water services, and urbanisation puts even greater pressure on that same burdened infrastructure. Compounding this situation is the poor forecasting of the influx of people to the city (Participant 8). This puts pressure on existing infrastructure. Participant 1 attributed sewer spillages, water leaks, and electricity infrastructure tampering to rapid urbanisation, all which have collapsed Margaung's service delivery infrastructure to a large extent. The participant also asserted that Margaung is losing revenue because of this tampering or breaching service delivery infrastructure. Participant 3 indicated that urban sprawl that characterises Margaung is growing beyond the city's capacity to provide services, thus forcing the city to expand bulk services beyond the urban edge.

There are also other examples of pressure on existing infrastructure in the city. Participant 3 gave an example of Brandwag flats in Margaung where in some instances, more than 20 students occupy accommodation meant for less than ten people. According to Participant 3, this also stretches those flats' internal services. This extends to households

where the standard infrastructure used to support a typical household is overstretched due to demands of a significantly higher number of people on one property than would ordinarily be expected. As stated by Participant 6, backroom dwellers also typically stretch the demand for service provision as households increase the demand for and use of services without the accompanying extension of a proper support network.

Participant 6 mentioned that the strain on infrastructure also extends to the service delivery fleet for waste collection. Participant 5 explained that solid waste management has limited resources for waste collection and has to stretch it to accommodate new households due to urbanisation. The demand, therefore, is not only to expand the fleet but to construct new roads in informal settlements to ensure smooth service delivery.

Critically, what emerged from these inputs is that urbanisation, particularly if not planned, stretches the resources of Mungaung Metropolitan Municipality, and therefore impacts on the concept of sustainable human settlements. Critically, sustainable human settlements are not only about the provision of shelter but all services that go with an improved quality of life as a result of the creation of human settlements. Sustainable housing does not entail solely the provision of only housing units, but it is also about the provision of services. Importantly, there is also a need to take cognisance of environmental factors as being central to the provision of areas where human settlements are provided.

3.4.2 Theme 2: Impact of Urbanisation on Urban Planning

As citizens migrate towards the main urban areas, inevitably urban planning programmes in the metropolitan regions will need to be adjusted. Such adjustments will typically be easier in urban areas characterised by sufficiently planning, as opposed to areas with insufficient planning capacity. In the case of Mungaung, most participants were of the view that the Municipality did not adequately prepare for the possibilities of rapid urbanisation. This is reflected in the sub-themes below.

Sub-theme 1- Rapid Urbanisation Impacts on Planning instead of Service Delivery

Because of the unplanned movement of people, the Municipality's planning department has to disrupt its planning processes in the allocation of human settlement services.

"In the areas of Bergman Square and Freedom Square of Mangaung Township, you get so much sewer spillages in there because now the planning that was done was not proper. But if there were an integrated approach between all the departments within the Municipality, one would come and see that with what we are busy planning, now me from roads and me from sanitation I will not be able to provide services in this area because that. So that is where the Municipality is doing it wrong." (Participant 5)

The participant squarely puts the blame for poor planning on the municipality's lack of response to service delivery issues. The participant further asserts that,

"People settle themselves in the land that doesn't have sanitation services, roads, and water there you get now the community unrest for services mainly because it was not properly planned and this urbanisation is like not even controlled in a way and as well you even get your deficit in Mangaung as far as the water supply is concerned, we got high water losses and the deficit is also there if one will come and install waterborne sanitation we will experience water scarcity, the more they come, the more water demands."

Sub-theme 2 - Rapid Urbanisation Leads to Improper Planning

Improper planning is when the municipality is forced to make ad hoc plans for what was never adequately planned.

"The whole issue of illegal occupation of land and in-situ planning is that in most cases, you find yourself in that situation where the disaster hits because you did not do proper environmental assessment". (Participant 3)

In-situ planning is a process by which the Municipality has to plan after people have already occupied land illegally, and then the city will bring the services to formalise areas. The same participant stated,

"It's more as we attend to situations as they come, so there is no pre-planning, and there is lack of implementation, which is the issue, so at some point, I was after this SDF."

"In terms of planning, it's like we are responding to crises. It's like we are crises driven". Participants from Solid Waste are not keen on in-situ planning as they believe it places an unplanned burden on waste collection.

"The planning unit will just approve the planning in-situ, meaning wherever those people are or have settled, then that area is just approved; sometimes you find that it's not habitable, and then now you are sitting with that situation. I will make an example in Botshabelo there is an area that area has got many rocks there is no way that they are going to be able to create roads today even in the next two years but people are staying there that was approved as a township, but we cannot reach the area and the community is complaining now that Solid Waste is not collecting waste in that area." (Participant 8)

Effectively, the criticism means that some areas may suffer in service delivery without proper planning around urbanisation.

Sub-theme 3 - The slow planning process impedes dealing with urbanisation

According to Participant 4, the approval process for development plans in Mangaung is moving slowly because of the various stakeholders involved in the process. One participant commented that the fact that other units are supposed to contribute to approvals of development plans is impediments to planning processes.

“Other units of the Municipality will delay putting in place what they are supposed to do, like in your parks. The Social Development unit within the Municipality must enter that space to make sure that there is a community park; your economic development unit should also seek investors that will invest in the area for economic purposes of the area so that it is not only populated by residential but also some people don’t do much on their site. The spaces are left open for a long time, and the community will occupy spaces meant for development or social activities like your parks.” (Participant 4)

Because planning involved the inputs of various role players, delays in one unit can lead to delays in the entire planning system, thus leading to delays in approving human settlement-related applications.

“It might take us six months or so to conduct our study on whether the land sometimes is habitable or not for people and also to establish the township, but for engineering services, it is not that easy they need to request for funds to respond to this demand it might take longer, and in the meantime, the people will be exposed to bad environmental issues so that is the case.” (Participant 4)

As stated by Turok (2012), effective urban planning and management are dependent on city governments' strategic capabilities, which are defined in political, technical, and administrative terms.

3.4.3 Theme 3: Impact of Urbanisation on the Economy of Mangaung

Economic opportunities are one of the main reasons why people migrate to urban centres. People leave the peripheral areas and move to places like Mangaung to access better economic opportunities. The Confederations of Switzerland states that if economies are not growing at the desired rate as the population grows, there may not be enough land in

a region to accommodate the entire population and people may seek economic opportunities elsewhere.

Sub-theme 1 - Economic Opportunities Drive Urbanisation

The statement below by Participant 4 depicts the centrality of the economy as a main pushing factor for urbanisation.

“The operation of the economy contributes to this slow or perceived slow change of our urban settlements and the hierarchy of our urban settlements because nothing changes fundamentally in terms of the makeup of rural and small towns.”
(Participant 4)

The participant further stated that,

“People always become economic migrants, they become socio-economic migrants because also added to a stagnant economic area its limited service for you to get a better education. Then the perception is to go to urban areas because that's where quality is located so it creates that constant need to migrate, the constant need to interact with urban areas.” (Participant 4)

This suggest that in the Free State or areas surrounding Mangaung, economic opportunities are few, which leads people from those areas to immigrate to Mangaung. This is also supported by Participant 6 who stated, *“I think its people who wanted economic opportunities. They thought big cities has better opportunities specifically for jobs and maybe to a specific extent business opportunities. ”*

“So I think the main two causes was your general natural population growth and migration of many people from rural areas into the city to look for better opportunities and remember all them or all of us at that time when Mandela was released, we saw a bright future, and that is the reason people started moving into bigger cities.” (Participant 6)

Participant 2 refers to migrants as,

"The people that were segregated before the 90s. Some people were purely part of the agricultural lifestyle and agricultural economy. Now, when the change of patterns and the change of governance are coming in, they are moving towards the city with the idea of accessing opportunities." (Participant 2)

As confirmed in extant literature on urbanisation, it is mainly economic factors that are push factors for people to migrate to Mangaung. People migrate for the purposes of seeking employment. The provision of employment is cited as a critical element of sustainable human settlements. The lack thereof by the city makes urbanisation a hindrance, and therefore, human settlements will not be sustainable.

Sub-theme 2 - Expectations of Economic Opportunities lead people to urban areas

Participant 4 advised against false promises of economic opportunities in the urban areas, which leads people to those areas. He states,

"Opportunities tend to be in your well-off areas, and the poor are at the fringes of your historic townships, which is also a barrier to access opportunities and services, so yeah. So essentially, people migrate to urban areas with hopes of better opportunities but end up in the peripheries struggling for peripheral opportunities with the urban poor. The participant states that they become driven to the edges, and the economic opportunities are on this side, so for them to interact with the opportunities becomes a challenge. They spend most of their income on transport, and most of their time is spent migrating to other areas daily and commuting daily to access opportunities, so from a productivity point of view, they are at the lower end of everything."

Concerning immigrants from other countries, Participant 4 reflects that people migrate *"They see the opportunity. Mostly they are retailers and things like that."*

The Participant further asserts that, "...while the city is growing and for that matter, we can only see an increase in the residential but not in the economy of the city."

While people move into the city hoping to find economic opportunities, they may find instead that these are false economic premises. Eventually, they will only put a burden on the City.

One of the participants reflects that from an economic perspective,

"When you see that there is urbanisation, but your planning is devoid of economic development planning, then you are planning for a disaster to happen in terms of social outcomes, your city will be producing."

3.4.4 Theme 4: Impact of Urbanisation on Service Delivery

As more people move into urban areas, authorities of cities may have to extend the reach and coverage of various essential services.

Sub-theme 1 - Urbanisation Puts Strain on existing Services of the Municipality

Urbanisation by nature would stretch not only service delivery infrastructure but also put a strain on the broader service delivery activities.

"Putting engineering services in strain, you get your sewer spillages which got no impact on our water streams and all that where there are informal settlements which were land that had trees and all that people stay there and cut the trees off that is also a negative impact to the environment cause they make fire and that results in air pollution but as far as Water and Sanitation are concerned it is also on the contamination of water streams." (Participant 8)

Participant 8 also further explained that urbanisation puts a strain on services such as the provision of water.

"People settle themselves in the land that doesn't have no sanitation services, no roads and water; there you get now the community unrest for services mainly because it was not properly planning and this urbanisation is like not even controlled in a way and as well you even get your deficit in Mangaung as far as the water supply is concerned, we got high water losses, and the deficit is also there if one will come and install waterborne sanitation we will experience water scarcity, the more they come, the more water demands." (Participant 8)

Sub-theme 2 - Urbanisation Compels Cities to Plan for Future Services Need

Planning for urbanisation entails planning for the expansion of the reach of services. This includes water and sanitation services. But even if there are no plans to expand services, urbanisation forces the city to provide services to the growing migrant population because as Participant 8 reflects,

"We are requested to render services to new settlements, or even if its informal settlements water and sanitation unit will always lack behind because it does not form part of these human settlement planning meetings, you know if you are given things in time, one will be able to plan."

As with economic development, service delivery was cited as a critical element of sustainable human settlement. Unplanned or rapid urbanisation, as reflected in this subsection, impacts sustainable human settlements in Mangaung and stretches the city's resources.

Theme 5: Land Invasion Characterises Patterns of Urbanisation in Mangaung

Sub-theme 1 - Incapacity to address human settlements challenges leads to invasions

One of the significant causes of land invasions as reflected by Participant 5, is the backlog in providing people with formalised sites or housing. The participant reflected, *"the more backlogs, the more informal settlements"* According to the same participant,

"The development of more informal settlements will lead to the occupation of land that does not belong to the City, creating more problems for the City".

Participant 4 added to this point by stating that,

"Currently people are illegally occupying land just to have a roof over their heads. So those priorities because they are social and these are moving targets, a balanced discussion is always not possible based on the immediate crisis that is there."

Sub-theme 2 - Invasions Characterises Urbanisation in Mangaung

Settlement patterns in the southern-eastern parts of the city were developed chiefly through land invasions.

"It was unplanned by the municipality, so we ran after people as they occupied land. They were invading land in that area.... The municipality was just coming after Freedom Square, Chris Hani, Grassland, Khayelitsha, phase 9, and Phase 10, and it continues in the same manner, including Caleb Motshabi, Kgotsong, the one they call Dinaweng." (Participant 1).

Essentially, people chose the option of taking the land by force or by invasions because the metro has been unable to provide for sustainable human settlements. This has put the metro under strain to find alternative settlements for these people or undertake in-situ development. This means that the City has to divert its own plans for sustainable human settlements and accommodate the invaders.

Theme 6: Limited Funding for Urbanisation Hampers Positive Response to Urbanisation

Urbanisation requires financial backing. To plan for urbanisation, cities must allocate resources to fund their service delivery infrastructure expansions.

Sub-theme 1 - Available Funding for Mangaung Metropolitan Municipality' Human Settlements Does not Meet Demands Posed by Urbanisation

Participant 5 asserted that funding is not readily available to meet that demand posed by urbanisation and so there will always be community unrest.

"Unfortunately, our people just don't understand they think the Government has money lying around everywhere... There are plans, but there is no funding; why I am saying there is no funding is that the seven land parcels really should have made a serious impact in terms of addressing this whole backlog, Botshabelo Thaba Nchu node we bought eight farms total of 2200 hectars it's a huge piece of land the intention was to create a new township that is going to link Botshabelo and Thaba Nchu the initial plan was to create a new town with its own CBDs, and whoever was around the table we understood that dream might be realised when we are on a pension." (Participant 5)

The above reflects that Mangaung has suitable parcels of land for human settlements but cannot develop them due to a lack of finances.

Sub-theme 2 – Additional Funding is Required to Meet Service Delivery Needs Posed by Urbanisation

The findings show that Mangaung is currently experiencing serious budgetary constraints, so it will require additional funding to meet these challenges of urbanisation. As stated by Participant 7, owing to socio-economic challenges most people in Mangaung are in poverty and unemployed and they can't even pay for services. This is in line with the findings above in Sub-theme 1.

Sub-theme 3 - The Government's Non-Payment of Services to the Municipality Constraint the City from Meeting its Urbanisation Challenges

One of the main reasons for the constraints in responding to urbanisation challenges is the non-payment of services by the national and provincial governments.

“The issue of Government not paying for services, both provincial and national, is really straining this municipality, and I think it's quite a big problem if the provincial and national can pay the Municipality, and also we have challenges of SLA with Bloem water, bulk water supply, as a Municipality we can't cope with current tariffs of water, It's many challenges because our current budget cannot even address some of these increases which are so high by the Bloem water board so those are the issues that are adding to our challenges”. (Participant 7)

Critically, the spheres of government which are supposed to support local government, are coming short with regard to their payments to Mangaung Metropolitan Municipality, thus incapacitating the ability of the municipality to respond to urbanisation challenges.

Sub-theme 4 - The Equitable Share Model Favours Bigger Municipalities

Participant 4 explains that over the last 30 years, the pattern of the division of revenue, particularly from the National Treasury, has persisted, where the more significant share of funding goes to the urban areas. The argument is that allocation of resources is based on the size of the population and the migration, but the greatest need for services is also in those small and rural areas.

3.4.5 Summary of Findings

Cities like Mangaung must invest in urban infrastructure for sustainable human settlements. Cities without enough infrastructure for service delivery may not be sufficiently prepared for urbanisation instead of sustainable human settlements. Rapid urbanisation without sufficient economic infrastructure is a sign of poor planning on the part of urban planners. Without adequate economic opportunities, the notion of sustainable settlements for Mangaung can be difficult to achieve, as the impact on resources without concomitant payments for services cannot ensure the development of sustainable human settlements. As urban sprawls are going beyond the city's capacity to provide services, the City is forced to expand bulk services beyond the edge of the city.

Positively, a growing migrant population stimulates significant social infrastructure investments. However, because of the unplanned movement of people, the municipality's planning department has to disrupt its planning processes in regard to the allocation of human settlement services. One of the significant causes of invasions is the backlog in providing people with formalised sites. As mentioned by one of the participants, *"The more backlogs, the more informal settlements*. As funding is not readily available to keep up with demand, there will always be community unrest.

4 CHAPTER 4: RECOMMENDATIONS AND CONCLUSIONS

4.1 Discussion

The study's main research question was: What impact does urbanisation have on sustainable human settlements in Mangaung Metropolitan Municipality? Because this study is premised on systems thinking, Systems thinking, therefore, provides a framework for the findings. As such, the following anchors, which are in line with the Systems thinking, form the basis for the findings:

- The current impact of urbanisation in the World, in Africa, in South Africa, and for the case in Point, Mangaung Metropolitan Municipality,
- Likely impact if the situation is not altered in the Mangaung Metropolitan Municipality.
- Proposed Model for Urbanisation in Mangaung Metropolitan Municipality - Situation as it should be

Chapter 1 laid the basis for the study. The study investigates the impact of urbanisation on sustainable human settlements, with Mangaung Metropolitan Municipality being a case in point. This study aimed to illustrate the relationship between rapid or unplanned urbanisation and sustainable human settlements. This chapter outlined the approaches and methodologies towards attaining that, and systems thinking was the theoretical grounding for the study. The sampling method used was purposive and, therefore, selected officials with a direct impact on Mangaung's sustainable human settlements and urbanisation.

Chapter 2 provided a literature review that provides background for the study. Using the funnel approach, the chapter explains the correlation between urbanisation and sustainable human settlements, starting at the global level, into Africa, and then South Africa, with Mangaung being last in terms of the background. In this chapter, patterns and approaches to urbanisation are explained in order to lay the basis for the next chapter. At

the African level, Africa is cited as the fastest urbanising continent, with little or no resources to take care of such urbanisation, thus putting pressure on African Cities. The same also applies to the South African context. Mangaung also follows the same pattern, with people invading lands, thus forcing the metro to do in-situ planning to accommodate massive urban sprawls.

Chapter 3 is data analysis, in which the data from the study was analysed and interpreted. This chapter outlines the interconnectedness between unplanned urbanisation and sustainable human settlements. The chapter, through the findings, proves that rapid and unplanned urbanisation has a negative impact on sustainable human settlement aspects such as the Metro's service delivery elements and economic aspects.

4.1.1 Urbanisation is a global, African and South African reality

Sustainability in the context of human settlements means the provision of housing together with the services that go with it. This includes sufficient water services, waste removal, economic opportunities, and infrastructure (Du Plessis and Landman, 2002; United Nations, 2016; Camagni et al., 1998; Futurize, 2024). Cities such as Mangaung that do not make provisions for accepting migrants might find it difficult to address sustainability concerns.

Urbanisation refers to people moving from rural areas into urban areas in search of various opportunities for sustainable human settlements (Attawairi, 2017), the reasons for which, may be quite diverse. Like other studies, this study found that patterns of urbanisation in Mangaung are characterised by massive movements of people who want to live in urban areas in search of diverse opportunities (Hope, 1998; Bowmans, 2020). Metro politicisation of 'agglomeration economies', which refers to the economic benefits that arise from the concentration of industries and people in urban areas, is the main pattern of South African urbanisation (Turok, 2012). The South African government has already defined a framework for sustainable human settlements, which enshrines the constitutional right for adequate housing or sustainable human settlement opportunities.

South African framework provides spaces for government assistance to all those who can afford and those who cannot afford sufficient human settlement through various subsidy programs. As with the African context, the push factors for urbanisation are primarily economic and social in the form of adequate housing (SALGA, 2009).

More emphasis needs to be put on providing sustainable human settlements. This entails proper planning. The study found that similar to patterns of urbanisation in Africa (Güneralp et al., 2017), planning in Mangaung is unregulated and based on weak urban planning, which results, for instance, in the development of informal settlements. As with other African countries, Mangaung does not have proper policies and plans to address urbanisation.

Urbanisation by nature stretches the resources of the host town of migrants as it directly impacts the resources that may be required to provide sustainable human settlements in an area without bringing any additional resources (Turok, 2012). Effectively, as new people move into an area, the area must produce more services such as water services, health care, jobs, food, housing, and other amenities, thus putting a strain on cities' limited resources. Urbanisation poses both challenges and opportunities for development in urban areas. For Mangaung it appears there are more challenges than opportunities.

4.1.2 The Unplanned and Rapid urbanisation Risks to Mangaung Metropolitan Municipality

Rapid and unplanned urbanisation harms Mangaung's existing infrastructure as it was developed to cater for a limited number of people. The research revealed that Mangaung does not currently have sufficient infrastructure for sustainable human settlements. As Saghir and Santoro, (2018) argue, cities need more infrastructure for service delivery to be sufficiently prepared for urbanisation instead of sustainable human settlements. Rapid urbanisation without sufficient economic infrastructure, such as roads, as is the case in Mangaung, reflects, in part, on the inadequate planning by the City's urban planners.

Without sufficient economic opportunities, achieving sustainability will be difficult for Margaung. The impact on resources and the lack of payment for service delivery hampers the progress towards the ideal of sustainable human settlements. Rapid urbanisation in Margaung is not matched by growth in service delivery and economic opportunities. As urban sprawls continue to exceed the City's capacity to provide essential services to its residents is severely reduced. At the same time, the City is forced to expand bulk services beyond the edge. This has severe budgetary implications.

The study found that because Margaung cannot match its development for sustainable human settlements with sufficient services, the support networks are breached and overloaded for all services, including water and electricity. The sewer networks, for instance, become overloaded and this leads to spillages which can pose severe health hazards to residents.

Because of the unplanned movement of people, the municipality's planning department has to disrupt its planning processes regarding allocating human settlement services (in-situ planning). The key pattern of urbanisation in Margaung island invasion. One of the significant causes of invasions is the backlog in providing people with formalised sites.

The slow planning processes also lead to slowness in the implementation of plans relating to sustainable human settlements. In addition, funding is not readily available to meet that demand, so community unrest will always exist.

Drawing on the findings above, the schematic representation below depicts the situation due to unmanaged urbanisation (see Figure 2 below).

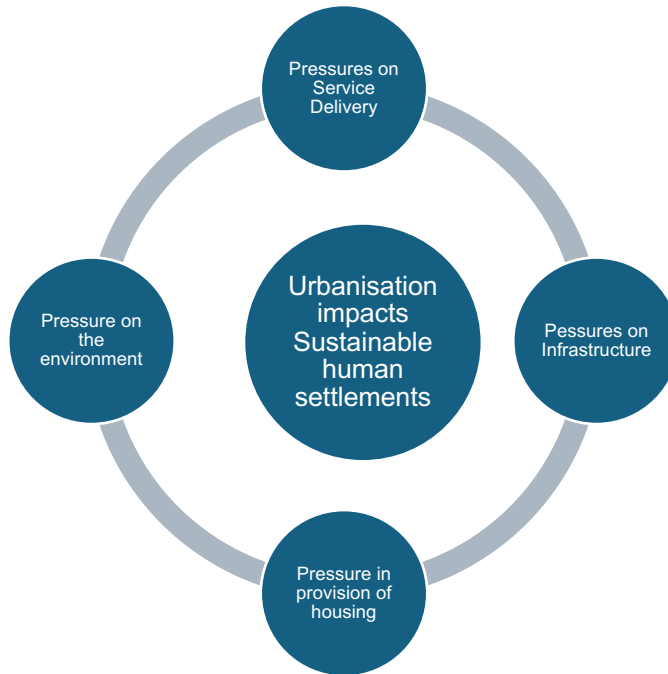


Figure 2: Situation As is on Urbanisation and Sustainable Human Settlements

From the empirical findings, it became apparent that urbanisation impacts the capacity of the municipality to deliver services to its residents as urbanisation brings additional burdens to service delivery infrastructure. Critically, unmanaged urbanisation puts unexpected strains on Margaung's infrastructure for service delivery and economic infrastructure. As reflected in the findings, urban sprawl is going beyond the city's capacity in terms of service provision, thus forcing the city to expand bulk and provide other services. Because of resource constraints and the inability to adequately plan for urbanisation, Margaung Metropolitan Municipality needs more capacity to meet the challenges of urbanisation.

Unmanaged urbanisation holds long-term risk for Margaung

The paragraph below depicts the chaos if left unchanged (see Figure 3 below).

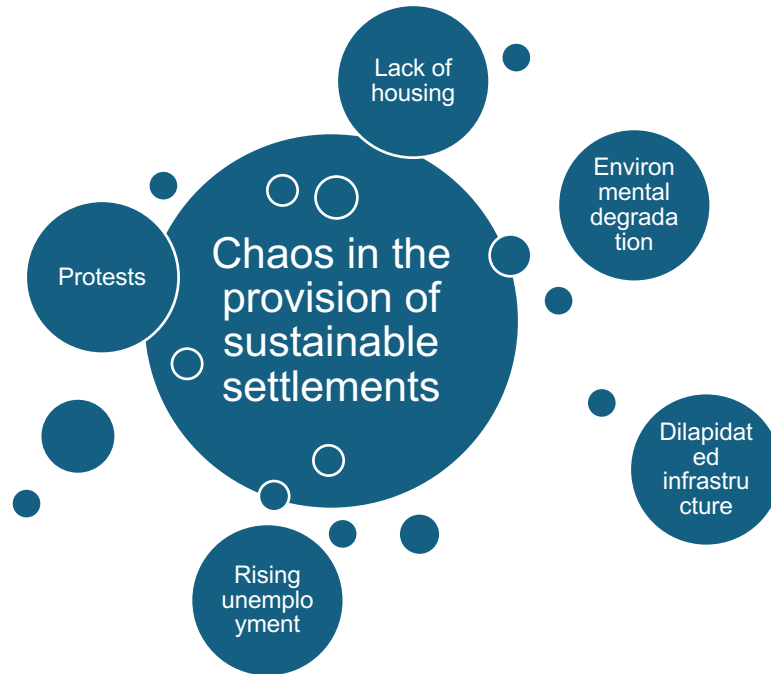


Figure 3: Situation As it Will be if No effort is taken to alter it

From the respondents' perspective, if not appropriately managed, urbanisation can worsen unemployment as many move into Mangaung hoping for employment but with few prospects. The above means that many people, as they migrate, come into situations of job scarcity, and as one respondent reflected, this can lead to lots of non-formalised jobs.

The number of households increases in Mangaung, especially in informal settlements, and this can lead to environmental impacts, especially if there are insufficient waste collection services or sanitation and water services. The other adverse effects of unmanaged urbanisation in Mangaung are the possible pollution of water resources and the burning of trees and waste due to inconsistent waste collection.

The study has shown that land invasion has the most significant impact on Mangaung, which is the invasion of land. The above is also supported by Hendler (2024), who states that local governments and municipal administrations perceive land invasions to threaten orderly development. This view is also supported by Scasa (2014), as quoted by Mthiyane

(2017), who reflects that land invasion complicates the government's carefully thought-out home provision strategies, and this, according to Mthiyane (2017), has serious financial repercussions, including taking funds away from other projects because unforeseen circumstances necessitate prompt action. 2017). Suppose the Metropolitan Municipality, as shown in the paragraphs above, needs to provide for the needs of those moving into urban centres. In that case, people will demand water and jobs.

One of this study's key findings is that if not managed, urbanisation can lead to civil unrest, with people jockeying for houses, jobs, and services. Unplanned urbanisation can lead people towards civil unrest in search of services and housing.

4.2 Recommendations

The Systems Thinking model cited by Alliance (2024) and Arnold and Wade (2015) depicts a system as a collection of different components which are interconnected, interactive and interdependent. Based on that model and the findings above, the model below depicts the systems thinking approach to resolving the situation of urbanisation in the Mangaung Metropolitan Municipality. At the centre of the model is the following considerations:

- The municipality must understand the urbanisation patterns in its area of operation. This will help develop the Integrated Development Plan and other sectoral plans with respect to urbanisation and sustainable human settlements.
- The municipality must plan for urbanisation by collaborating with various stakeholders. The plan will include sectoral plans, consisting of plans for sustainable human settlements.
- The municipality must allocate resources to address urbanisation. These resources will be drawn from various stakeholders, internally and externally.

The model below depicts the desired situation for Mangaung.

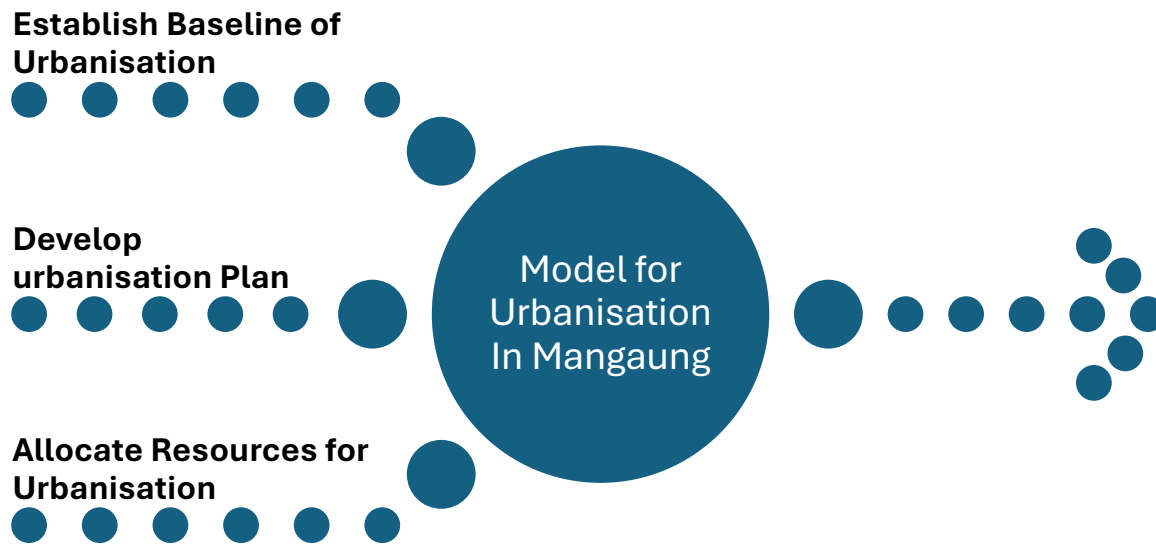


Figure 4: Ideal Situation for Mangaung Metropolitan Municipality

The recommendations for this study, in line with the depiction above, are as follows: Mangaung Metropolitan Municipality must understand the Cities' obligation to plan to provide access to integrated sustainable human settlements. This should be established with the citizens' formal and informal needs in mind. The plans should not only address housing needs but also sustainable human settlements. The urbanisation plan, which must address integrated sustainable human settlements, is a critical plan that must include all the City's plans, including spatial development aspects thereof.

The City must mobilise resources to address its urbanisation needs. Urbanisation must be a well thought out and well-resourced plan.

The interconnectedness of the above interdependent components will lead to a system of sustainable human settlements in Mangaung Metropolitan Municipality amidst the challenges of urbanisation.

4.3 Conclusion

This study investigated the challenges urbanisation poses for sustainable human settlement provisions, with Mangaung Metropolitan Municipality being a case in point. Like other urban areas, it has been shown in this study that the challenges are almost similar. This study analysed urbanisation in South Africa, Africa, and ultimately, Mangaung. Though the obstacles may sometimes be different, it becomes apparent that some common problems characterise urbanisation in mainly the developing metropolitan municipalities.

The study was premised on systems thinking and was also based on qualitative methodologies. It becomes apparent that if Mangaung does not generally improve its capacity to deal with services, it will be overwhelmed by urbanisation, which will broadly impact sustainable human settlements. The study emphasised planning for sustainable human settlements to avoid the chaos caused by unplanned urbanisation. Therefore, a model was also developed to respond to the challenges and give predictability to urbanisation in Mangaung instead of sustainable human settlements.

4.4 Proposed Future Research

In Mangaung, authorities are on a quest to ensure that sustainable human settlements will amalgamate the seven towns constituting the Metropolitan municipality in the future. This study, however, showed that the main focus of most of the residents, even within the metro, is to move into Bloemfontein. Further research is needed to determine what it will take for equal development to be realized across all towns, i.e., What developments can the metro bring to balance its internal migration and ensure sustainability in its human settlements approach?

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Appendices

Appendix

1



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

31-Oct-2022

Dear Mrs Vuyiswa Malaku

Application Approved

Research Project Title:

Challenges posed by urbanization for sustainable human settlements provisions: A case of Mangaung Metropolitan Municipality

Ethical Clearance number:

UFS-HSD2022/1324/22

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis

Chairperson: General/Human Research Ethics Committee

Adri
Du
Plessis

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by Adri Du
Plessis
Date:
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Appendix 2

Interview Schedule

Challenges posed by urbanisation for sustainable human settlements provisions: a case of Mangaung Metropolitan Municipality

Interview Schedule

1. Can you explain the historical (pre-1990s) patterns of urbanisation in Mangaung?
2. What patterns of urbanisation have developed over the last 30 years? What drives these patterns? Who are these migrants? Why do they migrate?
3. How did the municipality respond? What did they do?
4. What did they do that worked or did not work well?
5. What did they do that had adverse effects?
6. Can you describe the current impact of urbanisation in Mangaung on your departmental operations/ward?
7. Does the metro have an urbanisation plan? If yes, what does it entail?
8. What are the contributions of migrants in the city, positive and negative, to your section?
9. To your knowledge, are there plans to improve services in a growing city?
10. What will be the impact if the city's services are not sufficiently responsive to the demands of urbanisation or a growing city population?
11. What will the environmental impact of rapid urbanisation be on the metro?
12. What further improvements will you suggest for the city if it is to respond to the challenges posed by urbanisation?
13. Will there be any demand for additional resources to enable the metro to respond to the challenges of urbanisation, elaborate?

Thanks for your participation in this study

Appendix 3

Authorisation Letter

WHO IS DOING THE RESEARCH?

The researcher is Vuyiswa Catharine Malaku, student at the University of the Free State and a worker at the Department of Public Works and infrastructure. There is no relationship between my work and this project.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

The study has not yet received ethical approval. This authorization letter is part of that process.

Approval number: Not applicable

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

Below is the list of identified officials and how they will impact on the study.

Considered Officials	Role in the Study
Water and Sanitation	Impact of urbanisation on water provision
Roads Infrastructure	Impact of Urbanisation on Road infrastructure
Waste Management	Impact of Urbanisation on Urban Waste
Human Settlements	Impact of Urbanisation on Housing provision
Economic Development	Impact of Urbanisation on economic development
Development Planning	Impact of Urbanisation on Planning an development
Integrated Development Planning	Impact of urbanisation on integrated planning

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

As reflected in the paragraphs above, these are expert and role players in the field affected by sustainable human settlements, they will directly respond to the impact that urbanisation is bringing to Mangaung Metropolitan Municipality, with specific reference to their field of work.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

By sharing the knowledge, the respondents will help enrich the body of knowledge in relation to sustainable human settlements provision of the city.

WHAT IS THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

No potential risks identified for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Yes



HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of the answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No payment or incentive will be provided for participation in this study.

HOW WILL THE INSTITUTION BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please get in touch with Vuyiswa Malaku on 072 290 4049 or malakuvuyiswa@gmail.com

Yours sincerely

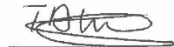


Vuyiswa Catharine Malaku

24 August 2022

Official Municipal Stamp

Approved/~~Not approved~~



City Manager:

Date: 02/09/2022



Appendix 4

Consent Form



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

Dear Respondent

As per my preliminary discussions with yourself, you are kindly requested to give consent on this form to affirm your participation in this study, in line with the provisions of POPI act 2021 which protects personal information. The questions below are drafted in line with the Act and therefore you are requested to fill in information as listed below.

DATE

August – September 2022

TITLE OF THE RESEARCH PROJECT

Challenges Posed by Urbanisation for Sustainable Human Settlements Provisions: A Case of Mangaung Metropolitan Municipality.

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Vuyiswa Catharine Malaku 2002153076 0722904049

FACULTY AND DEPARTMENT:

*Name of Faculty: Economic and Management Sciences
Centre For Development Support*

STUDY LEADER(S) NAME AND CONTACT NUMBER:

*Mr J. Cloete
051 401 3599*

WHAT IS THE AIM / PURPOSE OF THE STUDY?

To assess the impact of urbanisation on Mangaung Metropolitan Municipality's capacity to provide sustainable human settlements in its area of jurisdiction. This is an academic study aimed at assessing what impact does both internal (South African) and external (Foreign) migrants have as they move into South African urban areas mainly on service delivery efforts of Mangaung Metro. The preliminary assessment is that they can have both positive and negative impact on the broader sustainable human settlements. As a respondent you will be expected to give veracity to these questions in the form of responding to intensive interview questions.

WHO IS DOING THE RESEARCH?

The researcher is Vuyiswa Catharine Malaku, student at the University of the Free State and a worker at the Department of Public Works and infrastructure. There is no relationship between my work and this project.



HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received approval from the General Human Research Ethics Committee of the UFS. A copy of the approval letter can be obtained from the researcher.

Approval number: 0000- 0002 – 1698 - 5874

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT? AND WHAT IS THE NATURE OF PARTICIPATION IN THE STUDY

As an expert and role player in the field affected by sustainable human settlements, you have valuable insight into the impact of urbanisation on Mangaung Metropolitan Municipality, with specific reference to your field of work. Your position means that you have insights valuable to the research. The study is qualitative; therefore, you will respond to interview questions. The interviews are projected to last no longer than an hour (60 min).

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Kindly take note that participation is voluntary. There is no penalty or loss for non-participation. You can stop the interview at any time without providing any reason.

POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

As an expert and role player in the field affected by sustainable human settlements, you will directly respond to the impact that urbanisation is bringing to Mangaung Metropolitan Municipality, with specific reference to your field of work.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

No risks are anticipated. The only inconvenience would be the time set aside.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Your name will not be recorded anywhere, and no one will be able to connect you to the answers you give. Your responses will be given a fictitious code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Only the duly authorised staff and academics at UFS, in line with the provisions of the ethics committee, will have access to the information and sign a confidentiality clause. Your answers may be reviewed by people responsible for ensuring that research is done correctly, including the, research supervisor transcriber, external coder, and General Human Research Ethics Committee members. Otherwise, records that identify you will be available only to people working on the study unless you permit others to see the documents. Your anonymous data may be used for other purposes, e.g. research reports, journal articles, conference presentations, etc.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store electronic information on a password-protected computer. Future use of the stored data will be subject to further research ethics review and approval if applicable. Any

information about you will be separated from your answers and will be destroyed after the project is completed.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No payment or incentive will be provided for participation in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please get in touch with Vuyiswa Malaku on 072 290 4049 or malakuvuyiswa@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned,

_____ (participant's full names to be included), (the "Participant")

Confirm that I voluntarily agree to participate in the research study referred to as the

Challenges Posed by Urbanisation for Sustainable Human Settlements Provisions: A Case of Mangaung Metropolitan Municipality.

And which study is being conducted by

Vuyiswa Malaku (the "Researcher").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the study;
2. I have read (or had explained to me) and understood the study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the study;
4. I understand that my participation in the study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and deidentified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): Vuyiswa Malaku

Signature of Researcher: _____ Date: 07- 07 - 2022