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AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE RURAL-URBAN LINKAGES – A CASE STUDY OF ESWATINI

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Abstract

Eswatini has for the longest of time been predominantly rural and people depended on subsistence farming for their livelihood. The increased rate of urbanisation can be viewed as a disruption to the rural lives of the people. Urbanisation has given birth to new cultures where people, especially those living in the peri-urban areas are now selling land meant for other uses such as farming and grazing. This is done without due consideration for the protection of crop fields, animal grazing land and water sources.

The study seeks to establish an effective pathway to facilitating sustainable urban growth in eSwatini through the strengthening of rural-urban linkages in the country. In achieving the foregoing, firstly, one had to identify theory or literature on similar studies done elsewhere where the loss of rural/farmland because of indiscriminate urbanisation, its impact on people's livelihood and how such challenges are being addressed with emphasis on Sub-Saharan Africa. The theory was put into context by reviewing what is being done by the Eswatini Government to ensure the sustainability of the relationship between urban growth and rural/farmland activities which is meant to provide food security to urban land while reciprocal services are provided to rural/farmland.

The literature review revealed that indeed, the negative effects of urban growth are not isolated only to Eswatini, but it does appear that other countries such as the USA and China did experience similar challenges during their early development stages. It was further discovered that urbanisation and agricultural land uses are always in competition with each other as they both thrive in similar land parcels in terms of terrain, and proximity to resources such as water. It is unfortunate for rural/farmland that it always loses against urbanisation in the absence of regulation. It is in that vein that the developed world has already put in place policies to guarantee a sustainable relationship between urban and rural linkages to manage the negative effects of urban growth. This has contributed greatly to ensuring food security and sustainable development.

The research method employed is qualitative using non-probability sampling method and the research philosophy chosen is "Interpretivism" with the research approach being "Inductive Approach". The research strategy is a single case study. Semi-structured interviews were undertaken with twelve of stakeholders involved in public

service dealing with land issues The interview data was analysed using thematic analysis.

The study concluded that Eswatini, currently has no policies governing the different uses of land in the country due to lack of political will where highly fertile land parcels are lost due to the destructive nature of urbanisation.

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List of Abbreviations

AfDB	African Development Bank
BADEA	Arab Bank for Economic Development in Africa
CAHF	Centre for Affordable Housing in Africa
CAS	Centre d'Analyse Strate´gique
COMESA	Common Market for Eastern and Southern Africa
CONCO	Carbonated Drinks Concentrates
EIB	European Investment Bank
ELVCDP	Eswatini Livestock Value Chain Development Programme
ESWADE	eSwatini Water and Development Enterprise
EU DG	European Union Director General
FAO	Food Agricultural Organisation
FCs	Farmer Companies
GEF	Global Environment Facility
GDP	Gross Domestic Product
HVCHP	High Value Crop and Horticulture Project
IFAD	International Fund for Agricultural Development
KDDP	Komati Downstream Development Program
LUSIP	Lower Usuthu Smallholder Irrigation Project
MCS	Main Canal South
MDGs	Millenium Development Goals
NAMBOARD	National Agricultural Marketing Board
PTL	Private Tenure Land
PWS	Potable Water Schemes
OACPS	Organisation of African, Caribbean and Pacific States
OECD	Organisation for Economic Co-operation and Development
SACU	Southern African Customs Union
SADC	Southern African Development Community
SDG	Sustainable Development Goals
SME	Small and Medium Enterprises
SNHB	Swaziland National Housing Board
SNL	Swazi Nation Land

TDL	Title Deed Land
Rio+20	The United Nations Conference on Sustainable Development (UNCSD), also known as Rio 2012
UN-SDG	United Nations Sustainable Development Goals
USA	United States of America
WCED	World Commission on Environment and Development

CHAPTER 1:

1 INTRODUCTION

1.1 Introduction and background

Population growth and general migration of rural dwellers is one contributing factor towards urban explosion. Urban and peri-urban areas are generally more densely populated than farms / rural areas or areas further away from urban areas. Urban areas as defined by Torres-Lima, Pinel and Conway-Gómez (2019), is an area where more than 5 people live within a square kilometre coverage. The study will investigate the impact of urban growth and other land uses on food production and poverty in Eswatini, and how policy can balance the three such that they are able to co-exist and complement each other. Currently, property investors and property developers are taking advantage of every available opportunity to secure land for the provision of new developments. They are even willing to get land at a cost to the natural environment (that is, developing manufacturing industries that are destructive to the environment) by converting good agricultural land into built-up/usable/ developed space (which can be commercial, residential, industrial or other) including all support services and infrastructure (Mylott, 2009).

1.2 Urbanisation

Urbanisation responds to the social, economic, and special needs of population growth in the city. This population growth is seen as rural population migrating to the cities in search of economic opportunities. While addressing the economic opportunities, there arises the social needs and other special needs as may be required to be fulfilled by the local authority. (OECD, 2008a; Yonglong, 2015).

According to the OECD Environmental Outlook 2008, urbanisation increase the density of people and their related activities efficiently and thus promoting economies of scale and sustainable provision of services. This further limit the cost of infrastructure per capita while minimising negative effects of consumption and production on the environment and human health (OECD, 2008a).

On the contrary, concentration of a population density brings with it some challenges mainly those that are destructive to the environment such as such as waste, air

pollution and traffic congestion. The world has become more aware of environmental issues caused by unregulated human activities. Regulations are being put in place to manage the impact of destructive actions to the environment (Daramola & Ibem, 2010). Regulations enable countries or cities to promote improved air quality, clean water supplies, improved and more efficient transport systems as well as improved sanitation systems. Urbanisation challenges are not only environmental, but there are social issues which include but are not limited to health and well-being and economic. The rate of urbanisation has a direct bearing on the environmental, economic, and social challenges within countries and the world at large. The quality of life for urban dwellers is influenced by how environmental problems are managed which informs the sustainability of the urbanisation process (Yonglong, Lu et al., 2015).

Figure 1-1 below shows world population growth over the 20th century. Urban population the world over grew four-fold from 1950 to 2005 to 3.2billion residents. Compared with the world population, urban population grew at a much higher rate experiencing an annual growth of 2.7% on the same period against an annual average growth of 1.7% for world population (United Nation, 2006).

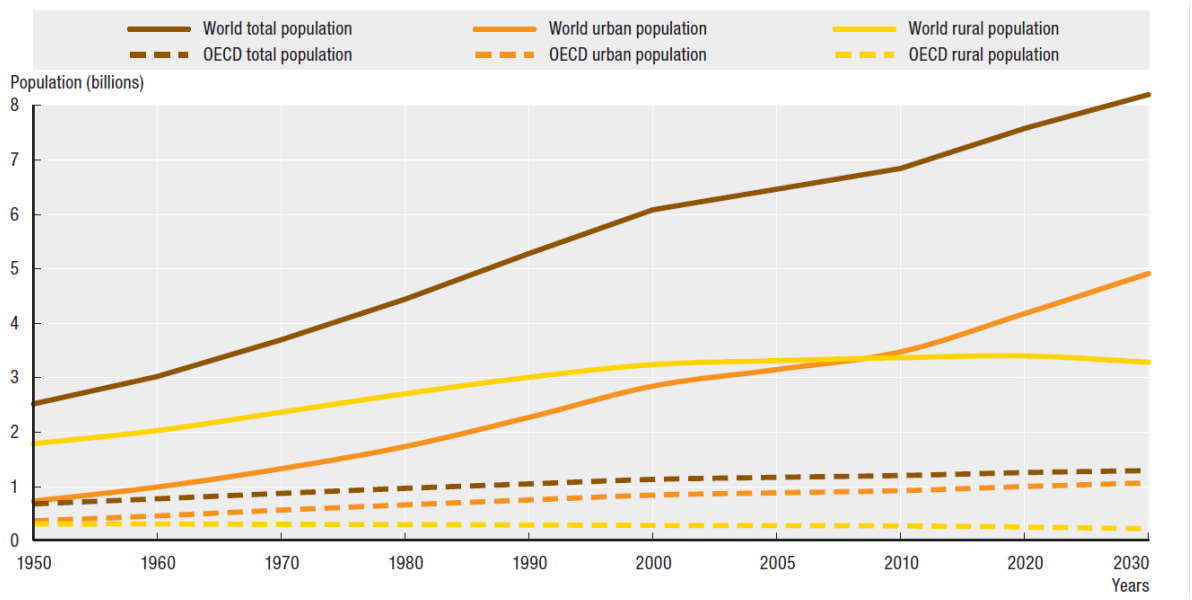


Figure 1-1 World Population - total, urban and rural, 1950 – 2030. *(UN-HSP, 2006)*.

Table 1-1 below shows that the world population growth experienced in the 20th century will continue up to 2030, where higher growth is expected for urban areas. During this period, it is anticipated that World urban population will grow by 1.8 billion between 2005 and 2030 as opposed to 1.7 billion for the whole world. The nett growth for total population will be lower than that of urban population due to the continued migration of rural population to urban area.

Table 1-1 World and urban populations, 1950 - 2030. Source: *(UN-HSP, 2006)*

Population (billions)						Average annual rate of change (%)	
County Groups	**1950**	**1975**	**2000**	**2005**	**2030**	**1950-2005**	**2005-2030**
Total Population							
World	**2.52**	**4.07**	**6.09**	**6.46**	**8.20**	**1.73**	**0.96**
OECD	**0.68**	**0.92**	**1.14**	**1.17**	**1.30**	**0.99**	**0.40**
BRIC	**1.07**	**1.79**	**2.61**	**2.75**	**3.26**	**1.73**	**0.68**
The ROW	**0.77**	**1.36**	**2.34**	**2.54**	**3.64**	**2.20**	**1.45**
Urban Population							
World	**0.73**	**1.52**	**2.84**	**3.15**	**4.91**	**2.69**	**1.79**
OECD	**0.37**	**0.62**	**0.84**	**0.88**	**1.07**	**1.59**	**0.75**
BRIC	**0.20**	**0.45**	**0.99**	**1.11**	**1.77**	**3.18**	**1.89**
The ROW	**0.16**	**0.45**	**1.01**	**1.16**	**2.07**	**2.84**	**2.37**

NB: BRIC contains Brazil, Russian Federation, India and China and the ROW (Rest of the World) indicates all other countries except for OECD and BRIC countries. *Source: (UN-HSP, 2006)*

Policy

Policy responds to the impact caused by population growth especially in urban areas. Urban areas normally take a long-term view in implementing an integrated plan for the anticipated requirements of the urban population in terms of sustainable growth

policy, environmental policies, infrastructure planning, improved governance while ensuring the harmonisation of the policies towards efficient running of the city (Afionis, Mkwambisi & Dallimer, 2020; Nilsson et al., 2012). Further to the forgoing, the policies should encourage sustainable practices to developers while ensuring that urban growth does not impact negatively on the rural areas including those in the peri-urban (OECD, 2008b).

1.3 The Origination of the Sustainable Development Goals and the Importance Sustainability

An idea that was born in 2002 at the Rio de Janeiro UN Conference, the Sustainable Development Goals were revitalised in 2015 in preparation for the Agenda 2030 Conference. The SDGs were initially called Millennium Development Goals in 2002 when they were coined. Key among the reasons for creating these goals was to encourage environmental protection or encourage sustainable development and economic practices. Appendix E outlines the 17 SDGs as originally coined through the Rio+20 Conference (Yonglong, Lu et al., 2015).

This research seeks establish an effective pathway to facilitating sustainable urban growth in eSwatini through the strengthening of rural-urban linkages in the country. A comment by Sachs (2013) notes that the Millennium Development Goals (MDGs) ran from 2000 to 2015. The Sustainable Development Goals (SDGs) started from 2016 and is expected to run until 2030. It can also be observed that SDG 1 to 16 all work together to achieve sustainability, that is, non-destructive interrelationship between the human beings and their habitat, while SDG 17 outlines the implementation plan for all the SDGs (Yonglong, 2015).

The SDGs encourage changed behaviours towards the environment. A closer examination into the SDGs in tandem with the rural-urban linkages or rural-urban interdependence reveal that they need to have a harmonious relationship to be sustainable (Vidal, Barros & Maia, 2020). This can be achieved through the enactment of relevant policies to manage urban growth given the location and existing productivity of the land earmarked for urban expansion (Yonglong, Lu et al., 2015).

The policy issue is briefly dealt with in section 1.4.4 of this chapter. Policy is dealt with in more detail in chapter 2.

1.4 Sustainability, the UN-SDGs and the African Cities

1.4.1 State of African Cities

High levels of poverty are inevitable in cities experiencing zero or negative growth economic growth while rapidly urbanising. Increased poverty levels in turn give rise to growth of urban slum. Africa coincidentally is currently the fastest urbanising region. Studies have shown that rapid urbanisation has coincided with rapid economic growth, of which, in Africa is not the case (Cobbinah, 2021; Greif, Dodoo & Jayaraman, 2011). In Africa, rapid urbanisation has given rise to the growth of impoverished slum settlements. Despite population and spatial growth, poor planning, rapid urbanisation and deteriorating infrastructure and service has remained a challenge among many cities (Cobbinah, 2021; Greif, Dodoo & Jayaraman, 2011; MacPherson, 2013).

Sub-Saharan Africa is growing at an average of 4.5% making it the fastest urbanising in the world (Obeng-Odoom, 2013; Toh, 2016). Further to the forgoing, it has been estimated that small and medium cities experience a growth rate well over 75%, traffic growth rate between 15 and 20% which is as a result of a one sided infrastructure growth by building roads while ignoring complementary transport systems such as railways and bus networks (Oldenziel, 2020; Sietchiping, Permezel & Ngomsi, 2012).

Since 2001, UN Habitat has published the State of World Cities Report to explore, analyse, and assess cities globally as a way of improving life in a world that is increasingly becoming urban (Obeng-Odoom, 2013:1). The state of African Cities report written in 2008, was set up as a medium to deliberate extensively on African urban issues especially those of sustainable Human Settlements Development as well as provision of baseline data on the level of urbanisation in Africa (Obeng-Odoom, 2013; OECD, 2008a; Parnell & Pieterse, 2010; Pieterse, Parnell & Haysom, 2018).

1.4.2 Food Security

Ngcamu (2022) observes that the lack of policy, capacity and support from government is the primary cause of food insecurity in Africa. These further cements that excessive increase in population is not the cause of challenges in food security but incompetency and lack of planning is the problem. The suggested solutions to the problem are policies to deal with food security, as well as participatory and strategic land-use planning (Aerni, 2016).

1.4.3 Urban Sprawl

Urban sprawl leads to inefficient and costly patterns of urbanisation. Sprawl is defined as lack of continuity in expansion resulting in the urbanising area with spots of intermediate islands of undeveloped land surrounded by developed subdivisions. Low density urban development also results in increased costs of providing services and infrastructure to the public (Amarawickrama, Singhapathirana & Rajapaksha, 2015; Kassa, 2013). Sprawl and conurbation have been used interchangeably to mean continuous network of communities such that there would be no definitive demarcation between two or more cities (Kassa, 2013).

The term sprawl was coined in 1937 by Earle Draper, one of the first planners in South-Eastern USA (United States of America) (Nechyba & Walsh, 2004:177). Urban sprawl is characterised by lower densities as the footprint of the city expand. Inefficiencies resulting from urban sprawl, which include: 1. Unproductive congestion on roads; 2. High levels of car pollution; 3. Loss of open space amenities; 4. Unequal provision of public good services across sprawling suburbs that give rise to residential segregation and pockets of poverty; and, 5. Consumption of farmland (Dieleman & Wegener, 2004; Nechyba & Walsh, 2004:178).

Urban sprawl is because of market failures that upset the allocation of land resources between urban and agricultural uses. These failures include being passive about the economic/community gains from open spaces, as well as failing to ensure that new development pay for supporting infrastructure. Corrective measures for these failures

include the introduction of controls such as levies and taxes (Brueckner, 2000; Brueckner, Mills & Kremer, 2001).

Urban land growth on the other hand discourages or disincentivise urban land redevelopment within close proximity to the Central Business District which results in urban decay. Low density on the other hand especially in the suburbs breaks the bond that forms the base of a healthy society. Brueckner (2000) notes that the United States governments have put in place controls to manage urban expansion. One example of such restrictive policy is that of Tennessee's 1998 anti-sprawl ordinance which forces cities to restrict boundary expansion which dangles a carrot of infrastructure funding if adhered to. requires cities to impose growth boundaries or risk losing state infrastructure funding. This ordinance is similar to that of the state of Oregon (Brueckner, 2000).

1.4.4 Policy issues

To combat urban sprawl, Africa is lagging extremely behind as opposed to most cities in Europe and the America where policies have been developed to encourage mixed use urban land use at one location. Mixed-use precincts are high density urban centres with well-developed infrastructure for ease of accessibility. Urban sprawl is an unsustainable urbanization of an area. Literature has confirmed that cities that have developed policies have encouraged controlled urban densification and have successfully managed sprawl. (Dieleman & Wegener, 2004). These policies focus mainly on discouraging vehicle use to minimise traffic congestion by introducing taxes / levies, development of proper or functional public transport system, and finally encouraging high density multifunctional land use. Dieleman & Wegener (2004) further notes that Sprawl is because of low population density, single use and the strip and leapfrog development.

Anti-Sprawl Policies

Discouraging sprawl and densifying cities leads to community restoration, urban redevelopment, improved access to housing, cost of living affordability, sustainable urban growth and improved environmental and healthy living. Growth of cities would

further follow a defined growth pattern as defined in the spatial planning policies. (Brueckner, 2000; OECD, 2008a).

1.5 Rural-urban linkages

Studies conducted by the International Food and Agricultural Development (IFAD) show that agriculture is continuously suffering loss of land more than 10 million hectares annually due to urban development and growth. The World Bank estimates that the world population is anticipated to grow by 40% by year 2050. This therefore calls for more investment in to guarantee food security for the added demand. The urban population growth creates new demand for agricultural supplies while conversions from arable land are made to meet the demand from urbanisation. This therefore creates the dilemma which needs to be addressed, that is, putting policies in place to manage land conversions. In addressing the factors that need to be considered, the following points have to be investigated and are discussed below.

1.5.1 Urban – Rural Interdependence

Urban and rural land uses are progressively dependent on each other hence both cannot exist in isolation. While people are migrating from rural to urban for greener pastures, the urban landscape is continuously responding to the needs of the new communities. As affordability becomes a challenge due to affordability, communities respond by moving further out of formal urban settlement to the peri-urban precinct where another problem will be created. This new problem would be addressed through formalising the settlement by providing services and infrastructure thus in turn expand the urban boundary (Herbers, 1986).

The uncontrolled developments in the peri-urban precinct results in lifestyle clashes as probably the substantive land use would be agricultural production. This creates unnecessary competition as non-farmland-use has a much higher return than current use, that is, farming. This would further create tensions between farmers and non-farmers. Environmentalists and farmland preservationists fight against suburban and peri-urban expansion, and at times against each other. "*The concept and the territory these terms connote, comprise dynamic and complex land use issues that involve*

more than rural to urban land conversion and conflicts between developers, environmentalists and farmland preservationists" (Mylott, 2009:1-2). Mylott (2009) further notes that policies that manages the connections between urban and rural land us still lags as available policies focus solely on either urban land use or rural land use. Public policies can help support economic growth while protecting natural and agricultural land uses (Mylott, 2009).

There is evidence of interdependence between rural and urban areas where rural areas provide agricultural supplies and labour while urban areas provide financial, government and other services to rural. Further to the foregoing, infrastructure projects are provided to rural areas through urban as well as provision of educational facilities, shopping, etc. Agricultural incomes are lower as compared to urban incomes hence the rural-urban migration. This is primarily of great benefit and importance for poverty alleviation through the provision of better employment opportunities in the cities (Tacoli, 1998).

Rural-Urban populations depend on formalised and strong relations of rural-urban linkages for sustainable living conditions (poverty alleviation) and employment opportunities. These linkages encourage trade and other mutually beneficial rural-urban relationships between rural and urban areas (Tacoli, 1998; Tacoli, 2003). Tacoli (1998) recognises that development policy is responding very slowly towards addressing the complex connections between urban and rural areas. The balancing act brought by the policies to minimise rural to urban migration has been hijacked by international investors where they take advantage of the opportunities availed through the policies but unfortunately not serve the intended purpose at the end. Policy makers intended such investments for poverty alleviation through domestic investments which is not the case. These policies have thus failed the people they were created to help (Mylott, 2009).

Urban food security demands an increase in food production in the rural. Urban food insecurity is as a result of inefficient or low production output by the rural (Crush & Riley, 2018). The increase in demand give rise to increase in agricultural product pricing. The

rising agricultural product prices attract financial investors and speculators. Post 2008 financial crisis, financial players identified investments in land as a new source of profit. They see land as 'strategic asset' from which they anticipate a high return on investment through value addition to land through food and fuel crop cultivation (Fields, 2018; Gerstter, KaphengstT & Timeus, 2011).

1.5.2 Urban Densification and Farmland Degradation

As human populations grow, there are competing land uses which provide support to the population growth. In fact, urbanisation, that is, conversion of farmland to urban use and its support services such as infrastructure and social facilities is one of the major contributors to the reduction of agricultural land that would have been used for sustainable population growth (DeFries, Foley & Asner, 2004). Urbanisation is a result of rural population migrating to urban area which in most cases in search of employment opportunities. Once a job is secured, a demand for residential accommodation is created. Supplementary demand would accompany the space demand. This includes retail facilities including services (government, postal, banking, etc) (Tacoli, McGranahan & Satterthwaite, 2015). The foregoing, all combined require the conversion of land from its current use which most probably will be a farm or rural land. The effect of this conversion would result in a decrease in rural or farmland. If it is a conversion of rural land, then that would be a displacement of the current dwellers who are dependent on the land for their livelihood (Song & Liu, 2017).

1.5.3 Poor Planning – Cause for uncontrolled Growth

The uncontrolled expansion of urban areas, which is often referred to as sprawl, has been researched extensively. Although poor planning bears much of the blame for sprawl, it has been observed though that sprawl cannot be avoided as a by-product of population growth. Ewing (1993) defines sprawl as development patterns characterised by poor accessibility of related land uses to one another. Sprawl removes seamless cohesion and efficiency between land pockets that could have otherwise been highly efficient based on density, resulting in inefficient provision of infrastructure and services due to low population densities. Sprawl has also been shown to negatively impact farmland (Mylott, 2009).

1.6 Rationale for the research

Extensive research is being done to investigate land tenure systems in Africa, Land Redistribution and Policy especially in conjunction with the European Union and the United Nations. The urban areas provide the market required for agricultural produce. On the other hand, although population density is a necessity, urbanisation competes with agricultural production for the available land urbanisationitthrough the infrastructure needed by the people such as homes, roads, and business facilities (Conway-Gómez, 2010).

Urban sprawl, as the process is called, is characterising peri-urban land indiscriminately. Although there is no available literature surrounding urban growth in Eswatini, a general observation is that urbanisation mainly follows two forms, that is either, residential or commercial developments and rarely industrial. Recently approved township schemes incorporated in themselves both residential and commercial components. As evidenced by the rate at which such developments happen, property development is a more attractive investment as opposed investment in agriculture. In Eswatini, there seems to be no tool to regulate the management of land use. The land use conversions that have been happening in recent years where township developments are happening in land where farming has been happening previously. All developments that have been done are being executed on fertile agricultural (Dlamini-GIBB, 2021; Eswatini Ministry of Agriculture, 2018).

1.7 Research problem statement and research objectives

1.7.1 Problem Statement:

The importance of rural-Urban linkages in promoting sustainable urban expansion in eSwatini is understudied, particularly in terms of land management techniques. This misunderstanding has resulted in uncoordinated land allocations in peri-urban rural settlements, impeding organised and sustainable urban development. Investigating the dynamics of these linkages is crucial for dealing with the spatial and governance difficulties that come with peri-urban growth.

1.7.2 Research Aim:

The aim of the research is to establish an effective pathway to facilitating sustainable urban growth in eSwatini through the strengthening of rural-urban linkages in the country.

1.7.3 Research Question:

How can rural-urban linkages be strengthened to engender sustainable urban growth in eSwatini?

1.7.4 Research objectives

The research objectives are as follows:

a) Determine how the current state of rural-urban linkages in eSwatini has impacted on the sustainable urban growth and value creation especially as it pertains to agriculture.
b) Identify the factors contributing to the current state of rural-urban linkages for sustained urban growth.
c) Establish the actions required to foster sustainable growth through optimal levels of rural-urban linkage in eSwatini

1.8 Research methodology

The research methodology for this study was a case study methodology and the approach used was qualitative. The data collection methods were semi-structured interviews and photographic imagery such as google earth timeline. Thematic analysis was used to analyse the data collected. Key stakeholders in the interviews were government officials (Ministry of Natural Resources, Ministry of Housing and Urban Development, Ministry of Agriculture, eSwatini National Housing Board, etc), municipalities (Mbabane, Ezulwini, Malkerns, Matsapha & Manzini Conurbation).

1.9 Importance of the research

The research is important for policy makers in the Eswatini Government Ministry of Agriculture, Ministry of Housing and Urban Development and the Municipalities, City Councils and Town Boards in Eswatini as well as the Land Management Board under the Ministry of Natural Resources as it is a key stakeholder in land apportionment in the country.

1.10 Limitations, delimitations, and assumptions of the study

The limitations of the study were the non-responsiveness of most government officers or rather those officers not willing to share information. The study was restricted to the Local Authorities within eSwatini, Ministry of Agriculture, the Ministry of Housing and Urban Development and the Land Management Board. A comparison with previous studies in other cities around the world to confirm the possibility of improving the status quo.

1.11 Dissertation outline

Chapter one introduces the study and briefly discusses the background to the study, identifies the research problem, research question, research objectives and the research methodology.

Chapter two documents a review of the available literature for the study by first discussing the current theories followed by the description of the context and the current work in the field followed by the identification of gaps in the study area and finally draws conclusions on the chapter.

The next chapter, Chapter 3 is the Methodology Chapter where the research strategy is discussed, followed by the research methodology chosen and finally the research instrument is described in detail as well as the data collection process.

Chapter 4 presents the results, that is, data gathered and analysis by first discussing the data collection process, secondly the data gathered and finally the data analysis. Conclusions are drawn from the data analysis.

The final chapter, that is, chapter five draws' conclusions from the research results, it reflects on the research journey and finally make recommendations for future studies on the same topic.

CHAPTER 2

2 THEORETICAL & STUDY CONTEXT

2.1 INTRODUCTION

The purpose of this chapter is to document the theoretical and the contextual framework of the study.

In addressing the foregoing issues, this chapter starts by addressing the theoretical framework for the research under which sustainability and SDG's, sustainability and African cities, and lastly rural-urban linkages and interdependence form the subtopics for key areas to be addressed. The second section to be addressed is the Contextual framework (Eswatini/Swaziland) where property development in Eswatini is discussed, followed by the sustainability initiatives and the rural-urban linkages in Eswatini. The last section of the chapter (section 2.4) is the chapter summary.

2.2 THEORETICAL FRAMEWORK

2.2.1 Sustainability and SDG's

Sustainability has been used interchangeably with 'Sustainable Development' across most of the literature on the United Nations Sustainable Development Goals (UN-SDGs). The Brundtland Commission in 1987 described Sustainable Development as "*development that meets the needs of the present without compromising the ability of the future generations to meet their own needs"* (Du Pisani, 2006:83). Accordingly, later studies view sustainability as a way of living within one's means given the fact that natural resources are limited (Chowdhury & Koya, 2017; Pope, Annandale & Morrison-Saunders, 2004). The Sustainable Development Goals (SDGs) on the other hand were adopted in September 2015 by at least 200 countries at a summit in New York for the purposes of moving the world towards improved societal sustainability performance through the addressing of three dimensions namely: economic development, social inclusion, and environmental sustainability (Campagnolo et al., 2016; Topple et al., 2017).

The UN-SDGs were initially created to be applied at a national level, but its application has since begun to cascade down on cities to assist in managing the urbanisation process especially the rapidly growing urban slums. Goal 11 specifically states that cities should be inclusive, safe, resilient, and sustainable. UN-Habitat (2015) gave direction on the implementation of the SDGs in urbanised areas. The 17 SDGs together with 169 targets in areas of critical importance appear to provide a holistic or integrated approach to addressing global sustainability issues which the Millennium Development Goals were trying to address (Newman, 2017).

Food Security, as one of the goals (Goal No 2 of the United Nations Sustainable Development Goals adopted in 2015) has been integrated into the three pillars of Sustainable Development coined by the World Bank in 2012. The three pillars are economic growth, environmental stewardship and social inclusion which effectively carry across all sectors of development, from cities to agriculture, infrastructure, anergy development and use. This study seeks to establish the challenges resulting from the loss of fertile agricultural land degradation due to rapid urbanisation. Alhaddad, Roca and Burns (2009)notes that the rapidity of urbanisation or urban sprawl, mostly comes at the expense of farmland. Urban Sprawl as previously described in Chapter 1.2 is the outgrowth of urban areas caused by uncontrolled, uncoordinated, and unplanned growth. Studies undertaken in several of the more developed and urbanised parts of the world such as Spain (Alhaddad, Roca & Burns, 2009; Fertner et al., 2016), United States of America (Hall & Ashley, 2008; Lichter & Ziliak, 2017) ; and China (He et al., 2017; Yan et al., 2022; Yang et al., 2021) show that the problem of urban sprawl is global. This literature as listed is assisting the legislators of each of those countries in the formulation of policies to regulate urban growth in tandem with farming and food security (IFPRI, 2021). In the case of Eswatini and other African countries, they suffer a similar challenge where there is a knowledge gap as far as this study is concerned to inform policy formulation.

A study into the '*Projections and Policy of Sustainable Development'* by Campagnolo et al. (2016) suggested that identified unsolved socio-economic challenges should be

addressed during the period 2015 to 2030. The study included an analysis of the costs and benefits of specific policies meant to aid the achievement of the anticipated targets. The study revealed that Sub-Saharan Africa is worst positioned in terms of sustainability ranking and there appears to be a lot of work that needs to be done to improve sustainability.

Global governments are key to the successful achievement of the Sustainable Development Goals as adopted by the United Nations at the end of September 2015. A significant number of countries have shown commitment towards the attainment of the targets of the SDGs. The eSwatini Government has just annexed its signature to the Revised Georgetown Agreement of the Organisation of African, Caribbean and Pacific States (OACPS) through the country's ambassador to the European Union in Brussels (Communities, 2020). Accordingly, this is one way the country is showing its commitment to the SDGs as these 70 member states organisations purpose is to push the sustainability agenda. What remains is the enabling environment and the actual implementation of the building blocks towards the achievement of the goals, especially because Africa is lagging quite behind on the ranking of attainability (Campagnolo et al., 2016).

2.2.1.1 Policy Initiatives and Sustainability

Sustainability issues have been implemented by several countries by formulating policies that give guidance on the localisation of the UN-SDGs (Pope, Annandale & Morrison-Saunders, 2004). Newman (2017) highlights targeted UN-SDG indicators for 2030 where urban slum regeneration is being addressed under Goal No 11 which is to make cities and human settlements inclusive, safe, resilient, and sustainable. Sustainability assessment is primary in the process of policy development. Sustainability assessment is described as the evaluation of the implications of policy initiatives on sustainability and the trade-off is to ensure policy maximum contribution to sustainable development. First described by the Brundtland Commission in 1987 as the development that meets the needs of the present without compromising the ability of future generations to meet their needs. The three-pillar model with three intersecting circles reflecting the environment, society and economic considerations in decision

making. The target is that the intersection is the target sustainable decision making (Pope, Annandale & Morrison-Saunders, 2004).

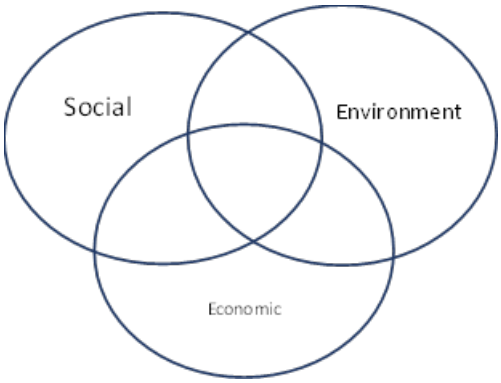


Figure 2-1: EIA-driven integrated assessment approach to sustainability assessment (minimise adverse impacts). Source: (Pope, Annandale & Morrison-Saunders, 2004:20)

The UN-SDGs are voluntary although countries are encouraged to implement them as a goodwill to the environment (Topple et al., 2017). The private sector has taken a lead in driving the sustainability assessments. Such assessments are carried out on a voluntary basis as opposed to other impact assessments such as Environmental Impact Assessments (EIA) and social impact assessments which are a regulatory requirement (Topple et al., 2017). Having a regulatory framework ensures or guarantees sustainable urbanisation considering the effect of migration. Uncontrolled urbanisation of cities over stetches their capacity to provide adequate housing in response to demand. In developing countries, informal urbanisation is because of massive rural-Urban migration which plays a substitute for formal city growth. Informal slums account for an estimated 72% of the urban population in sub-Saharan Africa where 24% is in East Africa. East Africa remains the least urbanised in Sub-Saharan Africa. A study on Addis Ababa's urban population revealed that about 80% of its urban population live in slums or other types of informal settlements. Informal settlements are characterised by substandard housing and a lack of essential services (Newman, 2017). Newman (2017) further observed that solving the problem of slums has been happening for the past six decades. Policies have evolved from total clearance and eviction to softer, more economically, socially, and environmentally sustainable approaches. The well-being

of the community, preservation of invested capital, promotion of economic development, preservation of cultural heritage and traditions, preservation of the environment, all has been given the most attention while engaging in the urban renewal process.

As a follow-up to the Rio+20 Conference and the requirements of the outcome document, subsequent measurement methodologies and assessments for sustainability have been proposed (Campagnolo et al., 2016; Chowdhury & Koya, 2017; Stevens & Kanie, 2016; Topple et al., 2017). The plan of action for the Rio+20 is for people, planet and prosperity and the ultimate Global challenge is eradicating poverty through the seventeen Sustainable Development Goals and 169 targets. These goals seek to build on the Millennium Development Goals and complete what was not achieved then by stimulating action from 2013 to 2030 (Topple et al., 2017).

2.2.2 Sustainability and African cities

A study into the 'Projections and Policy of Sustainable Development' by Campagnolo et al. (2016) identified unresolved socio-economic challenges to be addressed during the period 2015 to 2030. The study included an analysis of the costs and benefits of specific policies meant to aid the achievement of the anticipated targets. The study revealed that Sub-Saharan Africa is worst positioned in terms of sustainability ranking and there appears to be a lot of work that needs to be done to improve the situation. A study by Newman (2017) established that in Addis Ababa, Ethiopia the new high-rise developments are significantly better than informal slums because residents are given formal accommodation and hence can access the formal economy both in terms of banking, education and employment.

Cohen (2006) observes that rapid urban growth throughout the developing world is seriously outstripping the capacity of most cities to provide adequate services for the citizens. Over the next 30 years population growth is anticipated to be concentrated in urban areas in the developing world. The challenges of achieving sustainable urban development will be more pronounced in Africa. Mberu et al. (2013) and Tacoli and Mabala (2010) states that urban migration in Africa is especially for job opportunities,

resulting in squatter camps especially in peri-urban areas. It is a common phenomenon that these squatter camps lack essential services such as proper sanitation, running domestic water supply, waste disposal, that is, planned services to service the community. This results in environmental issues such as pollution, lack of infrastructure services to manage urban growth sustainably, it would benefit the settlers as they would benefit with proper infrastructure and services.

2.2.2.1 Policy Initiatives and Sustainable Urbanisation in the African Cities

Hope Sr and Lekorwe (1999) examined Sub-Sahara Africa which has triggered a chain reaction of consequences from environment to the need for the development of policy for the sustainability of the regions cities. In 1999, the urbanised population of Southern Africa was 47%, in 2010 it rose to 59% compared with 23%, 41%, 51% & 44% for Eastern Africa, Middle Africa, Northern Africa & Western Africa respectively (Cobbinah, Erdiaw-Kwasie & Amoateng, 2015). Cobbinah, Erdiaw-Kwasie and Amoateng (2015) further noted that cities in Africa are likely to experience average annual growth rates of between 1.93% and 6.13% by 2025. The unguided nature of this growth poses a range of development heights which includes unsustainable exploitation of resources such as land and increased urban poverty (Tacoli, McGranahan & Satterthwaite, 2015). For the whole of Africa, the urbanisation level was 35.56% in 2000, it grew to 39.19% in 2010 and Table 2-1 below shows a presentation of the population trends in Africa compared to the rest of the world, more developed Regions, less Developed Regions and the different Africa Regions.

Table 2-1: Urbanisation in the World, African sub regions and selected African countries. Source: Adapted from Cobbinah, Erdiaw-Kwasie and Amoateng (2015:64)

Major area, region, or country	Population ('000)				Urbanisation level (%)				Urbanisation rates (%)		
	1950	2000	2010	2050	1950	2000	2010	2050	1950–2000	2000–2010	2010–2050
World	745,495	2,858,632	3,558,578	6,252,175	29.44	46.69	51.60	67.18	2.69	2.19	1.41
More developed regions	441,845	881,344	957,251	1,127,222	54.47	74.14	77.45	85.93	1.38	0.83	0.41
Less developed regions	303,650	1,977,289	2,601,326	5,124,953	17.64	40.08	45.96	64.11	3.75	2.74	1.70
Asia	245,052	1,392,232	1,847,733	3,309,694	17.46	37.44	44.37	64.36	3.47	2.83	1.46
Europe	280,602	514,545	536,611	591,041	51.27	70.80	72.69	82.17	1.21	0.42	0.24
Latin America and the Caribbean	69,264	393,619	465,246	650,479	41.38	75.49	78.84	86.62	3.48	1.67	0.84
Northern America	109,667	247,911	282,480	395,985	63.90	79.13	81.99	88.61	1.63	1.31	0.84
Oceania	7907	21,924	25,857	40,346	62.38	70.43	70.66	73.05	2.04	1.65	1.11
Africa	33,004	288,402	400,651	1,264,629	14.36	35.56	39.19	57.70	4.34	3.29	2.87
Eastern Africa	3685	53,124	77,954	358,974	5.45	20.57	23.34	44.75	5.34	3.84	3.82
Middle Africa	3657	34,775	51,861	171,082	14.00	36.15	40.94	61.46	4.51	4.00	2.98
Northern Africa	12,935	82,079	102,249	195,877	25.80	48.41	51.25	65.32	3.70	2.20	1.63
Southern Africa	5869	27,647	33,778	49,810	37.65	53.74	58.46	73.98	3.10	2.00	0.97
Western Africa	6857	90,777	134,810	488,886	9.73	38.51	44.31	65.72	5.17	3.96	3.22

Further to Table 2-1 above, Li, Stringer and Dallimer (2022) notes that the urban world population reached 55% in 2018, and is projected to be 68% by 2050 with nearly 90% of this population in Asia and Africa. It is reported that Africa is experiencing the highest population growth. over 59% of the urban population in Sub-Saharan Africa live in slums. Rapid urban growth coupled with non-availability of suitable policies to manage the growth & provision of sufficient services has resulted in African cities struggling to provide adequate services. Unsustainable urban development has a negative impact on human health (Tosam & Mbih, 2015). Human health and urban sustainability create significant strain on African Cities such that global environmental change further exacerbates the sustainability issues which emphasise the importance of the formulation of relevant policies. Rapid population growth combined with week urban management capacity means that African cities are particularly vulnerable to risks associated with ecosystem degradation and climate change (Smit & Parnell, 2012).

Due to severe competition for urban space from economically and politically much stronger functions, agricultural production is not considered sustainable in urban areas (Van Veenhuizen & Danso, 2007). Supply of food and flowers, a meaningful way of spending leisure time and supplementary income for many of the urban poor in third world cities (De Bon, Parrot & Moustier, 2010). Other uses of agricultural activities include the management of green space or temporary vacant space at an affordable cost to the local authorities and the recycling of organic waste (Baker & de Zeeuw, 2015). Treating agricultural land use as more beneficial to the urban system by town planners and administrators as a normal urban function in need of both regulation and protection would encourage sustainability in the long term. Cities are not sustainable without agricultural production. Policy regulating urban growth is necessary to preserve fertile and highly productive farmland on peri urban location (Van Den Berg, 2002). A study by Drechsel and Dongus (2010b) revealed that peri-urban land is constrained by tenure insecurity and non-agricultural lands demands. Open urban patches of land not yet used for urban construction are used for farming which improves the inter relationship between farm and urban use. Farming in urban areas is dynamic, viable and largely sustainable livelihood strategy, especially to poor dwellers. However, political recognition needs to be addressed through the formulation of policies to secure this method of farming.

Urbanised open patches of land in the Kingdom of Eswatini have not particularly been cultivated to date. Only backyard gardens are observed and some even go to an extent of satisfying the demand for its produce in the supermarkets although commercialised urban farming is not so prevalent in the Kingdom. Drechsel and Dongus (2010a) have also shared the advantages of urban agriculture as follows:

1. Market proximity which allows close observation of price developments as well as reduced transport costs,
2. Urban farmers respond to demand by growing the most profitable crops, and
3. Choice of crops depend on regional diets.

Treating agricultural land use as more beneficial to the urban system by town planners and administrators as a normal urban function in need of both regulation and protection would encourage sustainability in the long term. Cities are not sustainable without agricultural production. Policy regulating urban growth is necessary to preserve fertile and highly productive farmland on peri urban location (Van Den Berg, 2002). Sustainable urban growth requires strengthened investigation into cities current resource flows, infrastructure systems and future resource requirements. Challenges faced by urbanisation decision makers or urban planners in African cities include data scarcity at the city level, difficult in trading informal flows lack standardised methods and the open nature of cities for supporting strategies toward sustainable urban development (Currie & Musango, 2016). It is estimated that 80% of the global gross domestic product is generated by cities which are therefore identified as core to addressing sustainability issues which balance economic growth, environmental protection & social equity pressures. African cities tend to be dominated by informal modes of urbanisation, relying less on the state for social well-being and access to resources. Informal settlements are not permanent in their nature and are favoured by residents as they eliminate the risk associated with permanent settlement in towns presenting a situation where urban dwellers prefer to invest on their rural homes than the urban ones (Parnell & Pieterse, 2014). Informal settlements are common in peri-urban areas which house a mix of residence, industry, agriculture, municipal service stations, & ecosystem services (Chirisa & Bandauko, 2015).

A study by Chirisa and Bandauko (2015) established that African Cities generally do not have a system to inform and guide its growth in a sustainable approach. In their study, they further emphasise the importance formulating policies that address the complex relationships between water, energy, climate, and food (called the WECF nexus), which if implemented correctly should guarantee sustainable urbanisation.

2.2.3 Rural-Urban linkages and interdependence

Chapter 1.3 deals in brief with this topic where it deals with the relationship between the rural and urban as far as benefits and cultures are concerned. The initial investigation revealed that the two land uses tend to rather exist in a continuum of community types that are increasingly interconnected. Patterns of community

development is mostly influenced by changing migration and settlement patterns which give rise to new forms of urban, suburban, and peri-urban development (Mylott, 2009). Furthermore, that low-density peri-urban population growth continue to characterise urban growth where fewer people are living in larger pieces of land further from the busy and densely populated urban centres. Affordability has in part played a bigger role in such movements or population re-characterisation. Such development trends have a bearing on national and world views, influencing how the local authority allocates the use of natural and financial resources as well as the planning and development of transportation systems. Politics, media, and money play a huge role shaping and reshaping culture in big cities including giving birth to new jobs and technology and is where big ideas start and flourish (Lichter & Ziliak, 2017).

As the urban boundary continues to shift outwards, it goes without saying that this gives birth to lifestyle clashes in the peri-urban areas once dominated by agriculture. As non-agricultural growth continues to take-over the rural and the peri-urban precinct, thus competing with agriculture for land, tensions arise between farmers and non-farmers, leaving farmers frustrated as they are the ones who suffer the most as policy is very slow in attending to their challenges or interests (Mylott, 2009; Tacoli, 2016). A strained relationship continues to exist between environmentalists and farmland preservationist against urban and suburban expansion into the rural and peri-urban land used for agriculture.

This is where the state needs to come in through the formulation of relevant policies as well as the planning of urban and regional boundaries to support economic growth while protecting natural and agricultural land uses. The challenge that still exists though is that current policies continue to focus exclusively on rural or urban areas, thus failing to address the link between the two areas (Lichter & Ziliak, 2017; Mylott, 2009). In particular, the rural or farming regions tend to be ignored or left out or not accommodated in the policies being formulated to guarantee their full benefit in the economic activities once implemented. Economic policies tend to favour urbanised communities over rural and farming areas (Lichter & Ziliak, 2017). Lichter and Ziliak (2017) further note this anomaly can be because the urbanised communities have much of the vote, or they have the majority representation. Due to population densities thus resulting in the rural having minority representation in policy formulation.

Rural areas generally do not have the density of numbers to justify a host of services such as social and public services, credit, agricultural expansion services and farm input services. Therefore, in all those services necessary for the farming community, they will have to rely on the more densely populated urban areas. The rural–urban link is further improved through greater access to information technology, better road infrastructure, improved education, and changing economic realities. This further results in increased people movement, goods and services, waste and pollution thus blurring the boundaries between the two (Lichter & Ziliak, 2017; Tacoli, 1998). As rural incomes decrease, rural communities tend to diversify the operations by incorporating non-agricultural income generating activities. Concurrently, low-income groups or households in urban areas may rely on agricultural goods from rural relatives to supplement their income.

Deepening social polarisation and increasing poverty in both rural and urban areas is because of current changes in the global economic, social, and political context including structural adjustment programs and economic reform (Tacoli, 2016). Achieving the Sustainable Development Goal of zero hunger by 2030 means considering changes in both rural and urban context. Amid concerns that rural migrants transfer poverty to urban areas, Tacoli and Vorley (2015) make the case for citizenship rights and proactive planning for urban growth to reduce disadvantage and poverty. Stopping rural people going to cities only makes poverty less visible, and stripping migrants of rights makes it worse.

Rural-urban linkages are important for poverty alleviation and sustainable rural development and urbanisation. Living conditions and employment opportunities of both rural and urban populations can be improved by strong linkages between the two. Behind a mutually beneficially rural-urban relationships and the success of the relationship between rural and urban areas must be a strong domestic trade including but not limited to adequate and efficient infrastructure (Mylott, 2009). It can be observed that the increasingly complex connections between rural and urban are beginning to be recognised although it appears to have limited impact or influence on development policy and practices (Tacoli & Vorley, 2015).

Tacoli, McGranahan and Satterthwaite (2015) has also quoted a 2013 World Population Policies report which states that among 185 countries with available data

in 2013 shows that since 1996, 80% of national governments have formulated and implemented policies that curb rural-urban migration. Such governments mostly include those that are in regions with rapid urban population growth, such as those in the sub-Saharan Africa and Asia. Urban growth of economies, especially those who previously depended on subsistence farming puts a strain on the already struggling agricultural production as it adds more to the existing demand for agricultural produce. The unwillingness of most of the rural population, especially in developing economies, to engage in commercial farming has resulted in the high poverty levels as well as food security challenges (Lichter & Ziliak, 2017). This has given birth to a challenge for policy makers where they must try and curb the migration of poverty from the rural to the urban areas where life is even more challenging for those without a regular income stream. As stated before, such policies are ineffective, and they have damaging consequences as it also affects the low-income residents rather than just forming a barrier to immigrants. This therefore renders policies that target immigrants into urban centres not practical due to its effects. Thus, policies that attempt to draw on rural-urban linkages are often unsuccessful because they fail to reflect the true circumstances of the people they are created to help (Mylott, 2009).

Table 2-2 below outlines the benefits and dis-benefits of urban communities versus rural communities. The mutual benefits and dis-benefits are the factors that unite the two nodes.

Table 2-2: Benefits & Disbenefits of Urban Communities vs Rural. Source: Somanje et al. (2020)

NO	RURAL COMMUNITIES	URBAN COMMUNITIES
	BENEFITS	
1.	Receive different types of Private and Public services	Fresh agricultural food supplies
2.	Receive credit for refinancing especially where a farm is planning expansion	Business support from farmers
3.	Benefit from technology and innovation	Different manufacturing inputs for different products
4.	Benefit from infrastructure and the provision of markets for the farm produce	

NO	RURAL COMMUNITIES	URBAN COMMUNITIES
5.	Benefits from suppliers of farm inputs and capital inputs	
	NON-BENEFITS	
1.	Some urban dwellers dispose environmentally unfriendly waste without due consideration of the aftereffects	Migration of rural duellers without the financial means of sustainability
2.	Industrial waste harms the environment and everybody suffers the consequences.	
3.	Urban expansion into fertile agricultural land	

Jamshed et al. (2020) argue that there are several challenges associated with urban rural linkages. Firstly, in terms of challenges, Sub-Saharan Africa (SSA) has 40% urban and 60% rural population and has the highest urbanisation growth rate in the world. Urbanisation is expected to reach 56% by 2050. For sub-Saharan Africa, urbanisation suffers unsustainable rural-urban linkages due to population growth (which currently stands at 56%), climate change, food insecurity, unemployment, and weak economy growth. A study undertaken in Ghana shows that urbanisation growth was 7% over a 10-year period from 2000 to 2010 with urban population growth from 43% to 50% and this is expected to grow to 70% by 2050 on current trends. The primary causes of rural-urban migration are poverty; migration for economic empowerment (although it does not always result on economic improvement or poverty alleviation); and rural non-agriculture economy (trade and mining) which reduces poverty at a faster rate and provides more inclusive growth for migrants when compared to bigger cities (Jamshed et al., 2020; Somanje et al., 2020).

Sustainable Development Goal (SDG) 11 calls for safe and resilient human settlements and the target of goal 13 calls to strengthen resilience and adaptive capacity to hazards (UNDP, no year). Strategies are required to address the vulnerability of both urban and rural areas where they are linked socially, economically, and physically in reducing its impact. The United Nations Human Settlements Program has also called for the harmonisation of integrated initiatives to deal with disaster risk, climate change and spatial and territorial planning by strengthening rural-urban linkages given the challenges of hazards and disasters (UN-Habitat, 2015). Rural-urban linkages discourse

considers rural areas, not as isolated scenarios but also characterised by their relationship with their nearest urban areas. The relationship is represented by the flow of people, information, finances, goods, and services which bind both areas and helps in development, particularly of rural households and communities.

More than three quarters of Latin America population is urbanised, and economic activity happen in rural areas in both small and medium sized cities (Berdegué et al., 2015). Studies undertaken in Chile and Colombia suggest that small and medium-sized cities within rural-urban territories enhance economic growth and reduces poverty and income inequality compared to deep-rural and metropolitan territories. Although in some cases, a rise in income inequality is experienced, Latin America is victim to such inequality as above (Léautier, 2006; OECD, 2011; UN-Habitat, 2008).

Agglomeration, that is, having goods and services located within reach of the consumers, benefits all stakeholders of the economy. In addition to providing a market for rural or agricultural products, the city provides employment opportunities to rural inhabitants hence a chance to diversify income generation. This is increasingly a trend globally. In addition to markets accessibility, urban centres generate pro-growth effects consistent with endogenous theories (Berdegué et al., 2015). The link between urban and rural communities is evidenced where urban centres provide specialised goods and services; create social, economic, and cultural interaction; provide links to infrastructure networks that connect local communities to regional, national, and international communities; and public and private administration services through which local demands and needs can be channelled. On the contrary, rural communities sell agricultural produce to cities (Berdegué et al., 2015). Jablonski et al. (2019) observes that food security is of late bearing much importance to policy makers to guarantee food access, food security, the environment and economic development.

2.2.3.1 Policy Initiatives on Rural-Urban Linkages

The influence of policy is evident especially as attested to by a study by De La Masselière et al. (2020a) in Tanzania (the Kilimanjaro Region) where it was observed that between the early 1980s and late 2000s, the harmonisation of rural and urban

spheres remained a challenge due to dumping policies formulated by rich countries. The dumping attitude was because of surplus agri-produce in developed economies with excessive subsidies. Such subsidies pushed down import prices to the local market which ended up being not profitable for the local farmers. The local farmers are therefore pushed out of business due to competition. Changes in policies to support and empower local farmers and tourism investors has seen an improved link between the urban and rural relationship. The farmers are now responding to the needs of the urban population. The policies have also encouraged the youth to engage in farming as well. Improved communication and transport infrastructure as well as administrative, financial and educational services has also encouraged rural-urban linkages. The recent transformation has resulted in: a booming tourism and hospitality industry; an improved services sector such as, financial, communication, infrastructure, and administration services; the availability of markets for agricultural products; the agricultural sector responding to the needs of the urban market; encouraging the youth to engage in tourism farming activities; and responding to market needs has resulted in improved economic status of the farmers (de La Masselière et al., 2020b).

Alliances between producers and consumers results in solid and sustainable food supply where the consumer receives organic produce at an affordable or fair price. Sustainable rural-urban linkages have to do with the complementary relationship between urban and the rural landscape. In between the two is the peri-urban land pockets. Sustainability promotes a beneficial inter-relationship between the urban and the rural landscape, while discouraging all forms of environmentally destructive activities (Viegas-Preiss, Charão-Marques & Wiskerke, 2017). Rural-urban inter-dependencies are modelled based on wages, cost of living, and inter-regional migration and community (Bosworth & Venhorst, 2018). Bosworth and Venhorst (2018) further notes that rural incomes tend not to be competitive against urban incomes. Moreover, the urban tends to employ more skilled related employees than rural which are predominantly non-skilled. Urban and rural economies are interdependent and complementary of each other.

Urbanisation tends to indiscriminately consume non-urban land parcels hence compromise highly productive or fertile agricultural land. Urbanisation will generally

out compete rural farmland since urbanisation tends to create quick returns (Sietchiping et al., 2014). Policies to manage the relationship between urban, peri-rural-Urban contexts are required as there is fierce competition between the land use of the limited land resources. The UN-Habitat Agenda encourages sustainable development of rural settlements and the reduction in the rural to urban migration. The new urban agenda seeks to maximise the benefits of urbanisation, that is, using urban planning to make urban centres prosperous thereby contributing to development (UN-Habitat, 2015). Sietchiping et al. (2014) recognises the importance of partnerships, collaboration, and unity in action in yielding sustainable rural-Urban linkages with participation emphasis on food security, incomes, planning, equity, and level of governance. Economic theories portray wage differences and income diversification as key determinants of rural-urban migration in developing countries (Iversen, 2006).

Zenou (2011) states that the Harris-Todero framework has become a cornerstone of models for rural-urban migration. The aim of the Harris-Todero framework is to explain the persistent rural-urban migration in developing countries despite the high unemployment rates in cities. It states that migration will occur if the urban expected income is higher than that of the rural one. Creating urban jobs is an insufficient solution to the urban unemployment problem because of the induced negative effect on rural migration, which may outweigh the positive effect of creating jobs (Zenou, 2011).

2.2.3.2 Land Conversions in the name of value creation and Farmland preservation policies

This section deals with an example of land lost to urbanisation. The example shows how Tongaat Hulett (The sugar producing company in KwaZulu Natal). The example will be followed by a summarised picture to demonstrate how the market forces influence the farm owners to respond to the demand for development land which has higher value than the current use.

As of March 2015, Tongaat Hulett had planted a portfolio of approximately 28 687 hectares of sugar cane fields in the province of KwaZulu Natal in the Republic of South Africa and provided over 7000 jobs in the process. Tongaat Hulett converted a

portfolio of 8 091 hectares of prime developable land from 2015 to 2020. As at end of March 2015, 357 hectares had already been sold generating a profit of more than R1.8 billion. Based on the foregoing, it can be argued that the land that has been converted into urban land is perfectly good arable land. But the seller took advantage by cashing into the opportunity seeing that urbanisation is on its way. It can be noted from the report as published in March 2015 that there was no consideration for food security when the opportunity presented itself, seeing that this was a lifetime opportunity to make significant profit within a short space of time (Staude, 2015). The value created from urbanisation perfectly fits the determining factors of value for fixed property. The passage below outlines the factors that influences value.

Market valuation of fixed property is determined by the market forces such as:

A) Locational Factors such as proximity and accessibility to various amenities including but not limited to waste sites, power lines, highways, shopping centres, schools, cultural opportunities, airport, public transportation etc.
B) Physical factors such as construction specification and accommodation
C) Neighbourhood Factors such as the Socio-economic characteristics of neighbouring residents, quality of neighbouring structures, ownership/rental, and ethnic composition
D) Community Attributes such as availability of schools, universities, religious palaces, availability of institutional facilities, social organizations and recreational facilities
E) Time-related Attributes such as details about month and year of sale, number of days on market, age of the building, market value of other properties/ comparable
F) Environmental Attributes such as view from property, noise levels, pollution levels, storm water and recreational facilities etc.
G) Subjective Factors such as Related Laws, Rules and Regulations, Management Corporation related details, Highest and Best Use, Potentiality, Zoning and etc. (Jayalath, 2016)

Having listed the determinants of property value above, one must add that in the case of the Tongaat Hulett farms all the factors determining the market value apply equally,

but key among all of them is the following: potentiality (Wyatt (2013)describes potentiality as attributes offered by land found to be more beneficial by different users in enhancing its productive or economic capacity which has an effect on its value), highest and best use as well as demand and supply. These three factors were key in assisting Tongaat Hulett's decision on whether to sell or not. In effect, the whole of G) applies for the purpose of the decision to sell. In valuing the highest and best use, it should be noted that a piece of land (farm in this case) located within an urban special development plan with all the zoning in place or at least attainable tends to lean more towards some form of urban development with much higher returns per square metre such as a commercial development, retail, industrial park, or residential development all as dictated by the zoning obtained (Jayalath, 2016).

As may be observed over time, farm valuation can generally not compete with all forms of urban development due to its inability to achieve competitive returns per square metre and considering potentiality and highest and best use. Therefore, farms located in peri-urban areas are automatically pushed out by the temptation that comes with higher value and higher returns offered by urbanisation. This can only be controlled by policies designed to promote food security through the prevention of the urban boundary expanding into valuable farmland.

In the absence of policies to assist in regulating the urbanisation of farmland, some farm owners have capitalised on the farm location and its characteristics to innovatively achieve its highest and best use. Purchases of agricultural land for diverse reasons, such as recreation or aesthetic appeal (collectively referred to as lifestyle purposes), has implications for agricultural land valuations, commercial agriculture, and the acquisition of land for redistribution purposes (Reed & Kleynhans, 2009). Reed and Kleynhans (2009) further reported in the case of the Western Cape in South Africa that farm purchases for alternative purposes were substantial where more than half of all transactions in both the intensive and extensive area were for lifestyle reasons, where such buyers mainly rely on income from outside the agricultural sector for their livelihoods and financing of purchased properties.

Advanced economies have formulated policies and legislation to regulate or minimise the loss of farmland to urbanisation which in turn guarantees food security. Studies that have been undertaken have advocated for the protection of agricultural land resources to guarantee food security (Food Agricultural Organisation, 2022). Countries such as China, France, Italy, and the United States of America has covered substantial ground in providing direction on policy formulation issues. Although for places like China it might seem to be too late as the damage has already been done, the extensive studies made by its researchers will guide policy makers on how best this issue can be resolved (Chau & Zhang, 2011). Another issue being addressed by policy makers is urban sprawl. The UN Habitat (2008) note that until now this has been a challenge to policy makers, such that due to limited academic input on the subject especially in Africa where, local authorities find themselves unable to implement well informed controls. To date, Europe and the United States of America have successfully implemented controls albeit to a limited extent since the available body of knowledge appears to be conflicted in this regard.

A study undertaken by Chanel, Delattre and Napoléone (2014), on a French environment, suggested that the following issues should be considered when determining factors that would influence policy formulation for land use allocation and control:

1) Current competitors of food production, such as biofuels production. It is more likely than not that the land used for farming biofuels inputs is counterproductive for food security.
2) Environmental preservation: this has to do with farming practices that are wildlife friendly, that is, practices that would ensure that eliminating all forms of farming practices that would cause harm to the environment.
3) Ensuring one voice among the organisations/institutions that advocate for the preservation of farmlands. It has been revealed that there are conflicting contributions among similar organisations which is a cause for concern.

Organisations working towards the same goal are encouraged to unify their efforts so that the results are achieved much quicker.

4) Interests of local authorities: it has been suggested by Chanel, Delattre and Napoléone (2014) that urban expansion polices are informed and directed by the interests of local authorities. This is confirmed by the fact that some authorities counter sprawl while others favour it. More investigation will need to be done to establish the effects of the different approaches and come up with a best practice approach.

Furthermore, Chanel, Delattre and Napoléone (2014) observes that many studies have addressed the challenge of urban growth control, but very few of the studies have considered policy as a means for intervention. Municipal land use regulations are used in France to control land use conversions. Analysis thereof gives the impression that farmland preservation determinants differ from country to country. This conclusion is based on a comparison of studies carried out in the United States of America and those done in Europe. However, there is currently no quantified validation of the determinants involved in decision making related to land use policies in French jurisdictions, and the literature, particularly the quantitative literature, contains few studies of European cases (Chanel, Delattre & Napoléone, 2014)

2.2.3.3 Urban Densification/Growth and Loss of Farmland

A well planned and managed urban growth would result in a well harmonised operation of the city and the opposite where the city growth is unplanned and haphazard. A well-planned urban area will have its nodes, services and infrastructure well-coordinated resulting in a seamless operation. Population density is a perfect fit for an urbanised area as it is much cheaper to provide services to the larger number of populaces. Unfortunately, whether a city is well planned or not, when a city's growth encroaches onto valuable high-quality farmland, the urban growth has a potential threat on food security. This scenario is very true for China where the limited farmland is required to feed over 1.3 billion people. This also explains the reason why most of similar studies have been carried out in China (Chau & Zhang, 2011; Song, Pijanowski & Tayyebi, 2015).

Urbanisation is regarded as a necessary phase in a country's journey towards modernisation. The United Nations has projected that by 2050, the urbanised proportion of the World population will be 67.2%. Urban expansion and consumption of farmland are inversely related, that is when the one grows, the other reduces (Song, Pijanowski & Tayyebi, 2015). The total global urban area quadrupled during 1970 to 2000. Conversely, urban areas in developing countries are projected to increase from 300 000km^2 in 2000 to 770 000km^2 in 2030 and 1 200 000km^2 in 2050. According to Song, Pijanowski and Tayyebi (2015), urban areas account for only about four percent of the earth's land surface. Urban expansion has significantly changed the natural landscape and generated enormous environmental and social impacts which has resulted in habitat loss, fragmentation, resource removal and the decrease in native biodiversity as well as degradation of air and water quality. Loss of farmland is one major consequence of urban expansion. The past thirty years has seen China experiencing a sharp decrease in farmland, thus threatening its food security (Fertner et al., 2016).

Documented evidence in the case of China shows that urban expansion consumed more than 33 400km^2 of farmland which accounts for 21% of the total farmland loss. Although research has not been focused on the quality of farmland being consumed by urbanisation, a study conducted in Beijing established that urban expansion prefers to occupy high quality farmland. High quality farmland has three characteristics. Firstly, it is flat or undulating: flatter areas are preferred for urban development as they are more suitable for infrastructure, housing construction and population concentration; on the other hand, flatter land is also suitable for large scale agricultural production (Song, Pijanowski & Tayyebi, 2015). Secondly, water resources are vital for human habitation and crop production. Human settlements tend to gravitate towards where water is in abundance and where it will be most economical to distribute, and this is common in the low-lying flat land. The same holds true for crop production where water will be required for irrigation in the most economical way (Mullan, Grosjean & Kontoleon, 2011). Lastly, relative proximity to an urban area. This is preferable for urban expansion and soil profile. Obviously, urban expansion will happen in areas closest to

the urban boundary. Soil profile determines farm storage, holding provision of soil water and nutrients. Soil profile is determined by the length of time the land has been farmed. Better soil profiles are associated with the longer farming times. The farmland around urban areas will have been cultivated the longest due to its proximity to urban areas. This proximity is important for the urban expansion as well.

Interestingly, although farmland in China occupies 13583.5 x 10^4 hectares, the most productive land accounts for only 2.67% of the total as of 2009 (He et al., 2017).

Having outlined the theory that underpins this research, the following section provides an overview of the context in which this research was undertaken.

2.3 STUDY CONTEXT

2.3.1 Vital Statistics

Eswatini was for a long time predominantly rural which made it easy to depend on subsistence farming. The densification of cities or urbanisation in recent years tends to have affected neighbouring rural or peri-urban areas. Urbanisation also resulted in a decrease in agricultural produce, while on the other hand there is a notable increase in demand for agricultural products in the urbanised areas. Concurrently, there appears to be no systems or policies in place to regulate the conversion of farmland to urban use. For an example, historically, Ezulwini Valley (near Mbabane), Malkerns, and Tubungu (near Matsapha) are believed to be good agricultural land but have over the years been converted into urban areas. Tubungu and Malkerns still have some of the agricultural infrastructure in place that once made it one of the food baskets in the country.

According to Food Agricultural Organisation (FAO) estimates, as cited by Koutrakos and Duke (2011), almost 80 percent of the world's undernourished people live in rural areas and most depend on agriculture, including livestock, for their livelihoods. Land also secures the production of food for people not directly involved in agriculture, and is needed for a myriad of other purposes, including infrastructure and human settlements. At the same time, land is a finite resource. Consequently, there are frequent struggles over access to land and conflicts over how land should be used. According to the International Fund for Agricultural Development (IFAD),

environmental degradation reduces agricultural land by 5 to 10 million hectares annually. Additionally, 19.5 million hectares of farmland are converted each year to industrial and real estate use. Koutrakos and Duke (2011) notes that the academic and political debate on appropriate land policies in developing countries has been going on for many decades hence there have not been any absolute suggested resolution to this challenge.

2.3.1.1 Location

Eswatini or eSwatini (Figure 2-2), officially the Kingdom of Eswatini, also known as Swaziland, was officially renamed in 2018. It is a landlocked country in Southern Africa. It is bordered by Mozambique to its east and South Africa to its north, west, and south as shown in Figure 2-2. At no more than 200 kilometres north to south and 130 kilometres east to west, Eswatini is one of the smallest countries in Africa. Despite this, its climate and topography are diverse, ranging from a cool and mountainous highveld to a hot and dry lowveld as shown in figure 2-3.

There are two capital towns in eSwatini. Mbabane is the administrative capital while Lobamba is the traditional capital. Manzini is the largest and the busiest city in the country, with Matsapha being the industrial hub and an extension of Manzini. The country is divided into four regional administration areas, namely: Hhohho, Lubombo, Manzini and Shiselweni as shown in figure 2-2. Each region has its own capital. Nhlangano is the administrative capital for Shiselweni, Siteki for Lubombo, Manzini for Manzini Region and Mbabane is both the administrative capital for Hhohho and the

Figure 2-2: Map of eSwatini. Source: Alchetron (2017)

country. The geographical size of the country is 17 360 square kilometres. There are two official languages in eSwatini, namely SiSwati and English. The system of government is Tinkhundla system of government administered through 59 Tinkhundla Centres spread across the country (Central Bank of eSwatini, 2020; Masson, 2020)

Climate: Eswatini's predominant summer rainfall season is between October and March and is characterised by occasional heavy downpours. The eastern side has a tropical sub humid with approximately 60cm mean average rainfall. Midsummer (January) temperatures are known to reach 42 Degrees Celsius. The average

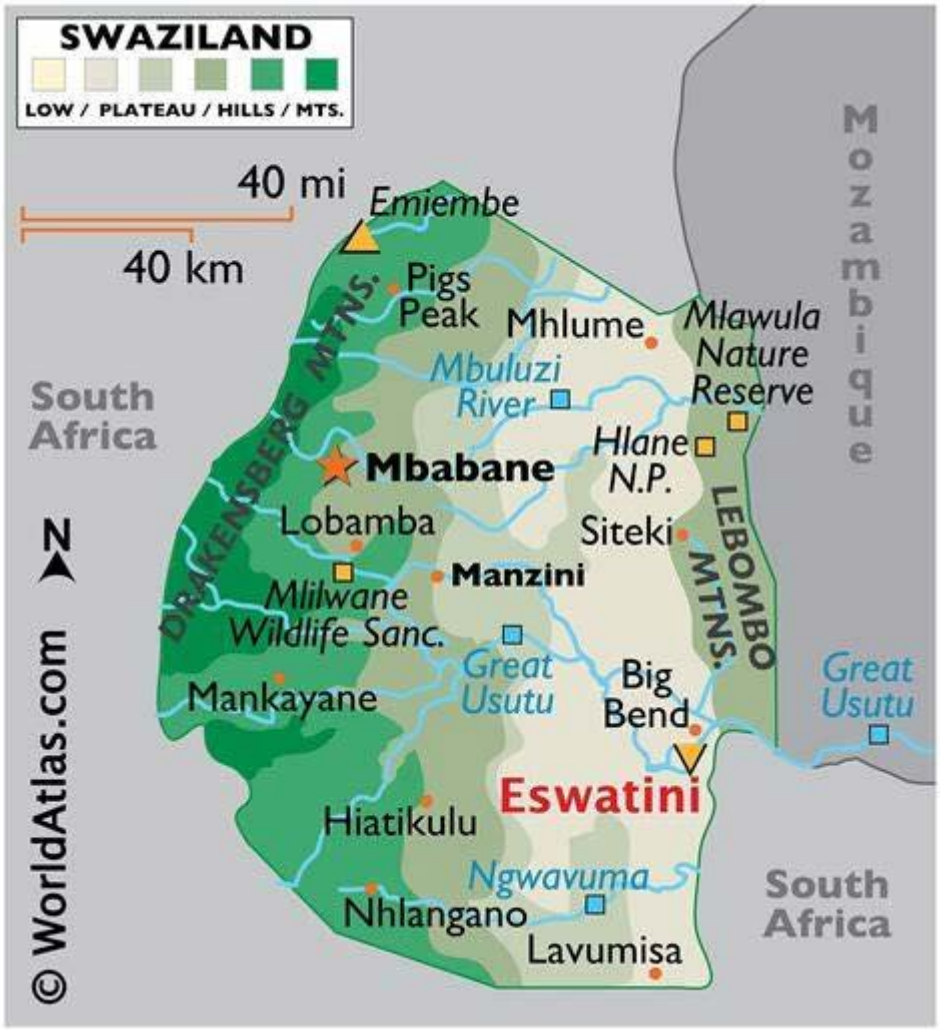


Figure 2-3: Geographic Regions of Swaziland. (World Atlas, 2021)

temperatures for major cities are; Midsummer: Mbabane (25 degrees Celsius) Manzini (30 degrees Celsius); Autumn: Mbabane (20 degrees Celsius) Manzini (25 degrees Celsius); Midwinter: Mbabane (15 degrees Celsius) Manzini (20 degrees Celsius) and Spring: Mbabane (22 degrees Celsius) Manzini (25 degrees Celsius) (Eswatini Government, 2023).

2.3.1.2 Economic Trends

According to the Macroeconomic Analysis and Research Unit (2022), the global economic challenges since the beginning of 2020 caused by the Covid 19 led to the revision of all economic projections downwards due to the economic slowdown. In 2022, the Russia-Ukraine war further worsened the situation where oil prices grew

beyond expectations as well as other products from Russia or Ukraine such as grains, fertilizer and cooking oil. In 2020, the world experienced negative growth at -3.1% and it picked-up in 2021 to 6%. Advanced economies contracted by -4.5% in 2020 and grew by 5.2% in 2021, emerging economies contracted by -2% in 2020 and grew by 6.6% in 2021. Sub-Saharan Africa contracted by -1.6% in 2020 and in 2021 grew by 4.7%. Of note is that advanced economies were the hardest hit during 2020 when the pandemic began. The Eswatini economy grew by 5.9% in 2021 following a contraction of -1.9% in 2020 and is expected to grow at an average of 2.9% in the medium term (2022 to 2024).

Inflation stood at an average of 3.9% in 2020 and reduced to 3.7% in 2021 maintaining the targeted range of between 3 and 6%. The discount rate was 3.75% in 2022 from a long-term average of 7%. Exports to the international market grew by 7.2% in 2021 against the imports of 16.6% due to the need to meet the requirements of Covid-19. Fiscal deficit stood at 4.5% of GDP in the FY2021/22 against 6.7% in the FY2020/21 while debt was within a benchmark of 60% of GDP and is expected to stabilise around 38% of GDP in the FY2022/23 (Macroeconomic Analysis and Research Unit, 2022).

The current GDP growth rate stands at 1.9% and inflation rate currently stands at 4.8%. Eswatini is a developing country with a small economy. With a GDP per capita of $4,145.97, it is classified as a country with a lower-middle income. As a member of the Southern African Customs Union (SACU) and the Common Market for Eastern and Southern Africa (COMESA), its main local trading partner is South Africa in which Eswatini's currency, the Lilangeni, is pegged to the South African Rand to ensure economic stability. Eswatini's major overseas trading partners are the United States of America and the European Union. Most of the country's employment is provided by its agricultural and manufacturing sectors. Eswatini is a member of the Southern African Development Community (SADC), the African Union, the Commonwealth of Nations, and the United Nations (Central Bank of eSwatini, 2022).

2.3.1.3 Demographics by region and urbanised areas

The population of the Kingdom of eSwatini as per the country population count of 2017 is 1 093 230 ranking no 158th of world population. This figure is composed of 562 127 females and 531 111 males which is a split of 52:48 ratio (see Figure 2-4). Eswatini's population density is 68 and an area of 17 200 square kilometre ranking it no 135th of the world country population by density. The population has grown by 74 789 persons when compared with the 2007 census, that is, a 10-year period from 2007 to 2017. This presents an annual growth rate of 0.7%. Out of the four regions, the most populous is Manzini Region with 355 945 inhabitants, followed by Hhohho Region with a population of 320 651.

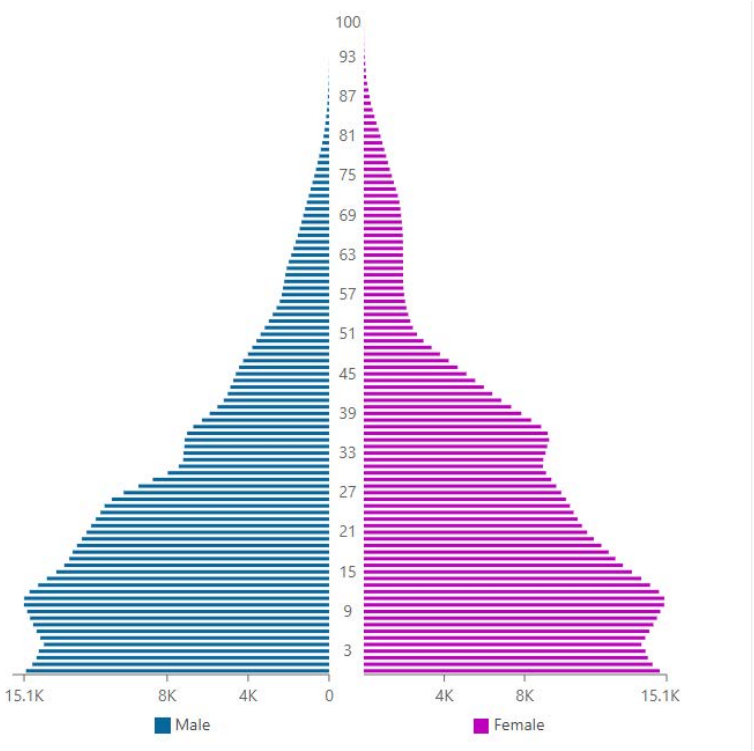


Figure 2-4: Population Pyramid of Eswatini of 2017. Source: Remzfamily (2020).

The third populous region is Lubombo with a population of 212 531 and lastly is the Shiselweni region which has a population of 204 111 inhabitants (UNFPA Eswatini, 2017). The Human Development Index is 0.498, while the literacy rate stands at 89.1%. The Kingdom of eSwatini is predominantly a Christian country with indigenous beliefs and small representations of other major world faiths.

The population is composed primarily of ethnic emaSwati. The language is siSwati. In April 2018, the official name was changed from Kingdom of Swaziland to Kingdom of Eswatini, as is common knowledge by emaSwati. The government is an absolute monarchy, ruled by His Majesty King Mswati III since 1986. Elections are held every five years to determine the House of Assembly and Senate. The current constitution was adopted in 2005. Umhlanga, the reed dance held in August/September, and incwala, the kingship dance held in December/January, are the nation's most important events (UNFPA Eswatini, 2017).

As of 2018, Eswatini has the 12th-lowest life expectancy in the world, at 58 years. Life expectancy is 58.85 years for males and 63.52 years for females. The population of Eswatini is young, with a median age of 20.5 years and people aged 14 years or younger constituting 37.5% of the country's total population (UNFPA Eswatini, 2017).

The working population accounts for 59.7% in the 2007 census. The World Population Review has compiled a breakdown of the most populous town in eSwatini as depicted in Table 2.3.

Table 2-3: Eswatini Population Distribution. Source: World Population Review (2020).

Name	Population
Manzini	110,537
Mbabane	76,218
Big Bend	10,342
Malkerns	9,724
Nhlangano	9,016
Mhlume	8,652
Hluti	6,763

Name	Population
Siteki	6,152
Piggs Peak	5,750
Lobamba	4,557

2.3.1.4 Urban Growth Trends by town

Ezulwini, the town one would comfortably call the extension or rather the peri-urban area of Mbabane has recently been declared a town. Ezulwini and Malkerns are well known for their soils rich and perfect for farming purposes. Although the majority of Ezulwini and Malkerns have always been titled farmland, recent promulgation has rendered its farm status redundant in the kingdom where buildings and estates are now located. Most corporate head offices are being relocated to Ezulwini, and it is currently the fastest growing town in the kingdom, while Malkerns is developing into upmarket residential estate for the wealthy. The two towns are fast bridging Matsapha/Manzini and Mbabane corridor and the land patches originally predominantly rural farmland is fast urbanising and soon, the farmers will be forced to sell or urbanise to give way to the wave of urbanisation. Manzini on the other hand is expanding down towards Sidvokodvo and Hhelehhele. A significant part of Sidvokodvo has already been proclaimed an Industrial Estate by the Ministry of Housing and Urban Development and soon, infrastructure works shall begin (Dlamini-GIBB, 2021).

Fortunately, the agricultural towns such as Big Bend, Mhlume, Simunye and Tshaneni are expanding through the downstream agricultural development initiative by the state managed through SWADE (Eswatini Water & Agricultural Development Enterprise). Big Bend has since expanded beyond Thambuthi and Siphofaneni is already an agricultural town through the LUSIP I, II and III downstream development projects (Dlamini-GIBB, 2021).

2.3.2 State of Agriculture

The eSwatini farming has predominantly been subsistence until recently where the Government has invested its efforts into commercialising agriculture in the kingdom. The state has invested heavily in building dams and continues to do so to further develop downstream agricultural investments. Established in 1999, eSwatini Water and Development Enterprise (SWADE) has been an enabler in facilitating visible growth in the commercialising of agriculture. The impact of this initiative by the state has been felt Africa wide as some countries such as Zimbabwe who have recently came to take a leaf on the success of SWADE.

For each downstream development, SWADE successfully formed a company to operationalise it. The first one was Komati Downstream Development Program (KDDP) to support schemes born of Maguga Dam in Piggs Peak. The next one was LUSIP I (Lower Usuthu Smallholder Irrigation Project) born of Lubovane Dam in Siphofaneni. The latest one is LUSIP II and LUSIP III is on the cards. The success of LUSIP I gave rise to two proposed projects, that is, LUSIP II and III. This project is so successful that the poorest of all communities around the country have been pulled out of poverty through smallholder schemes born out of this project (ESWADE, 2020f; Eswatini Ministry of Agriculture, 2018).

2.3.2.1 Food Production in Eswatini

Small Scale

As reported by the Eswatini Statistical Office, Eswatini is made up of 30% urban population and 70% rural population. For a long time, the Eswatini's Annual Economic Review reports that the rural population mainly depends on subsistence farming or seasonal employment on agricultural farms. Small scale farming output is directly dependant on the amount of rainfall for each year. It therefore goes without saying on why the year 2015/2016 experienced less than 60% (Central Bank of eSwatini, 2022) output because of the El Nino drought. The annual report from the National Maize Corporation highlighted that the 2016/17 farming period experienced exceptional yields on maize cereals production. For 2017/2018, the production surpassed their expectation due to the exceptional amount of rain received.

Large Scale

Large Scale farming typically includes the sugar belt in the Lubombo Region such as Ubombo Sugar, Mhlume and Simunye, Ngonini for Citrus and Banana, Thambuthi and all the co-operative schemes managed by SWADE under the downstream projects.

Bodies Involved in Agriculture

The Vision 2022 Strategy Document mentions food security as one of deliverables. The Komati Downstream Development Projects (KDDP), Lower Usuthu Smallholder Irrigation Project (LUSIP I & II), LUSIP-GEF Sustainable Land Management Project, Innovative Beef Value Chain Development Schemes and High Value Crop and Horticulture Project (HVCHP) all of which are managed or implemented by Eswatini Development and Agricultural Enterprise (ESWADE) (ESWADE, 2020f).

SWADE has successfully implemented these community projects under KDDP, and LUSIP I. LUSIP II, LUSIP-GEF Sustainable Land Management Project, Innovative Beef Value Chain Development Schemes are in progress. With the downstream developments, pack house plans have been developed to support or receive the produce from the various constituents that have been empowered. Such Pack houses are already functional especially for Siphofaneni where several of the produce types are already being received and kept in a non-perishable state for export (See Figure 2-5).

Figure 2-5: Location of pack house Hub Zones around Eswatini. Source: ESWADE (2020f)

From the foregoing, one can see that SWADE in conjunction with the Ministry of Agriculture specialises in establishing infrastructure, training of communities, kick starting the production, handing over to communities and lastly providing oversight once projects are established. The marketing is done by the National Agricultural Marketing Board (NAMBOARD) who guarantees that the products being farmed have a guaranteed market (NAMBOARD, 2020).

Agriculture is the mainstay of the Kingdom of Eswatini. Commercial agriculture is carried out on both titled land (farms) and SNL which has been prepared for irrigation through resettlement. Although there is no proper documented statistics of both commercial and subsistence farming, most emaSwati lives are changed daily through

agriculture. The country has invested hugely on commercial farming through the Eswatini Agricultural Development Enterprise (ESWADE) which focuses on building waterbodies and downstream development through training of farmers and conversion of SNL into productive farmland through resettlement schemes. This started in early 2000 when Maguga Dam was built and the farmers downstream of the Nkomati River benefited through sugar cane farming and cash crop farming. The farm produce has since diversified since the Lower Usuthu Irrigation Project which has changed the lives of emaSwati when different types of produce are grown for export such as vegetables, fruits such as bananas and avocados. Figure 2-6 depicts some projects addressing the African common challenge of rural-urban migration through the commercialisation of agricultural projects in the rural areas.

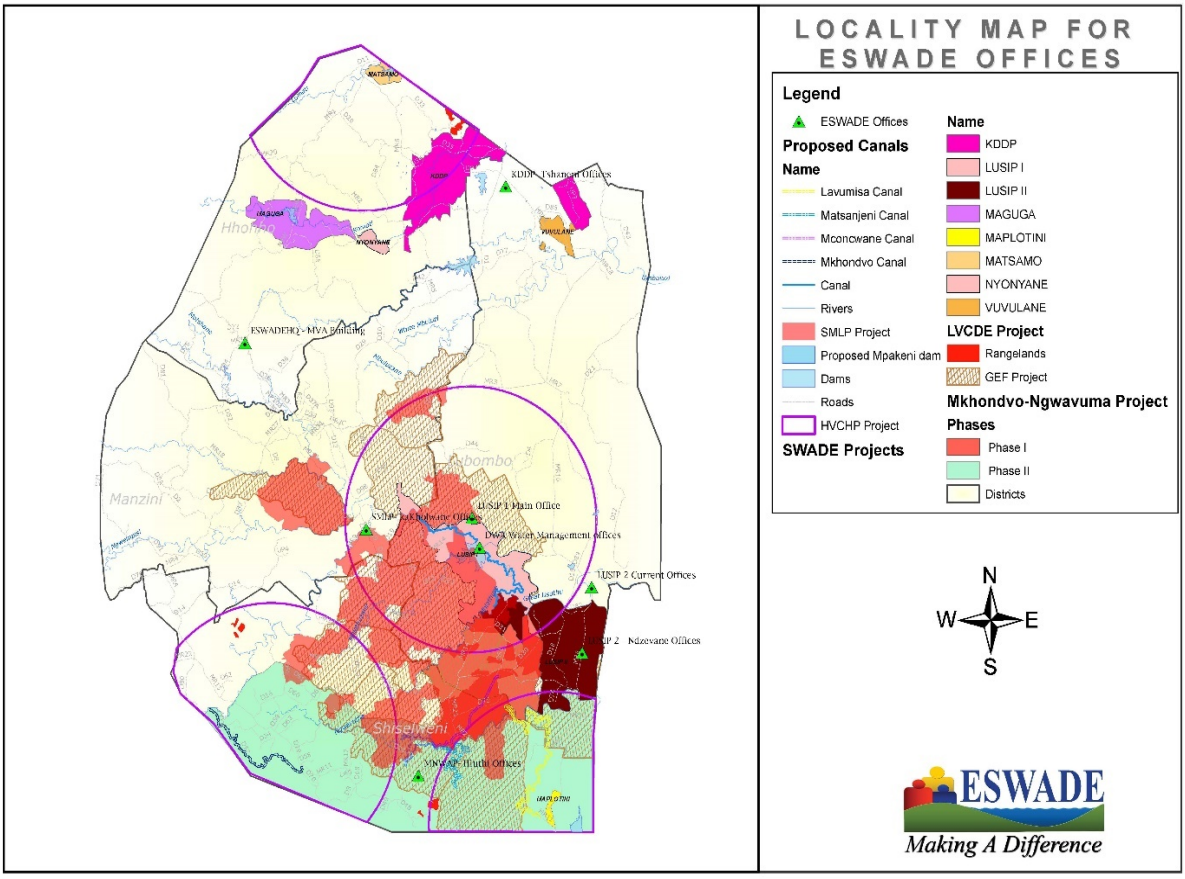


Figure 2-6: Map Showing the Locations of Areas Impacted by ESWADE Across the Country ESWADE (2020f)

Komati Downstream Development project (KDDP)

Located in the North-Eastern Hhohho and Northern Lubombo Regions as shown in the map in Figure 2.8 and Developed in the late '90s, KDDP was established to manage water resources to 6 000ha of irrigable land benefiting well over 20 000 people affected by the development (on Swazi Nation Land) through associations. According to SWADE, the project development area was 27 000ha benefiting three constituencies (Mhlangatane, Lomahasha and Madlangampisi) made up of ten chiefdoms (Nkambeni, Madlangamphisi, Sidvwashini, Mafucula, Malibeni, Sihhoye, Mangweni, Mpofu, Nhlanguyavuka and Nyakatfo). The main objective of the development was poverty alleviation through water as a catalyst in commercialising farming (ESWADE, 2020a).

Furthermore, the key project targets achieved included 31 000 people being final beneficiaries, 27 farmer companies established and operational, 6 036ha of land developed (5 446ha under sugarcane and 590ha under alternative cash crops) with 1 482 people employed by the farmer companies (FCs). FCs have a total of 2 283 shareholders, 60km gravel road constructed, 11 dip tanks relocated, 9 potable water schemes constructed supporting a total of 24 591 people (3 513 homesteads) with clean water and 28 714 (4 102 homesteads) people with sanitation facilities, 3 nurseries established, Over 40 livestock projects established, 27 tunnels for crop production were constructed, Total loans disbursed to FCs were over E211 Million.

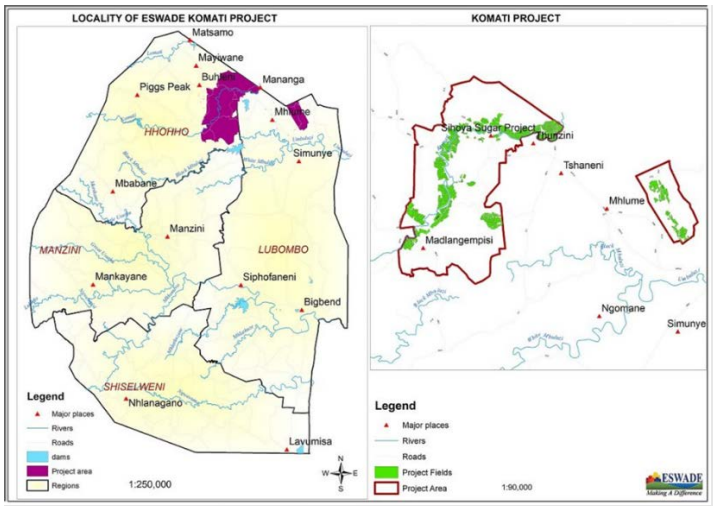


Figure 2-7: Komati Downstream Development Project Location Areas. Source: ESWADE (2020a)

The Lower Usuthu Smallholder Irrigation Project (LUSIP I)

Following on the success of the Komati Downstream Development Program (KDDP), the Lower Usuthu Smallholder Irrigation Project (LUSIP I) was developed to further similar objectives through the construction of three dams to form an off-river storage reservoir for 155 million cubic metres of water. The main canal and distribution system constructed below the dam, together with on-farm works, was designed to irrigate a net area of 11 500 ha. A total of 2 600 households, representing 15 300 people, benefited directly from the project (ESWADE, 2020b).

Benefiting from this project are the following Chiefdoms: Madlenya, Ngcamphalala, Shongwe-, Gundvwini-Lesibovu, Mamba-Mamisa, Bulunga-Mahashulane and Mphumakudze-Mphaphati. ESWADE reports that the project has created a total of 60 farmer companies focusing on sugarcane and banana benefiting 20 118people or 2 874 homesteads. A total of 6 115ha of land has been developed with 5 045ha under sugarcane and the remainder being banana and other alternative cash crops. There were 6 portable water schemes benefiting the same number of homesteads with sanitation facilities while 14 646 people or 2 740 homesteads benefited from clean water facilities.

Table 2-4: Impact of the ESWADE Downstream Development projects on affected communities - Source: SWADE 2015/16 to 2020/2021 Annual Reports

PROJECT	Households with Access to portable water				People with access to portable water				Households with access to Sanitation facilities				People with access to household facilities			
	2015	2017	2018	2021	2015	2017	2018	2021	2015	2017	2018	2021	2015	2017	2018	2021
LUSIP I	2186			3 300	15302				2771				19397			
LUSIP II	0			2 259	0			14279	152				760			
KDDB	3513			4 102	24591				3665				25742			
TOTAL	5699	6 420	8138	9 661	39893	43767	57381	63658	6578	7 075	7 932		45742	49221	56239	62216

As of 2020, the funding portfolio of downstream development program lead by ESWADE stood at E5.2billion impacting 80 000 people in 3 of the 4regions of the kingdom. The disbursement of the fund is shown in Table 2-5 below.

Table 2-5: Funding Portfolio for all projects led by ESWADE from 1997 to 2020. Source: ESWADE (2020f)

PROJECT NAME	FUNDING	FUNDERS	STATUS
Komati Downstream Development Project (KDDP)	US$142.857 Million	African Development Bank	Complete
Lower Usuthu Smallholder Irrigation Project I	US$ 190.476Million	Multi-donor (Government of Eswatini, AfDB, BADEA, DBSA, ICDF, EIB, IFAD, EU and OFID)	Complete
Lower Usuthu Smallholder Irrigation Project II Extension	SZL 2.3 Billion	Multi-donor (Government of Eswatini, AfDB, BADEA, DBSA, ICDF, EIB, IFAD, EU and OFID)	Ongoing
Lower Usuthu Sustainable Land Management Project	US$ 4.293 Million	IFAD, GEF	Complete
High Value Crop and Horticulture Project	€ 13.85 Million	EDF	Ongoing
Smallholder Market-Led Project	US$ 21.1 Million	IFAD, GEF	Ongoing
Innovative Beef Value Chain Development Scheme in Southern Africa Project - Eswatini	US$ 1 000 000.00	IFAD	Complete
Fruit Tree Production and Marketing Project	US$ 2 Million	ICDF	Complete
Water Harvesting and small Dams Project	€ 300 000.00	EDF	Complete
Mkhondvo-Ngwavuma Water Argumentation Project	SZL 7.1 Billion	African Development Bank	Procurement

The Lower Usuthu Smallholder Irrigation Project (LUSIP) II

Funded by African Development Bank (AfDB), Arab Bank for Economic Development in Africa (BADEA), Kuwait and European Investment Bank (EIB), the Lower Usuthu Smallholder Irrigation Project (LUSIP) II was phase 2 of the LUSIP project carrying on from phase 1 and the mandate remained unchanged but rather was building on the success of the original program.

The project started in 2016 and its completion was 2022. The target population for this program was about 13 460 in the Lower Usuthu Basin area of Eswatini through an environmentally and culturally sustainable process. Phase II extended the Main Canal South (MCS) to service irrigation blocks in the greater Matata area; a net irrigation area of 5 728 ha, consisting of about 5 273 ha of new irrigation area and 455 ha of

existing irrigation brought under command of the LUSIP II canal system (ESWADE, 2020e) (see Figure 2.8).

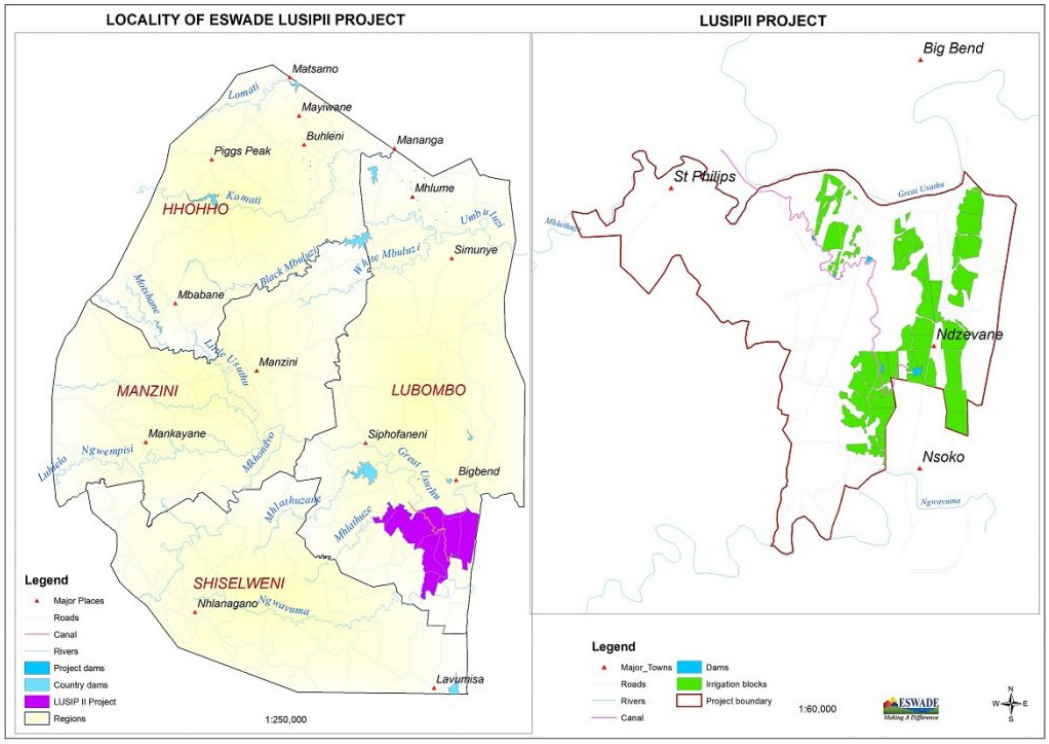


Figure 2-8: LUSIP II Location Area. ESWADE (2020f).

The anticipated targets for the program include the Main Conveyance System (completed), 27 Farmer Companies Established, Secondary Distribution System (underway), On-farm development (underway), 6 potable water schemes (PWS) planned for construction and will benefit a population of 15 925 people and 2 337 homesteads. Already 2 schemes have been established (Phafeni PWS & Gamula/Mahlabaneni PWS), and finally, 843 Ventilated Improved Pit latrines (VIPs) already constructed benefitting 5 901 households.

The Eswatini Livestock Value Chain Development Programme (ELVCDP)

Another program developed by ESWADE was the Eswatini Livestock Value Chain Development Programme (ELVCDP) which was targeted at economic growth and job creation as well as poverty alleviation especially for smallholder farmers through the

strengthening of livestock value chain as guided by the National Agriculture Investment Plan and the EU-Africa Alliance. The project was funded by the EU and planned to run from 2020 to 2025. Five chiefdoms located under five Tinkhundla have been planned to benefit from this project namely Gangakhulu chiefdom under Lubulini Inkhundla, Luhlekweni chiefdom under Somtongo Inkhundla, Bambitje chiefdom under Matsnjeni Inkhundla, Zinyane chiefdom under Mhlangatane Inkhundla and Mlindzini chiefdom under Gege Inkhundla (ESWADE, 2020c).

The project target output includes Improved smallholder livestock productivity, with a more inclusive management of assets at community/household level, Inclusive, efficient, and transparent markets for livestock products, and New Small and Medium Enterprises (SMEs) established, jobs created in a more sustainable and inclusive value chain.

The High Value Crop and Horticulture Project (HVCHP)

Based on the success of the KDDP, LUSIP projects, The High Value Crop and Horticulture Project (HVCHP) is built alongside the infrastructure that came with the two projects. This project's principal focus is to support high impact commodity chains focussing on horticulture. This has been planned to be achieved through market identification, production planning, production, packing and collection of products. Cold storage facilities have been built around the country as support infrastructure in strategic locations, one in Msahweni (Northern-Hhohho), Nhlangano, Lavumisa and Mphumakudze. Others are in existing national markets that is, Mbabane, Mahlanya and Manzini all built as hubs for the project where there is potential to achieve the intended purpose, that is, localised production around existing small harvesting structures. The project is intended to produce high quality produce targeted to national, regional and international market which is expected to ultimately meet the goal of poverty alleviation, food security and ground roots economic empowerment. According to ESWADE, 785ha of land have already been developed for horticultural crops.

Mkhondvo-Ngwavuma Water Augmentation Project

According to SWADE, Mkhondvo-Ngwavuma Argumentation Project is funded through the African Development Bank and has been planned to cover a total area

of 30 000ha in turn benefiting 100, 000 people while creating 10 000 jobs. Seven chiefdoms in the Shiselweni Region are earmarked for this project. Mpakeni Dam will be built to provide water for irrigation schemes and reinforce water systems management and coordination (ESWADE, 2020d).

SWADE further highlights that the project is located across to places, that is, the Mahamba Gorge within the Mkhondvo River and Ngwavuma River. The two locations are linked through a transfer pipe/canal taking water to the Mpakeni Dam located in the Ngwavuma River catchment. The water will be further processed from the Mpakeni Dam through either pipelines or canal to Sigwe, Mconcwane and St Philips irrigation areas as well as Greater Lavumisa.

The objectives of Mkhondvo Ngwavuma project are: 1. to integrate smallholder farmers into the commercial economy through the establishment of farmer-managed irrigation companies; 2. to strengthen bulk water administration and infrastructure maintenance; and 3. to attain efficient project coordination and management.

2.3.2.2 Property development in Eswatini

RESIDENTIAL

A study by Finscape in 2014 notes that only 4% of emaSwati invest in property. The Centre for Affordable Housing in Africa (CAHF) in its study from 2014 reveals that there is a challenge of property and quality rental affordability among emaSwati. The study further reveals that there is a shortage of quality rental accommodation in the range between E4 000 and E8 000 per month. Eswatini National Housing Board (SNHB) has been mandated by government to provide affordable housing to its citizens.

SNHB Chief Executive Officer as interviewed by Eswatini Property Review (2020) confirms that there is currently no policy guiding the provision of affordable housing in eSwatini thus there is no subsidy to improve the accessibility of affordable housing in the Kingdom. This has resulted in the exclusion of the Lower to Middle Income emaSwati in the Housing Market. The housing market has braced itself of the benefits of the recently enacted Sectional Titles Act and will surely welcome its long-awaited operation.

The long-term profitability of the residential property market will remain to be seen, especially because it is competing with Swazi Nation Land (SNL) which is free although it has no financial security. This is because people prefer to reside on SNL and commute to work daily. And it can be observed that it turns out to be cheaper to commute to work daily rather than renting in town except of course for those who are further away from town. Even then, there is evidence of individuals commuting as far as Siteki to Mbabane (85km), Nhlangano to Mbabane (125km). These individuals have the benefit of sleeping at home daily, yet they use public transport.

COMMERCIAL

The commercial office space is facing possible challenges of an increase in vacancy due to potential occupiers such as government parastatals acquiring and building their own office space. This is slowly rendering developers such as the Public Service Pensions Fund and Eswatini National Provident Fund at risk of having unoccupied office buildings. Unless some form of policy comes into effect to control and restrict parastatals from building their own office space, the profitability of the commercial office space in the major urban centres (Manzini and Mbabane) to plummet or crumble. For the commercial property sector to remain profitable, government needs to do something which would protect the long-term sustainability of the industry.

INDUSTRIAL

The Kingdom of eSwatini is not an industrial economy although there is a small contingent of Chinese (Taiwan) garment factories targeting the American market, garment factories for the South African Department Stores like Woolworths, Truworths, Jet, Edgars as well as Bidvest which manufacture both protective clothing and cleaning materials. Other factories include food processing plants such as Eswatini Fruit Canners, sugar and sugar products, Conco (Carbonated Drinks Concentrates), Eswatini Oil Industries (Cooking Oil), as well as wood processing plants.

2.3.2.3 Legal Aspects of Land Tenure in Eswatini

Comprehensive research carried out by Armstrong (1986) established that there are three sources of land law in Eswatini. The study was supported by the Ministry of

Agriculture feeding into a broader study on "Changes on Agricultural Land Use: Institutional Constraints and Opportunities". It can be noted that officials at the different government ministries refer to this study as the most recent academic source material that details the compilation of laws relating to land in eSwatini. The three sources of land law as identified are statute law, Roman-Dutch common Law and Swazi Customary Law.

Statute law applies to all land, common law to Title Deed Land, and customary law to Swazi Nation Land. Statute law is legislation in the form of Acts of Parliament, Independence, King's Proclamations (of the High Commissioner prior to Orders-in-Council, and a few statutes of the Transvaal in force prior to Eswatini's becoming a British protectorate. Roman-Dutch common law on the other hand is the law imported into Eswatini by the colonialists. Swazi law and custom theoretically applies to all Swazi Nation Land and to all Swazis.

There are three types of Land Tenure in Eswatini: Private Tenure Land (PTL), Swazi Nation Land (SNL), and Crown (or Government) Land. The legal basis for this tri-partite division lies in legislation passed at the time of concessions. The study by Armstrong (1986) highlighted that:

a) The study documenting the laws governing land in Eswatini was the first, an in-depth study was proposed to assist in guiding land policy.
b) The study identified active statutes and dormant ones after which it recommended omission of outdated statutes or those not in use anymore.
c) The whole suite of land laws of the Kingdom needs revision to eliminate all forms of contradiction, vague and ill-defined laws.
d) An increased scarcity of unused land, hence the need for pro-active planning and management of land use. Speculation Control and Farm Dweller's Acts were taking that direction to address the challenges.
e) Lack of political will to review outdated laws and enact new laws as may be required.
f) Existing laws that are not enforced such as the National Resettlement Policy, 2003.
g) Security of tenure, further research and investigation was recommended.

h) Landlessness of eligible Swazis, further research and investigation was recommended.
i) Evidence of farms bought by government and by the king in-Trust have not been handed over to chiefs. Evidence points to the fact that such farms are ran privately limiting their availability for traditional tenure arrangements.
j) Land leases: the study recommended that further investigation should be carried out on leases.

The Constitution of the Kingdom of Eswatini Act, 2005

The introduction of the Constitution in 2005 was thought to be coming with the long-awaited solutions related to land management challenges faced by the country. Clause 212 of the Constitution of the Kingdom of Eswatini allows for the establishment of the Land Management Board which was to be operationalised by an Act of Parliament. Clause 267 of the Constitution stipulates that the board shall be appointed within six months of the Constitution coming into force. Clause 268 on the other hand speaks to the alignment and bringing of existing law into conformity with the constitution. Below are the extracts of the relevant clauses that speak especially to the Land Management Board. In addition, it is important to note that the eSwatini legislation refers to the King as "*iNgwenyama*". The eSwatini term iNgwenyama is retained throughout the narrative below as traditionally known in eSwatini.

> *Land Management Board.*
>
> *212. (1) There shall be established a Land Management Board (hereafter in this section referred as the —Board and shall consist of a chairman and not more than four members appointed by iNgwenyama.*
>
> *(2) The members of the Board shall be appointed for a period of not more than five years and shall be eligible for re-appointment.*
>
> *(3) The allowances payable to the members of the Board shall be charged on the Consolidated Fund.*

(4) The Board is responsible for the overall management, and for the regulation of any right or interest in land whether urban or rural or vesting in iNgwenyama in trust for the Swazi nation.

(5) In performing its functions, the Board shall be accountable to iNgwenyama.

(6) Subject to the provisions of this section, the Board may regulate its own procedure.

(7) A member of the Board (including the chairman) may be removed from office as far as may be practicable on the same grounds and in like manner as a member of a service commission under section 175.

Draft National Land Policy, 2009 and the Draft National Land Act, 2013

In response to the requirements of the Constitution, the relevant ministries drafted relevant legislation while the boards were appointed into position as well. It is unfortunate that to date all other boards as per the requirements of Clause 267 of the Constitution are in place and have been operationalised through an Act of Parliament except for the Land Management Board (LMB). It is sad to say that to date, the LMB, 18 years later does not have legislation. Two pieces of legislation were drafted, one in 2009 (Draft Land Policy) and another in 2013 (Draft Land Act) but were not successful in being signed into law. Another supporting piece of legislation is the Tinkhundla Administration Bill of 2014, which remains in draft format to date. Most of the issues of land remain a challenge as the eSwatini government does not have the legislation and regulations to manage issues of land. The Draft National Land Policy, 2009 was drafted jointly by four ministries, that is, the Ministry of Natural Resources, Ministry of Agriculture, Ministry of Housing and Urban Development and Ministry of Tinkhundla Administration. The objective of the Draft Land Act 2013 and the Draft National Land Act 2009 appear to be responding to similar challenges, that is, the challenge of having a law guiding the management of land resources in Eswatini. Although the Draft Land Act of 2013 appears to be independent of the Draft National Land Policy 2009. One would have expected that this bill is super ceding the Draft Policy as a formal departure. Once passed into law, the Land Bill would repeal nineteen Acts as

guided by section 129 the Draft Land Act 2013. The Draft Land Act (2013:1), states that the main objective of the Bill is to:

(a) operationalize the Land Management Board as established by the Constitution.

(b) harmonize the land legal regime so that there are no inconsistencies in the various legislation and in particular the Constitution.

(c) establish the Department of Land Affairs to, inter alia, provide secretarial and advisory services to the Board.

(d) establish a Land Tribunal for purposes of adjudicating over land issues.

(e) establish a Land Settlement Fund for purposes of resettlement and mitigating landlessness, squatting and farm dwelling.

(f) establish a Sub-Division Committee for purpose of centralizing the function of approving sub-divisions in urban and rural title deed land.

(g) repeal land related laws that are inconsistent with this Bill; and

(h) *Provide for other matters incidental thereto.*

Both draft pieces of legislation recognise the current structure to the land tenure system in eSwatini.

There are number of pieces of legislation that are a part of the over-arching land law as guided by clause 268 of the Constitution. A brief outline of each is provided below.

The Crownlands Disposal Act, 1911

According to the Act, Crownlands is described as any land in Eswatini for the sole and exclusive occupation of Africans as proclaimed by the Minister or any land expropriated by the Government of Eswatini excluding any land under of the Minister by virtue of section 21 of Part V of the Concessions Act No 3 of 1904 and Land proclaimed to be Crown or Government land dealt with by the Mbabane Township Proclamation. The sole purpose of this Act was for the alienation of land from the state for either private or public use.

The Land Speculation Control Act, 1972

The purpose of the Act was to provide for the speculative land transactions involving persons who are not citizens of Eswatini.

Human Settlement Authority Act, 1988 as amended in 1992

This act is fairly new, although it was enacted in the pre-constitution era. This act provides guidance in the establishment of townships or urban areas. The Authority has been established primarily to:

(a) assist the Government in formulating policy relating to human settlements and uphold and give effect to such policy.

(b) ensure the orderly development of existing and future urban and rural settlements.

(c) establish a finance mechanism for ensuring the supply and maintenance of approved shelter and infrastructure throughout Eswatini, which shall include a system of revenue recovery.

(d) prepare appropriate standards for the provision of land, shelter and infrastructure by both private and public developers.

(e) regulate real estate transactions including the standardisation of lease agreements, rent control and sale of land and buildings.

(f) encourage and support research in appropriate methods of providing shelter and infrastructure; and

(g) perform all acts and things as are requested by this Act.

National Housing Board Act, 1988

The National Housing Board Act came into operation in 1988, 17years before the Constitution came into operation, the purpose of the National Housing Act was to provide accessible rental housing to the middle-income class of emaSwati. Due to the absence of the Land Act, no amendments of any form have been made to the Act.

National Rural Resettlement Policy, 2003

This Act was promulgated in February 2003, 2 years before the Constitution came into operation. The main purpose for this Act is to restore some harmony and order in the rural settlements where the crisis of land conflicts was increasingly being witnessed. The National Rural Resettlement Policy included sustainable land management and resettlement in rural Eswatini with the following as guidelines:

a) Improving land use in rural Eswatini to enhance sustainable livelihoods;
b) Correction of existing land-use problems through participatory planning;
c) Prevention of future land-use problems through universal introduction of better land planning tools and compliance mechanisms in rural areas to ensure that land use is done wisely and that plans will be respected; and
d) Ensuring that affected people are at least as well-off after resettlement as they were before.

Research that informed the formulation of the policy found that 75% of the population depended on agriculture while prime arable land constituted 10% of the total land coverage of the country and the balance shared between grazing, settlement, forestry, urban and other small uses. According to the study, land use was spread between the following, subsistence crop agriculture was about 12%, commercial crop agriculture 6%, grazing land 69.1%, plantation forestry 8% and the balance on other uses.

The study further revealed that the 1907 Land Partition Proclamation allowed for three major forms of land tenure, namely, freehold title deed holdings or Title Deed Land (TDL), Swazi Nation Land (SNL) and Concession Land. 80% of the population was living on one third of the total land mass thus putting a huge strain on the available land. This necessitated the need to come up with a system of land redistribution. Most of the land was sitting with minority groups through concessions. There were schemes instituted to restore the anomaly which included the Native Land Settlement scheme of 1946, the Lifa Fund of 1948 (which later became Tibiyo TakaNgwane) and the Land Purchase Programme of 1970 as recommended by the Hobbs Land Commission of

1969. All land purchased through these schemes was registered in the name of Ingwenyama in Trust for the Swazi Nation while remaining Title Deed Land.

Another observation by the study is that there was the absence of land management guidelines such that people were illegally selling communal land which has worsened as of 2022. Although Swazi Nation Land has traditional regulations administered by chiefs, there has been rampant defiance and chiefs allocating land to people in land not designated for settlement.

The Tinkhundla and Regional Administration Bill, 2014

Just like the Land Bill of 2013, the Tinkhundla Administration Bill is yet to be passed into law. The objective of this Bill was to provide the law on the administration and development of Tinkhundla and Regions and the decentralisation of power from Central Government to other spheres of governance to bring it into conformity with the Constitution (Tinkhundla Administration Bill, 2014).

2.3.2.4 Sustainability initiatives in Eswatini

As a signatory of former Millennium Development Goals (MDGs) and later the Sustainable Development Goals (SDGs), the country continues to implement its obligations on sustainability as captured on different reports such as Habitat series. The SDGs are housed under the Ministry of Economic Planning and Development and inputs are received from stakeholders such as the *academia, business community, civil society organisations, development partners, government ministries, non-government organisations, persons living with disabilities, women and the* youth (Eswatini, 2021). To show serious commitment towards sustainability, the country has incorporated the SDGs into the National Development Strategy (NDS) of the country running from 1998 to 2022. The achievements to date have been captured in Annexure A as sourced from the report. One major challenge of the implementation of the SDGs is the financial resources, which in limited supply to the state.

2.3.2.5 Prioritisation of SDGs

Faced with limited resources, there is strong need to prioritise development issues and efforts to attain maximum results in a cost-effective manner considering multiplier effects and means of implementing the goals. The country prioritised and ranked the SDGs giving due attention and consideration to domestic contextual realities and future development potentials. Special attention was given to objective realities prevailing in the country particularly perceived national focus areas for development and prevailing development gaps. In addition, consideration was given to challenges, potential for development and promotion of human development dynamics when prioritizing the SDGs.

The prioritised goals for the medium term are listed in table 2-6. These SDGs had potential for overall growth including possibilities for generating better backward-and-forward linkages, diversification of economic base and domestic supply capacity, export and trade promotion.

The SDGs were classified into three groups: the 'prioritised' which are the focus for the country in the medium term; 'enablers' is the ideal environment or conditions for the implementation and achievement of other SDGs, 'cross-cutting issues' as areas for integration in implementation of the goals.

The SDGs prioritisation process resulted in the following tabular presentation:

Table 2-6: Prioritisation Matrix PRIORITISED GOAL (Source: *Eswatini SDGs Report, 2021*)

PRIORITISED GOAL	CROSS CUTTING ISSUES	ENABLERS
2. Zero hunger	1. No poverty	10. Reduced inequalities
3. Good health and well-being	5. Gender equality	13. Climate action
4. Quality education	11. Sustainable cities and communities	14. Life below water
6. Clean water and sanitation	12. Responsible consumption and production	15. Life on land
7. Affordable and clean energy		16. Peace justice and strong institutions
8. Decent work and economic growth		17. Partnership for the goals
9. Industry innovation and infrastructure		
1. No poverty		
13. Climate action		

The prioritisation process led to the domestication of the indicators where the targets and indicators were reviewed in the local development context using the following groupings:

i. Poverty sectors (Goals 1, 2, 10),

ii. Social sectors (Goals 3, 4, 5, 16),

iii. Environment (Goals 6, 7, 11, 13, 14, 12, 15), and iv. Economy sector (8, 9, 17).

2.3.2.6 National Climate Change Policy, 2016

The purpose of the National Climate Change Policy is to establish an enabling environment for both communities and investors in taking advantage of opportunities availed by climate change such as activities that alleviate poverty and *building a climate resilient Eswatini.* The UN-SDGs Country report discusses extensively how the country intends to combat the impacts of climate change under SDG13.

The Meteorology Department under the Ministry of Natural Resources and the Multi-sectoral National Climate Change Development Guidelines was core in the formulation of the policy. The following are areas where the Climate Change Impacts can be felt, namely: Agriculture and Food Security; Water Resources; Biodiversity and Ecosystems; Health; Tourism; Energy; and Traditions and Customs. To address the

above challenges, the Policy provides for the National Climate Change Committee; National Climate Change Strategy and Action Plan; and Sectorial Policies and Legislation.

2.3.2.7 Sustainability and the Land Resources in Eswatini

An article that was published in the Times of eSwatini dated 24 June 2020 shows the challenges emanating from the absence of the Land Act. The article reported on a meeting that was held a Lozitha Palace where the issues discussed included grazing lands, wetlands, fields, and road reserves. Regional Administrators and the Land Management Board complained that chiefs are ignoring their warning that they should stop allocating or selling land reserved for specific uses as listed above. Specific issues that were raised is the evidence of the physical loss of wetlands due to the allocation of building rights on non-designated land. The meeting was not conclusive as the ultimate decision must be made by the king. It can be observed that to date, no decision has been made and the unlawful allocation has continued unabated.

In terms of SDGs Goal 6, sustainable water resources are key to meeting the requirements of the UN-SDGs. The performance of government based on the report on 2.3.1.9 above, is not satisfactory and based on the challenges as faced by the Land Management Board, there seems to be no hope of ensuring the sustainability of water resources. If the Land Act remains in draft format the status quo will remain.

2.3.2.8 Towards a sustainable urban growth framework for Eswatini

For the Kingdom of eSwatini to achieve sustainable urban growth; there is need to address the gaps identified and learn from other fellow African countries as well as those developed countries. A study by Sihlongonyane (2003) focused on rural-urban encounters. In this study, the relevance of government policies in managing the Peri-Urban Interface (PUI) around Manzini in Swazi Nation Land was analysed. The argument presented was that given that a whole host of economic activity is happening in this part of Swazi Nation Land it should be incorporated into the urban fabric. The reasons provided for this proposal were:

a) The boom in economic activity is due to the proximity to the urban precinct,

b) The economic activity results in increase in population densification,

c) Population densification which if not properly managed or which has no policy guiding its growth give rise to the need of the following:

    a. Proper sanitation

    b. Proper planning for land allocation

    c. Having executed b. above would result in reduced cost for the provision of a host of services such as Electricity, Communication, Waste Management and Environmental Management.

d) Currently, government programme of action strategy document from 2013 to 2018 as reiterated by the Speech form the Throne in the past five years has put infrastructure development and services as one of goals. This goal goes beyond 2018 to 2022. Infrastructure Services such as electricity, water and communication have been implemented to at least 80% of the geographic area, with electricity services implemented to at least 90% and a target of 100% by 2022 (Speech from the throne 2018-19). The lowveld which has low perpetual low rainfall precipitation is benefiting from the lower Usuthu irrigation scheme, resulting is those communities experiencing clean water.

e) Generally, the population densification in chiefdoms in the Peri-Urban Areas depend on the adjacent municipalities for services such as solid waste disposal. Although the council does not provide the necessary infrastructure such as waste collection vehicles and skips, the community still transport their waste to skips in the nearest townships.

2.4 Summary of the Bills/Constitution and Acts Discussed

In summary, the constitution did provide the base for the establishment of the land related legal framework. The relevant ministries did lead the process in fulfilling the requirements of the constitution by drafting the relevant land related legislation. In general, all the legislation are still in draft format to date awaiting the sign-off by the king into law. Only one requirement of the constitution was met, that is, the appointment of the Land Management Board. Otherwise, all the other requirements

such as the bringing all existing law into alignment and conformity with the constitution remain pending. The Land Act, which is the basis of all land related legislation remains in draft format.

2.5 Chapter Summary

From the literature it is evident that urban expansion prefers to occupy high quality agricultural land, that is, land which is generally flat, with easy access to water resources and proximity to urban areas. Urban sprawl is a global challenge and, due to conflicting suggestion on how best to solve the agricultural land consumption problem from interested parties/groups, their input is not having an impact to the level which one would expect. Determinants of relevant policy to preserve farmland consumption are not the same in different countries/regions, but rather, each country/region should use the most suitable to guide them on the formulation of policy.

It is also evident from the literature that farmland can be used for multiple non-agricultural uses which has a positive contribution to its highest and best use and thereby increasing its value. The growth in urban population creates demand for products and services which translates into investors seeing an opportunity to invest in capital projects for the provision of those needed services. This creates competition for land between food security and agricultural land conversions. Investors see urban land as a better investment than farming which creates a threat for the latter, hence the need for policy to guarantee food security.

Chapter 3 shall document the research methodology employed in this study.

CHAPTER 3

3 RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter (Chapter 2) identified several research authorities around rural-urban linkages such as: Sustainability and the SDGs, Sustainability and the African Cities, Rural-Urban Linkages and Interdependence as well as issues around eSwatini. This chapter documents the choice of research approach and data collection method used in this study. The research question being addressed is, "How can rural-urban linkages be strengthened to engender sustainable urban growth in eSwatini?"

The Saunders research onion (refer to Fig. 3-1) was used in developing the research methodology. The research onion consists of six layers and the process is guided by the following layers namely: 1) Research Philosophy; 2) Research Approach; 3) Research Strategy; 4) Research Choice; 5) Time Horizon; and 6) Techniques and Procedures.

Each of these layers are discussed below in the context of this research.

3.2 Research Philosophy

Research assumptions are the basis for each of the research philosophies. Saunders, Lewis and Thornhill (2009) discusses three main research assumptions while acknowledging that there are other assumptions that may be considered such as Praxeology, etc. For the purposes of this research, only three assumptions have been discussed. These assumptions are the Ontological Assumptions (study area or focus of the study), Epistemological Assumptions (available knowledge) and Axiological assumptions (Objectivism or not being influenced by values and belief or *what are the fundamental values? As a general philosophical theory, it involves a study of goodness, or value, in the widest sense of these terms.)* (Creswell, 2013; Engle, 2008:105; Saunders, Lewis & Thornhill, 2009).

In summary, *"Assumptions are the researcher's tour guide"* Tengli (2020:3) that is, they assist the researcher in answering or addressing all the pertinent issues in relation to one's subject throughout the research journey. The assumption would also be a handy

tool used to justify the overall approach of the research. Creswell (2013) and Saunders, Lewis and Thornhill (2009) identify five research philosophies, namely: 1) positivism; 2) critical realism; 3) interpretivism; 4) post modernism; and 5) pragmatism.

The most suitable research philosophy is determined by the researcher based on one's own beliefs and assumptions. There is not necessarily the best research philosophy for a specific subject (Tsoukas, Knudsen & Press, 2003). Two commonly adopted choices are positivism and interpretivism. Positivism is commonly the underlying research philosophy in quantitative studies. It states that the researcher can observe reality objectively and that there is only one reality that exists independently outside of the observer. Interpretivism is the underlying research philosophy in qualitative studies, and it assumes that the research plays a role in observing the world around them. Reality is unique to each observer, i.e., reality is observed subjectively.

In terms of the three research assumptions, that is, Ontological assumption, Epistemological assumption and Axiological assumption, the research subject being pursued leans more towards Interpretivism Philosophy as it explains the meanings about reality created by humans. The nature of reality or its meaning in this case remains with the observer to interpret. All that is seen is land suitable for agricultural production being urbanised with no one taking control of its regulation; land allocation on farming fields and pastureland for human settlement much against Swazi Law and Custom without anyone taking charge. The Land Management Board which was to provide this regulation and control. Hence, an interpretivist philosophy is the most appropriate philosophy as it seeks to explain the meaning created by humans.

3.3 Research Approach

The research approach is determined from the first ring being the research philosophy. Leading to the third and fourth ring, its choice is influenced by the choice of the research approach . Saunders, Lewis and Thornhill (2009) state that there are three research approaches, namely: induction, deduction and abduction. In inductive research, the theory is generated from the ground up, i.e., from the collected data

and therefore these studies tend to be explanatory in terms of their approach. Deductive research starts with an established theory or set of theories and builds onto it with collected data. These studies tend to be confirmatory in approach.

Abductive research approach is a combination of the two approaches, that is, inductive and deductive research approaches. Inductive and Deductive approach indicate whether the study adopts a qualitative, quantitative or mixed methods methodology. There is a strong link between this choice and the research philosophy and thus the alignment should be clearly visible.

Saunders, Lewis and Thornhill (2009) further applying the research approaches through a flow diagram for each of the three approaches show a standardised structure of the research question and research objective. From the flow structure, one can predict the route to be followed during the research journey. Based on the foregoing, the choice of research approach is the inductive approach.

3.4 Research Design (Methodological Choice, Research Strategy & Time Horizon)

Saunders, Lewis and Thornhill (2009) have classified research design into three steps, viz Methodological Choice, Research Strategy and Time Horizon. Each of the steps are discussed briefly below.

3.4.1 Methodological Choice

There are three methodological choices, namely: qualitative method; quantitative method; and mixed methods. It can be observed that each method follows a distinct path, that is, for example, the sampling method for qualitative approach is non-probability while quantitative uses probability sampling. The research method is Qualitative which uses non-probability sampling method which follows that the research philosophy chosen is “Interpretivism Philosophy” and the research approach is “Inductive Approach” (Saunders, Lewis & Thornhill, 2009). Following on through the follow diagram by Saunders, Lewis and Thornhill (2009), the research strategy is a single case study given that this study seeks to establish the role of the rural-urban linkages in achieving sustainable urban growth in eSwatini through interviews with participants, observations through google earth timeline on the loss of agricultural land, through

human settlements on specific locations, document and record analysis of reports from key government departments (Fellows & Liu, 1997; Gillham, 2000; Tengli, 2020). This is because the research is qualitative as well as descriptive in nature and requires an in-depth analysis of the data which is aimed at presenting the results of the findings in a descriptive way (Orum, Feagin & Sjoberg, 1991).

3.4.2 Research Strategy

The research strategy gives guidance on how the research is going to be carried out (Tengli, 2020). Fellows and Liu (1997) lists seven strategies available to the researcher, namely: Experimental design, survey design, archival research, case study, ethnography, action research, grounded theory and narrative enquiry. According to Fellows and Liu (1997); (Greenfield, 1996); Leedy (1993); Tengli (2020:16), experimental design is the study of the cause-and-effect relationship of two or more variables while survey design (either quantitative or qualitative approach is used) is when the researcher tries to seek answers for "what", "who", "where", and "how much", types of research question. Data is collected and analysed from a sample of individuals. Case study (suitable for qualitative approach) is when the researcher tries to seek answers for "how" and "why" questions (Gillham, 2000; Orum, Feagin & Sjoberg, 1991). Action research (both quantitative & qualitative are used) is a systematic inquiry to address real life problems. The researcher tries to find practical solutions for problems through participation and collaboration with members of a social unit. Grounded theory on the other hand is a systematic inductive method for conducting qualitative research to develop a theory. Ethnography (qualitative approach) is a research strategy adopted to explore cultures and societies. Data is collected through direct interaction and involvement to gain first-hand information from research subjects. Finally, archival research is a systematic inquiry wherein primary sources held in archives are studied for evidence collection or deep understanding.

From the forgoing, the most suitable research strategy is the "Case Study" method. Yin (2003) identifies six types of case studies based on a 2 x 3 matrix, where the 2 represents either a single case or multiple cases and the 3 represents three options of the cases which are exploratory, descriptive or explanatory.

This study seeks to establish the role of the rural-urban linkages in achieving sustainable urban growth in eSwatini through semi-structured interviews with participants, observations through google earth timeline on the loss of agricultural land, through human settlements on specific locations, document and record analysis of reports from key government departments. The single case study method therefore was found to be most suitable for the proposed research. This is because the research is qualitative as well as descriptive in nature and requires an in-depth analysis of the data which is aimed at presenting the results of the findings through thematic analysis and in a descriptive way.

Unit of Analysis

A unit of analysis is the social unit that is being compared with others to identify patterns of interaction among domains, subdomains, or qualitative variables and is at the level of the research question. For the purposes of this study the unit of analysis is the nature, strength, and value associated with the rural-urban linkages in eSwatini.

3.4.3 Justification of the Case Study Strategy

Eswatini was chosen due to the land use challenges observed especially on the peri-urban areas of the Mbabane – Manzini corridor. The research is such that data collection needs to be carried out with specific departments or ministries within government as well as other local authorities. To achieve maximum benefit out of the research, the researcher needed to engage with the research participants being cognisant that:

- Sending questions would not be enough as the nature of the study needs follow-up questions and clarifications based on responses.
- Some background to the current environment and sensitive issues surrounding or regarding the absence of policies,
- Supplementary information may be required to clarify some responses,
- Probing necessary to get in-depth information,
- Open ended questions provide in-depth information,

- Open ended questions allow the respondents to express themselves freely, thus eliminating investigator bias and greater variety of information,
- There is a benefit of supplementary data acquired through observation of non-verbal reactions,
- The interviewer is present to explain unclear questions.

(Kumar, 2011)

The study areas for this research were limited to the urban areas or nodes in the various regions of the country, Eswatini as listed in table 3-1.

Table 3-1: Table showing the extent of the study by region and location (this may be a city or town) of Eswatini.

NO	LOCATION	TOWN/CITY
1	Mbabane/Ezulwini	City
2	Manzini/Matsapha Malkerns	City Town

The Lubombo region has been deliberately ignored as it is the main agricultural hub of the country. Most of the towns are there to provide support to the agricultural precinct. The locations chosen for the study are those considered to be most capable of having a negative impact on the peri-urban precinct and beyond.

3.4.4 Time Horizon

This step is not normally incorporated in the results but deals with data collection at different points in time to understand the changes that happen over time. Bryman and Bell (2015) notes that research can be grouped into two types based on time, namely: longitudinal and cross-sectional. A longitudinal study happens over a period of time e.g., observing a trend over time. A cross-sectional study on the other hand is for a short or fixed period for an example a master's degree research, where the study would be at a specific point in time. The time horizon for this research is cross-sectional in nature as it is fixed by the requirement for the completion of the master's degree.

3.5 Research Tactics (Data Collection & Analysis)

The research tactics includes the data collection and analysis. This layer specifically discusses what the researcher did or intended to do during data collection and analysis. There are several sections in this layer, namely: the data collection section; the specific things done during data collection; and the type of data collected.

3.5.1 Type of data collected and collection methods

Drawing on from the chosen methodology above, being the single case study method, the type of data that was collected was qualitative in nature. Kumar (2011) identifies three main methods of data collection used in qualitative research, namely: semi-structured interviews; participant observation; and secondary sources.

The data for the purposes of this study was collected through semi-structured interviews. The data collection process began with the identification of the suitable departments within government structures. An appointment with the officer in charge (such as the Principal Secretary in the case of a ministry, the CEO in the case of government parastatal or local authority) to request permission to carry out the study was requested. Three ministries were contacted viz the Ministry of Agriculture, the Ministry of Natural Resources, and the Ministry of Housing and Urban Development. The Principal Secretaries advised on the most suitable officers to form part of the study. Having identified the officers, they were contacted telephonically, and the study was introduced. A brief of the study was shared by email including the Interview Questions followed by a request for an appointment for an interview session during which, follow up questions were asked. During the interview, the participants were requested to permit the researcher to record the session. Fortunately, all the participants permitted the interviews to be recorded. During the interview, the participants were made aware that the ethical issues have been dealt with through the university and the researcher has undertaken to abide by the ethical requirements of the study and that all data collected would be kept anonymous (refer to section 3.6 below).

3.5.2 Interview Design

The interview structure was informed by the literature review and the questions were formulated as per table 3-2. A copy of the interview outline may be found in Appendix B.

Table 3-2: Table showing sources informing questions for the Interview guide.

No	Question	Reference
1	3.1 Deliverables As a custodian of land use in the Kingdom, what key deliverables need improvement to allow you to deliver your mandate effectively?	
2	3.2 Rural-urban Linkages Having witnessed in recent years, urbanisation affecting historically active agricultural land parcels; what strategy has been put in place to manage the urbanisation of agricultural land parcels? What data is currently available detailing the land-use, allocation and land-use plans or framework in the Kingdom?	OECD (2008a) Yonglong (2015) UN-DESA (2015) Mylott (2009) Tacoli (2003)
3	3.3 Research Studies made around the world, in particular Mainland China has proven that urbanisation and farming are in direct competition with each other. What has been done (or currently being done) to ensure sustainable urbanisation of such land parcels in the Kingdom?	Song et al. (2015) Chan & Zhang (2011)
4	3.4 Policy The Kingdom, as a signatory of the UN-Sustainable Development Goals; Do the Land Management Policies of the Kingdom match the requirements of the UN-SDGs? What plan has been put in place to update the policies to ensure they are in line with the UN-SDGs. a) What plans are in place to monitor the progress of the implementation of the United Nations Sustainable Development Goals? b) What is being done about sustainable rural/farmland conversions. c) What tools are available to regulate sustainable urban growth? d) What are the future plans in the formulation of policy towards sustainable farming practices?	Sachs (2013) Yonglong (2015) OECD (2008b) Mylott (2009) United Nations (2015)
5	3.5 Determinants of Urban Expansion a) What are the current guidelines used for informing policy towards urbanisation? b) What factors are being considered for the management of urban expansion?	EU DG (2011) Ewing (1993) Mylott (2009)
6	3.6 Food Security a) How has the creation of value through urbanisation affected farming in Eswatini? b) How does commercial farming compare to subsistence farming and its impact on poverty reduction? Is there any statistics available to that effect? c) What policies are in place for fertile farmlands protection and guaranteeing food security?	EU DG (2011) Greif, Dodoo & Jayaraman (2011) MacPherson (2013) Sietchiping Permezel & Ngomsi (2012)

3.5.3 The Sampling Strategy

According to Kumar (2011), in qualitative research, the following has great influence in sample selection: a) ease of access to potential respondents, and b) judgement on how knowledgeable the participant on the subject is, an event or situation of interest. This is quite the opposite of sampling in quantitative research where there is

randomised sampling. Qualitative research tends to explore diversity and therefore sample size and strategy do not matter. Kumar (2011) further notes that non-probability sampling designs can also be used in qualitative research with two differences; a) qualitative studies do not have a definitive sample size and b) "Judgement" plays a key role in deciding the best source of data. All non-probability sampling designs include purposive, judgemental, expert, accidental and snowball. For the purpose of this study, the judgemental or purposive sampling has been used. This type of sampling is where the researcher considers the sources of data which are more likely to provide the required information and be willing to share such information. Initially, 20 data sources were identified but at the end, only 12 were interviewed. Miles and Huberman (1994) and Lapan, Quartaroli and Riemer (2012) agree that saturation data is reached when during the data collection process when no new data is collected. In terms of the case in hand, data saturation was reached at twelve interviews after which the data received was confirmatory in nature.

3.5.4 Data Analysis

Following on from the flow diagram presented by Saunders, Lewis and Thornhill (2009), the data analysis methods for qualitative research are namely: content analysis; thematic analysis; narrative analysis; grounded theory; or discourse analysis. Given that the data collection method used is the semi-structured interviews, Evans and Lewis (2018) highlights that thematic data analysis would be the most appropriate. For the purposes of this research, the data analysis approach used is Thematic Analysis where a total of 12 key stakeholders were interviewed and their anonymity was guaranteed by allocating unique identity codes to each of the theme starting from IN01 to IN12. Braun and Clarke (2012) describes thematic analysis as a method for systematically identifying, organising, and offering insight into, patterns of meaning (themes) across a dataset. Data analysis was achieved using a qualitative data analysis application developed by QSR International commonly known as NVivo (Braun & Clarke, 2012). Specifically, the study utilised thematic analysis. All the data collected was imported into NVivo for analysis, where a six-phase approach was followed namely:

Phase I – Data Familiarisation

Phase II – Generating initial Codes

Phase III – Searching for Themes

Phase IV – Reviewing potential Themes

Phase V – Defining and Naming Themes

Phase VI – Producing the Report

3.6 Reliability and validity of the study

Although Saunders, Lewis and Thornhill (2009) notes that in qualitative studies, it is close to impossible to eliminate biases or to be completely objective during data analysis, Miles and Huberman (1994) further amplifies on same and emphasises the importance of maintaining a high level of objectivity. This is because social studies tend to happen in a real world influencing or affecting people in the process. The following five issues are critical in forming a guide of the reliability and validity of the study. The first one is objectivity which ensures that neutrality plays a key role during data collection and processing. In this case, emotions were kept at bay throughout the exercise.

The second guide is reliability which deals with the consistency of the process of the study across researchers and methods. Reliability was maintained by carefully selecting officials who are experts in issues that deal with land in the kingdom. The third one is credibility which is that guide that establishes if the findings of the study make sense to the reader or its audience. This was ensured by having the interview guide or questions independently assessed by the supervisor to ensure that they are addressing the research question. Transferability is the ability of the study to be generalised or imported to other contexts. The quality of the study ensures that the study forms a base for further similar studies. Finally, the application of the study which is understanding how the study will benefit both the researcher and those being researched. This study will benefit the land policy makers and the country's authorities in understanding the impact of having no policy governing land use and management (Miles & Huberman, 1994).

3.7 Ethical Issues or Concerns

Swisher, Arslanian and Davis (2005) defines ethical issues as those situations that may compromise in whole or in part the respect of at least one moral value that is considered socially legitimate. Ethical issues are discussed extensively by Miles and Huberman (1994) where it is highlighted that voluntary participation, informed consent, anonymity, confidentiality, and no harm should be guaranteed for all participants taking part in the data collection process. The faculty takes such issues very seriously to the extent that researchers are required to attain ethical clearance before embarking on the research. The ethical approval received from the Faculty Engineering and Built Environment Ethics and Research Committee has been attached in Appendix D. Letters of Request to the different ministries as well as approvals from the relevant ministry principal secretaries has been attached in Annexure E & F.

3.8 Chapter summary

In this chapter, the different research methodologies were outlined and then briefly discussed. An interpretivist philosophy was adopted, the research was qualitative in nature. A single case study of the Kingdom of eSwatini was undertaken. Semi-structured interviews were undertaken with government ministries, departments, parastatals and local authorities responsible for Land Use, Planning and Management Policies. The stakeholders were identified based on their perceived responsibilities in as far as land affairs are concerned. The data was analysed using thematic analysis. The following chapter presents the themes that emerged from the data.

CHAPTER 4: RESULTS AND ANALYSIS

4 Results and Analysis

4.1 Introduction

The focus of this study was to establish an effective pathway to facilitating sustainable urban growth in eSwatini through the strengthening of rural-urban linkages in the country. This chapter presents the findings arising from the data collection. Three emerging themes were identified and formulated as well as subthemes under each emerging theme in phase v of the data analysis process. These themes were (1) Land, (2) Rural-urban Linkages, and (3) Sustainability. The tree node map from NVivo is presented in Appendix G to J.

Each of these themes are discussed in detail below.

4.2 EMERGENT THEME 1: LAND

4.2.1 EMERGENT SUB-THEME 1.1: Factors Influencing Current Context

> *IN12: "The issue of land is historical. It originates from the colonial era that land is controlled by two different entities. There is what we call Swazi Nation Land and Individual Tenure holding commonly known as Title Deed Land. Land ownership comes/stems from the arrival of the White Settlers meeting with the Swazi King (King Mbandzeni) to request for concession land for the grazing of their animals such as cattle and sheep, land for mineral exploration, for planting man-made forests, etc.*
>
> *Around 1885, the country came under colonial protection by the British which was called British Protectorate. This happened to Eswatini, Botswana and Lesotho. When the British took over, they found out a lot of concessions in place which to them was chaos and needed urgent attention. They set up a structure to try and improve the land administration by registering all the concessions. A survey was done for all the concessions. Some concessions had dates of expiry and others did not. The British found that there was a big challenge because*

almost all the land now was in one way or the other owned by the settlers rendering the natives without land."

The Swazi nation led by Dlamini settled along the Pongola River (now Shiselweni region) around 1750. On or about 1810, the founder of the state, King Somhlolo (Sobhuza I) took over as king. The King moved the nation to settle in Lobamba (central Eswatini) in 1820 and expanded further Northwards during the 1830s. King Mswati II took over the reins from 1839-1865. The 1850's saw the rapid expansion of the territory into more than double that of Eswatini today which covered Pongola, crocodile river, Piet Retief. Carolina, Nelspruit and White River (which was eastern Transvaal) all the way to the current Pretoria (Boddy-Evans, 2022; Eswatini, 2009). The Boers established themselves in the Eastern Transvaal in 1845 which saw them sign the major land deals in 1846, 1855 & 1866. Two of the deals were during the reign of King Mswati II while further colonisation of Eastern Transvaal post the demise of the King during which they demanded either labour or tax from the Swazis. King Mbandzeni reigned between 1875-1889.

The 1880s saw a windfall of land concessions seekers taking full control of and ownership of the land by Europeans in complete disregard of the Kings authority. During the scramble for Africa, Eswatini remained independent until 1894 when the Transvaal was imposed as an administration. The Organic Proclamation of 1890 was the first legislation to restore order in the chaos caused by the land grabbing by the settlers. The British victory in the Anglo-Boer war in 1899 to 1902 saw them taking over Transvaal and Eswatini became a British protectorate in 1906. A census conducted in 1904 found that there were 86 000 Swazis. Land concessions were formalised in 1904 through an act where the British took over the control of the land like they did with the Zulus.

The British take over resulted in the loss of land by the Swazis an injustice through the law. The administration proposed a resolution of the injustice by making a new law, the *Concessions Partitions Act of 1907* which availed one third of the lad for exclusive use of natives and the balance for commercial development. The legality of this legislation was challenged by King Sobhuza II in the Privy Council in 1923, although unsuccessful, this led to the loss of the trust of the colonials by the Swazi rulers on land issues. The horror of displaced Swazis was worsened by a 1915 Proclamation used for

restricting the purchase of land by Swazis. This continued until 1963 thus keeping all emaSwati on the side-lines of the economy.

The Concessions Partitions Act saw 58% of emaSwati finding themselves within one third of land returned to Swazis while the balance (42%) was on the two-third of the land remaining with the settlers. They were pushed to move to the Swazi Nation Land (SNL) within three years of the Act after which the settler could choose to forcefully remove them or allow them to stay. The process of regaining the free hold and concessions land started in 1946 through the formation of the Lifa Fund, the present day Tibiyo Taka Ngwane where emaSwati contributed one cow per household towards its formation. A Land Settlement Scheme was instituted from 1940 to 1948 by the British Administration. Eswatini Settlement Act No 2 of 1946 (Includes any land registered in the name of Ingwenyama in Trust for the Swazi Nation.

4.2.2 EMERGENT SUB-THEME 1.2: Current Status of Land Use

The land area of the Kingdom is 17 259 km2, which is constituted into four administrative regions, 59 constituencies (Tinkhundla Centres) and 389 chiefdoms. Of the two land tenure systems, Swazi Nation Land accounts for 75% and the remainder is Title Deed Land. Below is a table showing the land distribution according to region including the respective population and Tinkhundla Centres thereof *(Manyatsi & Sigwane: 2019).*

Table 4-1: Population Distribution by region (Source: Government of Eswatini, 2017A)

eSwatini/Region	Area (km²)	Population (2017)	Density (Person/km²)	Annual Growth over 10yrs	No of Tinkhundla per Region
eSwatini	17 349.98	1 098 238	63	0.7	59
Hhohho	3 319.37	320 651	89	1.3	15
Manzini	4 107.85	355 945	87	1.1	18
Shiselweni	3 784.46	204 111	54	-0.2	15
Lubombo	5 838.30	212 531	36	0.2	11

Urban population in Eswatini stands at 21.3% with an urbanisation rate of 1.41%. *(Manyatsi & Singwane, 2019).* The country has four ecological regions namely the highveld, Middleveld, Lowveld and Lubombo Plateau as shown in the map below.

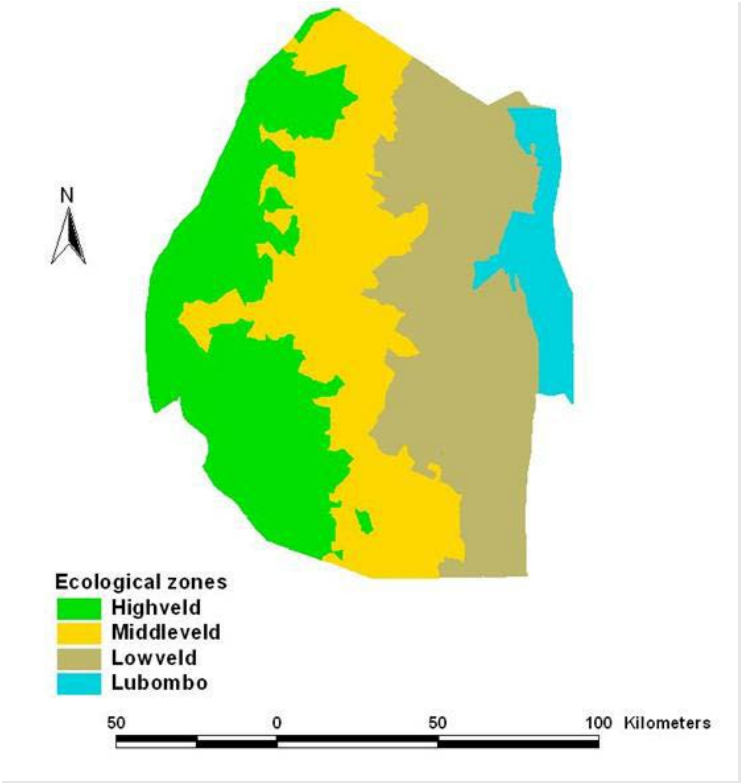


Figure 4-1**:** Ecological Regions of Eswatini. Source: Manyatsi and Singwane (2019)

Highveld: This is the Westmost region in the country. Only 3% of the region constitutes arable land with 10% having fair potential for crop farming. This region is mountainous with steep slopes and experience low temperatures and frost during winter, sour grasses and dominated by poor soils and cattle raising operations.

Middleveld: Generally hilly with isolated valleys is a subtropical region with a drier and warmer climate compared to the highveld. The proportion of the arable land for this region is about 15%.

Lowveld: Lying east of the Middleveld, the Lowveld is the driest of the four regions but contains the most fertile soils at 20% and contains gentle undulating terrain.

Lubombo Plateau: The eastmost region and shares its borders with Mozambique eastwards. Lubombo has 12% arable soils.

Manyatsi and Singwane (2019) reports that crop farming in Eswatini constitutes 11% and the remainder used for communal grazing at 48%. Commercial ranching stands at 19% while commercial forests contribute 6%. About 16% of land is used for residential purposes, natural reserves, reservoirs, orchards, and gardens. The government is as yet to establish a National Land Information System together with a National Information Service Centre for a dynamic database which shall be easy to be kept up to date in real-time.

4.2.3 EMERGENT SUB-THEME 1.3: (Deliverables) Tools Needed to deliver mandate

An issue identified in this sub-theme was the outdated regulations which needed to be updated. The second one was the availability of budget to execute their responsibility. The third one was that the Land Act had remained in draft format to date for the longest of time since the first policy stakeholder engagement document was first drafted in 1986. The Constitution Act of 2005 requires that all legislation enacted prior to it coming into force should be aligned with the constitution. The instruments setting into motion all land related legislation was supposed to be in place within six months of the constitution coming into force. The third issue was that it can be observed though that the transition process has been quite slow due to the absence of the Land Policy.

All participants identified operating without the Land Policy as the overarching Land Legislation as the main challenge. This is albeit the appointment of the Land Management Board. IN07 even referred to the Land Management Board as a "*toothless dog"* as it does not have an instrument to operationalise them. To prove the Boards ineffectiveness, it has failed to resolve multiple land disputes since it's coming into office. IN03 complained that the Board is partly to blame for the delay in the Draft Land Act coming into law. This participant noted that most of the Board Members do not meet the qualification criteria specified in the Draft Land Act. Other reasons for the delay in the Act coming into force are the chiefs. All the participants confirmed in no uncertain terms that the influence wielded by the traditional structures over all major decisions in running the country cannot be underestimated and if ignored can

frustrate important decisions which unfortunately, traditional structures are sometimes influenced by personal interest other than national interest. Any proposal which is somewhat threatening the status quo always suffers maximum level of frustration even to the detriment of national interest or the larger community.

All the participants unanimously left the onus on the researcher to decide or propose a possible way out on the current challenge. The general feeling was that there is a bigger problem surrounding land in the country and there seems to be no easy solution.

Interestingly, IN02 identified the unwillingness from the executive arm of government to have an up-to-date soils database of the country by frustrating any move to mobilise resources towards that exercise. Additionally, although government has pumped financial resources towards the education of its officials, there is unfortunately a lack of support in implementing their newfound knowledge for the benefit of the country. Even policies drafted towards planning and management of land resources for the guarantee of food security are being frustrated. *The result is an educated, frustrated, grounded and unproductive agricultural specialist who will retire with a heavy heart* (IN03). With this also, the participant wished the researcher well in influencing any positive change with the current state in the government administration. The officials availed some policy proposals meant to link-up with the land policy such as the 'Commercialisation of Rural Agricultural Land Bill', 'Tinkhundla Administration Bill', etc. all of which are all collecting dust.

4.2.4 EMERGENT SUB-THEME 1.4: Competing uses of land

In the absence of land policy, there is evidence of uncontrolled land use. This has been observed especially within unurbanized land, that is, Swazi Nation Land and Title Deed Land outside the urban precinct.

4.2.4.1 Swazi Nation Land:

According to IN03, Swazi Nation Land can be divided into three main uses namely: Human Settlement, Grazing Land and Crop Farming Land. These land uses need support services in the form of power, water, communication, public services (decentralised), infrastructure, etc. For the feasible implementation of such services,

proper and structured planning is required. Unfortunately, both policies which are key to the implementation of this exercise remain in draft format. There is apparently no political will to implement them. These policies/legislations under discussion are: 1) The Draft Land Policy of 2009; and 2) the Tinkhundla Administration Bill of 2015. In addition to the forgoing draft policies, there is the Commercialisation of Rural Land Bill which is also in draft format. According to participants, all the forgoing bills were in part meant to address the following issues: Land Disputes; Boundaries of chiefdoms; Human Settlement; Protection of Arable Land; Protection of Grazing Land; Physical Planning (Demarcation/Planning of specific land uses); Commercialisation of Rural Land; and Consolidation of Land Management under one roof as opposed to the current fragmented management under different ministries, that is, Ministry of Agriculture, Ministry of Housing and Urban Development, Ministry of Natural Resources and Ministry of Tinkhundla.

With the above issues still pending address, people are now settled or allocated land not just in grazing land, but evidence shows that chiefdoms are encroaching into Title Deed Land (farms), grazing land, and mountains. People are now allocated land without any support land allocation such as grazing land and land for crop farming and vegetable gardening. IN10 even gave an example of a well-planned chiefdom by the name of Motshane which had a wise and open-minded chief (Chief Sipho Shongwe) who was open for advice. Having been trained on the Rural Resettlement Bill of 2003, the chief invited the Physical Planners from the Ministry of Housing and Urban Development (Responsible for planning and implementing the policy countrywide) to assist with the planning and resettlement of his chiefdom. Apparently, they did a great job hence Motshane is a model of a best planned chiefdom in the kingdom. It is unfortunate that the policy was met with a lot of resistance from other chiefdoms and this good work was stalled. With Motshane Chiefdom, it can be observed that even after the death of Chief Sipho Shongwe, the inner council still follows the same plan in allocating land. One wishes that all the chiefdoms follow the same approach, but unfortunately, without an umbrella Land Policy to enforce all other related policies, that will remain wishful thinking.

The haphazard land allocation is more pronounced in chiefdoms which are sharing a boundary with urban centres. The Google Timelines below shows human settlements in chiefdoms around Mbabane, and Manzini/Matsapha. The odd one among settlement being Motshane Chiefdom at the periphery of Mbabane which shows a controlled growth as opposed to other chiefdoms such as Mpholonjeni, Siphocosini, Ezulwini, Etiyeni in which crop farming and grazing land is already a challenge. The same is noted in the periphery of Matsapha/Manzini where settlement such as KaShali, Lobamba, Ngculwini, Ludzeludze, Kwaluseni, Mfabantfu where grazing land and crop farming is fading away.

MBABANE GOOGLE TIMELINE

MPHOLONJENI

Plate 1: Mpholonjeni in 2003 did not have many homesteads. There was an opportunity for proper planning but never happened.

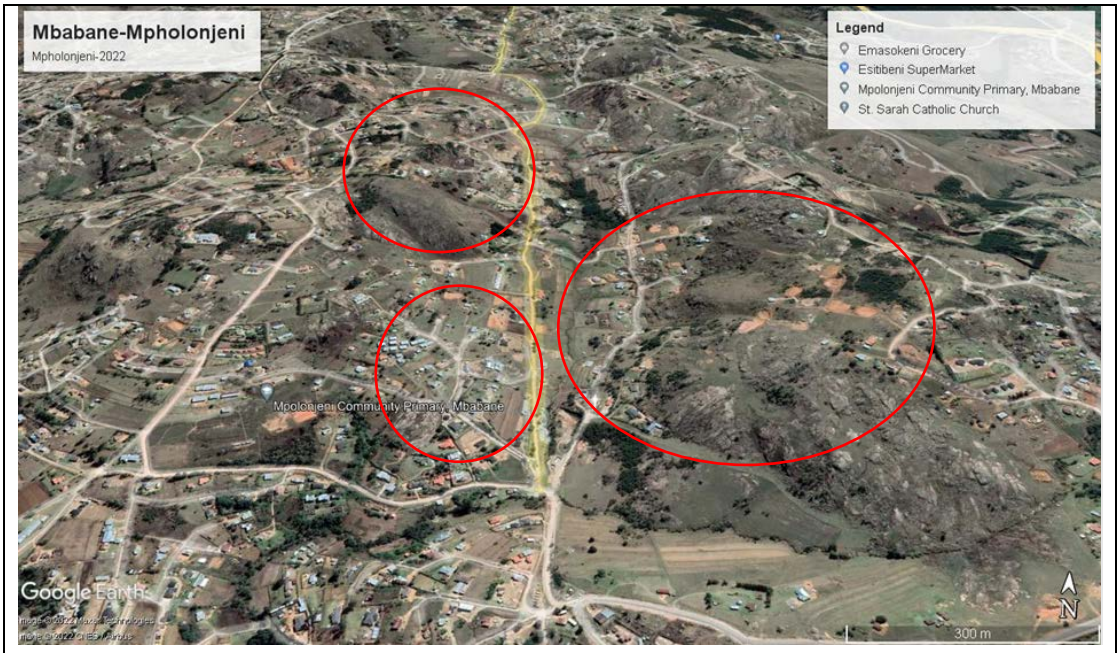


Plate 2: Shows Mpholonjeni in 2022, densely built and showing haphazard allocation of land.

Plate 1 above is evidence of the uncontrolled land allocation on Swazi Nation Land. It can be noted that grazing land has been taken over by new homes with no fields for farming as some homes have been allocated in land previously used for crop cultivation as shown in encircled parts in plate 2. The bigger encirclement shows former land parcels reserved for grazing pastures which is no longer available for animal grazing.

In 2003, as shown in Plate 3, Nkoyoyo was not a built-up area. This area is made up of both title deed and Swazi Nation land. Both land parcels show physical changes between 2003 and 2022 where Plate 3 shows the development status in 2003 and Plate 4 shows the level of development in 2022.

Plate 3 Nkoyoyo in 2003: There were no subdivisions, and the farm was active in cattle raising commercial operations albeit at a small scale.

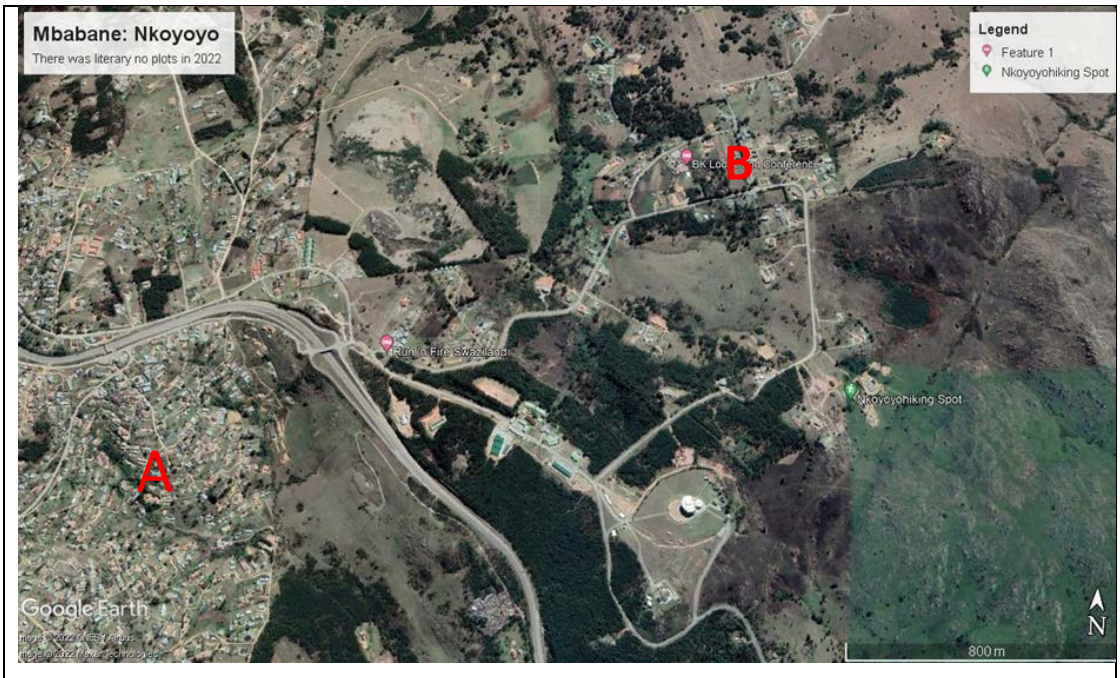


Plate 4 Nkoyoyo in 2022: The cattle raising operations had stopped and the farm had already been subdivided and sold for human settlement purposes

It can be observed that densification through informal settlements on Swazi Nation Land as shown in "A" is evident in Plate 4. A more formal settlement is more relatable

to Title Deed Land where formal subdivision is done and land sold to willing buyers. "B" shows former grazing pastures being lost to plots for building residential houses.

Contrasting Plate 5 and Plate 6 below, it can be observed that there is a notable difference between the two in that Plate 6 resembles a built-up area especially on the circled area. Siphocosini is approximately 13 kilometres from city centre and the indiscriminate land allocation of building land without supporting services such as water sources, grazing land and crop fields is evident across all peri-urban areas.

Plate 5 Siphocosini in 2003: Grazing land was for cattle grazing only and homesteads were restricted to designated land.

Plate 6 Siphocosini in 2022: Land previously reserved for crop farming and pastures has already been allocated for new homesteads and the future does not look good if not curbed.

MANZINI/MATSAPHA GOOGLE TIMELINE

TUBUNGU

Plate 11 Tubungu in 2004: This land was active in commercial farming in 2002 where pineapples and avocados were products.

Similar to Malkerns, Tubungu had for a long time been active in agricultural production with primary focus on pineapples and avocados. Come 2022, all that activity was history, the land had already been developed into an upmarket gated residential estate. The dam previously used for irrigation now used for recreation. This is another evidence that unless there is regulation against the urbanisation of fertile soils, agriculture will not be able to stand against urbanisation.

Plate 12 Tubungu in 2022: This farm had completely changed face and had become a bustling human settlement. By now the crop farming was history.

KASHALI

KaShali was a greenfield in 2003 as shown in Plate No 13. In 2022, KaShali has grown into an informal settlement under a local chief's administration. Unless the ministry of housing and urban development comes to the rescue, this is another settlement lacking in proper planned sanitation services like it is the case with other informal settlement like Nkoyoyo in Mbabane.

Plate 13 KaShali in 2004: there literary no sign of human settlement in 2004 and it was just a vacant land.

Plate 14 KaShali in 2022: Fast forward to 2022, the land is built-up with informal human settlement

4.2.4.2 TITLE DEED LAND:

Still under competing uses of land, there is Title Deed Land. Title Deed Land is made of crown Land, that is, land owned by the state, privately owned farms and land held in trust (not allocated to chiefdoms). Most of the participants voiced their concern with the current status quo especially as far as land administration is concerned. IN10, IN02, IN03, IN06, IN07, IN10 and IN12 all agree on the following issues on land:

1) 1946-7 saw the establishment of Lifa Fund (later converted to Tibiyo TakaNgwane through the Royal Charter of 1968 just before independence) to buy back land taken by the settlers.
2) The plan was to re-integrate this land back into the control of the emaSwati through a tenure called Swazi Nation Land.
3) Unfortunately, some of the land was never re-integrated into Swazi Nation Land but remained under the control of Tibiyo TakaNgwane as Farms or royal assets. This as stated by IN02 has created resentment or bitterness as some families are being displaced or evicted in the name of squatters or encroachment by nearby chiefdoms as most of them believed the land to be their ancestral land.
4) According to the Surveyor Generals Department, all land in the country has been surveyed such that the Deeds office has the registry history of each land parcel in the Kingdom. This survey was done in 1885 when the country came under British Colonial Protection. This, according to IN12, was done as an effort to set up a structure to try and improve the land administration by registering all the concessions.
5) The recently formed Silulu Trust (Controlled or instituted by the King) has caused an uproar around the country's political circles and line ministries. This trust is apparently a top-secret operation only being implemented through a select few ministers and senators. IN07 even presented some evidence where all the government farms with information that has been surrendered to the select cabinet ministers and senators are no longer available for rental to the public for economic activities. So, this makes one understand the dynamics behind the delay in operationalising the Land Policy and all legislation to do with land. Further probing with the officials or participants as mentioned above, revealed that the loss of government

farms under unclear circumstances to Silulu Trust is happening at an alarming rate (further investigation is required to verify the above).

6) The challenge in 5) above is a cause for concern as it contributes to competing land uses as the farms being targeted are those which are arable which should be contributing towards food security. Most of these farms are targeted for other uses than that of farming or investments towards food security.
7) In addition to the above, privately held farms tend to be influenced by economic factors. Without any form of regulation, a private farm in the periphery of a city will be influenced by urbanisation due to its higher and immediate returns. To further fuel the conversion of the farms from agricultural productivity would be the non-existent government subsidies to entice farmers to maintain farming operations. Having some form of legislation in place would give guidance on pockets of land that should be protected from land conversions to more profitable investments and thus guaranteeing food security.

4.2.4.3 URBAN LAND:

The Ministry of housing and Urban Development is responsible for economic activities that happen in the urban precinct. The ministry has facilitated the development of instruments that enable all economic activities on urban land. IN09, IN11, IN01 and IN10 concur that the ministry has successfully implemented policies that deal with urban land challenges. Such policies include but not limited to:

1) Human Settlement Act
2) Sectional Titles Act
3) Housing and Urban Land Act
4) Physical Planning Guide
5) Town Planning Schemes
6) Spatial Development Plans
7) Urban Agriculture By-Laws

According to the participants, the Ministry of Housing and Urban Development has done a fairly good job in implementing necessary legislation for urbanised land. Every town/city is required by law to produce a Town Planning Scheme and a Spatial Development Plan. In addition to the forgoing, Mbabane City Council has gone as far as developing By-Laws for urban agriculture. All the participants highlighted that the ministry is very strict in ensuring that all urban development's abide by the requirements of the regulations as far as may be required. The only challenge may be that the current urban land policies have not been updated to be in line with the United Nations Sustainable Development Goals which are being implemented albeit at a slow pace and by the look of things it will take some time to be incorporated into the urban Policies.

The environmental laws of the country are assisting to some extent in introducing some element of sustainability in urban developments. The challenge paused by the absence of the Land Policy cannot be overemphasised as all efforts can sometimes be watered down due to some poor holistic coordination.

4.2.5 EMERGENT SUB-THEME 1.5: Policy

The general feeling among all the participants was the lack of political will in having all policies to deal with land issues coming through. Although IN04 and IN03 gave a detailed account of the influence of Prince Mshelevu during his era as the chairman of the Central Rural Development Board (CRDB), they failed to give the intricate operations of his board. Below is a detailed account by IN12.

Prince Mshelevu was popular among the participants as someone who enforced order in the management of rural land in the kingdom. He was chairman of Central Rural Development Board (CRDB) as clarified by IN12. IN12 further gave a detailed account of the history of land management in the country as detailed below. IN12 came in handy as a trusted reference due to their association with the Senior Prince, that is, Prince Masitsela. The CRDB were similar to the Natural Resources Board (NRB). The Natural Resources Board was responsible for the conservation of natural resources in title deed farms of the Kingdom. It oversaw managing title deed land and the conservation of natural resources. Central Rural Development Board (CRDB) oversaw

managing land and conservation of natural resources in Swazi Nation Land. It was responsible for approving schemes as well as resettlements happening in Swazi Nation Land. Other responsibilities included the management of soil erosion, teaching farmers on sustainable methods of farming and for issuing fines where guidelines were not followed.

The Natural Resources Board (NRB) on the other hand was responsible for regulating title deed farms. The regulations included restrictions on farming close to the river, building on road reserve, building close to wetlands. The Natural Resources Act of 1951 outlines all the regulations expected to be observed. According to IN12, the Central Rural Development Board was enacted through the Kings Order in Council of 1954 which gave power to the board to exercise its authority.

> *IN12: What is important here was the calibre of people appointed into the board. During this time, there were very few people who were educated, so there was no clearcut selection criteria into the board. People up to Standard 6 or 9 could qualify for highly technical or managerial positions. Fortunately, those people acknowledged their deficiencies and thus engaged experts to advise them accordingly. People were diligent in executing their duties then, up until the time of Liqoqo, after the passing on of King Sobhuza II. That is when people lost their patriotism and diligence in executing their duties. During those times of turmoil in the Kingdom, positions were more important than the diligence and thus excellence started deteriorating. The Principal Secretaries in the Ministries no longer listen to the technicians, but rather they were more influenced by politicians, that is, ministers.*

IN12 further explained that the Prince Mshelevu Board was very popular especially in the Ministry of Agriculture because this ministry used to house the Land Use Planning Department, and the prince's board used to oversee approving development schemes in the Swazi Nation Land. They used to be passionately involved with planning of settlements including farming and grazing land. They used to supervise and enforce the implementation of every scheme, making sure that each chief follows the implementation plan exactly as planned. If the chief was found to be deviating from the plan, they would charge him in terms of the Swazi Administration Act which created the CRDB and thus gave them power to prosecute any uncompliant chief.

At initiation, the CRDB used to operate based on technical advice and later lost its effectiveness. This board at a later stage in the 80s lost track and started focusing on politics hence they lost their effectiveness and purpose of their existence. Like all the other boards during Liqoqo era (the time between the demise of King Sobhuza II and the installation of King Mswati III), they started ignoring or side-lining technical advice. They no longer worked hand in hand with the Ministry of Agriculture and they bossed themselves over the ministry and assumed themselves to be more powerful than the ministry. They began to have an attitude towards professionally drawn Land Use Plans in favour of politically motivated plans. They failed to understand that the plans were based on surveys done to allocate the land in the most appropriate manner separating farming land from grazing land and human settlement according to the land potentiality. This chaos started in the 80s after the demise of King Sobhuza II.

By the look of things, if political influences did not take over, the existing land laws at that point in time were sufficient to maintain order and harmonise the land uses, given the power both SNL and TDL boards had in the management of land issues. The political interference was the downfall of these boards which were good for the country.

The biggest blow to the survival of these boards was the Land Management Board who used the constitution to take over authority even though they did not have the instrument to be operational. The LMB although backed by the constitution could not resolve chieftaincy disputes. On the contrary, the Central Rural Development Board (CRDB) was able to resolve all forms of chieftaincy disputes. The CRDB was active until the constitution era later lead by the secretary to the board a hardworking and patriotic Mr Ben Sibandze (commonly known as Mshamndane) who was also influential in managing natural disasters in the country until the millennium. The board was led by Prince Mshelevu since the 1960s until his demise in the 1980s. Similarly, the CRDB was constituted by a not so qualified individuals but during the pre-political influence era they used expert advice profitably as opposed to today. Most of these people were appointed based on loyalty to the king which is the same with the Land Management Board.

The Land Policy was first drafted in 1992 by the team which constituted Mr Albert Mhlanga, Mbuso Nkhambule and Burnet from Land Valuation. This was first purported

in 1986 when the Land Authority proposition was first mooted when a new ministry was introduced, that is, the Ministry of Natural Resources and Energy in 1985. The ministry was composed of Land Use Planning from the Ministry of Agriculture, Surveyor General, Geology, Physical Planning from Home Affairs, Land Valuation from the Ministry of Agriculture, Water Resources from the Ministry of Works. That is when the idea of Land Authority came about. Out of that discussion was also born the Human Settlements Authority, Environment Authority and the third one was Land Authority which to date is still to pass. Just after some years, Land Use Planning reverted to the Ministry of Agriculture. Meteorology also was reallocated to the Ministry of Works. Now, this disbanding of the Ministry of Natural Resources disturbed the process of the formation of the Land Authority as now the officers pushing the agenda were now scattered into the different ministries. All the Authorities that passed are operational and still have their legislation to date.

It can be observed that Physical Planning is sitting under the Ministry of Housing and Urban Development while Land Use Planning is sitting under the Ministry of Agriculture which does not make sense. One would have expected the two departments to be under one roof. The participants at the Ministry of Agriculture revealed that they are responsible for planning land use as informed by scientific means making sure that highly fertile agricultural land is protected. Unfortunately, they do not have some regulation to back them. The draft policy was done, but unfortunately it did not pass to be a regulation.

One of the reasons for failure of the policy going through was the competition between urban and rural land. The challenge is more people consider urbanised land as more valuable than agricultural land and they are more akin to motivate for urbanisation than food security. The highly fertile farms need to be protected especially for food security. If the country had the necessary regulation, the whole of Ezulwini Valley should have been protected as it is highly fertile agricultural land. The same applies to the whole of Malkerns as available data shows that it is the best agricultural land in the Kingdom. The foregoing pockets of land should have been bread and butter land of the whole country. Competition has though alienated these pockets of land for building structures or as urban land.

It is very unfortunate that the Human Settlement Authority was not prepared to consider the recommendations by the Ministry of Agriculture, that is, building infrastructure and other developments should avoid fertile soils. The Ministry of Agriculture has not been receiving political support from government by formulating relevant policy to encourage food security. The Human Settlement Authority fails to acknowledge that when development happens through urbanisation, arable land is lost permanently. The challenge is that the Human Settlement Authority are not using a similar criterion to evaluate land for production. Ideally there should have been a neutral tool for identifying the potential for each land parcel and its conclusion or decision be taken as final and everyone abides by it. This would only be possible if all land was managed through one single policy or legislation that is Land Policy which is to date in draft format. The Human Settlement Authority views land from creating value through capital investment as opposed to the fertility of the land in agriculture. The sustainability of their action is not incorporated in their equation for urbanisation. The Commission even proposed that the Human Settlement Authority do consider the possibility of urban agriculture, and such proposal fell on deaf ears. The proposal was that there should be patches of land that should be zoned 'Urban Agriculture' and restrict all forms of construction on such land parcels, unfortunately it could not be accepted. The same should have been followed especially in places like Malkerns. A practical example is where Malkerns Square has been built, a highly fertile and productive agricultural land. The pineapple that used to be farmed in this land is now history. This land had just disappeared due to the absence of Land Policy. Without Land Policy and legislation to govern the use of land in the country, it is very difficult to control the use of land in kingdom. If one can forecast a twenty-year horizon, the existing farmlands shall possibly be history and all the land shall have converted to urban development.

Hughes (1972) made a detailed study of the land tenure system from pre-independence as detailed in Section 4.3.2 in this chapter. It can be observed though that there are piecemeal policies enacted during the colonial era and some post-colonial era of which most of them have been overtaken by events. these said policies are still in force as they have not been superseded or amended. Policies that have

been given attention and reviewed as necessary are mostly to deal with urban land such as Town Planning Schemes, Spatial Development Plans and Byelaws and regulations to manage urban growth. It can be observed though that the overarching policy is outdated and need to be reviewed to align with the current trends and demands of modern cities in which emphasis is mainly on sustainability as informed by the United Nations Sustainable Development Goals.

The lack or absence of land policy in the country has been a key challenge among all the participants as this policy is seen as the ultimate solution to the challenges faced by the country on issues of land management. The constitution clearly specifies the boards and policies that need to follow after the constitution comes into force. The constitution further specifies the period by which the boards come into force and the process to be followed in implementing the policy review. It can be observed that some other boards have been implemented as guided by the Constitution Act of 2005 with an exception of course of land related policies and regulations.

4.2.6 EMERGENT SUB-THEME: 1.6 Challenges due to no Land Policy

The constitution of Eswatini Act of 2005, Clause 267 lists the boards and commissions that should come into place within 6 months of the constitution coming into force. The observation is that the Land Management Board still lags seventeen years later and still counting (Eswatini, 2005). There is no sign of having the Draft Land Policy signed into law any time soon. The general feeling of all the participants is that any regulation that is meant to root out the anarchy has remained in draft and has not been passed into law. The challenges resulting from such an anomaly is evident to all but unfortunately, there seems to be no political will to operationalise such regulations. The Tinkhundla Administration Bill of 2016 has also remained in draft to date. Coincidentally, this bill is meant to restore order in the use of land as well by harmonising and documenting the boundaries of all Tinkhundla and chiefdoms and give guidance on resolving disputes but unfortunately it has remained a draft document.

IN08 suggested that farmers in the country are being neglected by government by not providing sufficient support through subsidies such that local farmers remain

uncompetitive as compared with South African Farmers resulting in them being pushed out of business due to competitive pricing on imports. Government does impose tariffs on some selected produce available locally, but then the challenge becomes the pricing, the consumer is forced to endure the much more expensive local produce.

4.2.6.1 CHALLENGES ON SWAZI NATION LAND

Swazi Nation Land is the most affected due to the unavailability of the Land Policy. The chiefs have departed from the traditional requirements of land allocation (IN12).

The general observation of late (IN12) is that the foregoing guidelines are no longer adhered to hence disputes will arise due to; say, undefined boundaries, blocked access, etc. Very common is the allocation of building land on fields and grazing land. Land is now allocated without the due consideration of the community concerns leading to unnecessary disputes. Worse enough, land allocation even encroaches onto title deed land which results in court action from the farm owners who would be addressing an issue of squatters resulting from the negligence the chief with his inner council.

IN07 cited that peri-urban areas such as Ngculwini in Manzini, Mpholonjeni in Mbabane and KaShali are suffering unstructured settlements with no services due to no Land Policy. The Commercialisation of Swazi Nation Land Bill 2017 was put together specifically to address such challenges but unfortunately it did not go through as well. IN09, IN06, and IN11 also confirmed the observation by IN07. IN10 further observed that the vacuum created by the absence of Land Policy has also encouraged uncontrolled disposal of land resulting in Human Settlements in peri-urban Swazi Nation Land with no services. People are engaging in illegal practices of buying and selling SNL and there seems to be no one concerned on restoring order in this anarchy. IN07 even indicated that by the time a solution is implemented to the indiscriminate allocation of land, there would already be an irreparable damage to even highly fertile agricultural land hence affecting food security. IN10 quoted words by the former Minister of Housing (Jabulani Mabuza) where he registered his concern that if the sale of SNL is not brought under control, he foresees the whole of eSwatini becoming a

squatter camp (that is the whole country becoming an informal settlement). He was then referring to what is happening in Siphofaneni where the chiefs have turned the chiefdoms into squatter camps. IN10 further noted that only one chief (the late Chief Sipho Shongwe) was able to bring this anomaly under control through the guidance of government physical planners who are there for the same purpose. On another note, there seems to be no political will for government to utilise its human resources for the advancement of service delivery. Instead, highly skilled individuals are frustrated until retirement. It can be noted that the implementing officials are highly skilled with all of them having masters' degrees and they are ready to deliver, but unfortunately, they are not allocated the necessary resources hence they retire frustrated.

4.2.6.2 IMPACT ON TITLE DEED LAND

IN12 noted that the main challenge with urbanisation is that it is destructive in nature, that is, permanent/irreversible changes to the soil characteristics is experienced, and that is the very reason urbanisation should be controlled. The soil texture cannot be restored even if the regulations allow the reversal of a built environment back into agriculture. The impacts of urbanisation on agricultural land can be listed as follows:

a) Soil chemical contamination due to industrialisation
b) Landscape degradation
c) Change in vegetation cover
d) Change in soil properties
e) Change in microclimate conditions

(Hou, Meng & Prishchepov, 2021; Luo, Yi et al., 2021; Luo, Youlin et al., 2019; Marcotullio, Braimoh & Onishi, 2008; Zhou et al., 2021)

All the participants indicated that land has been susceptible to permanent destruction especially in the urban precinct, due to the absence of land policy. The only practical way of managing such a challenge is through legislation. Malkerns, Ezulwini, farms in the peri-urban precinct are victims of such. The Ministry of Housing had to be roped in to manage the sporadic unfolding of farms being lost to human settlements in Malkerns on behalf of the Ministry of Agriculture. There is still no guarantee that the

now agricultural town will sustain into the future since now they are now required to pay rates. One hopes that the rates should be relative to the type of town this is. IN12 and IN07 were both concerned that Malkerns will naturally be lost to urbanisation. The current Malkerns Square is located on a highly productive agricultural land which previously was pineapple plantations. An irreversible destruction to the land has been done and the former glory of the soils will never be regained.

IN02 noted that all is not lost as the Malkerns Town Planning Scheme regulates the minimum size of the smallholdings which protects it from further destruction. Further assistance has been received from the Food and Agricultural Organisation which developed a strategy especially for Malkerns to protect the highly fertile agricultural land/soils.

IN03 had this to say on encroachment of chiefs on neighbouring farms:

> IN03: "*The unco-ordinated management of the land shows its ugly head when chiefs allocate land even in titled land causing unprecedented disputes. A case in point is the one in Sigombeni chiefdom in the Manzini Region, where a prominent businessman in the country (X) is challenging the allocation of people in his farm. One of the inner council members has even died because of the dispute. X tried to get government to compensate him unsuccessfully as government did not want to involve itself in such disputes as it concerns SNL."*

On Land management Board being one of the stumbling blocks towards the Land Policy coming into effect:

> IN03: "The *main stumbling block currently is resistance from the incumbent Land Management Board. They are challenging the involvement of Government in issues of Land. They believe the traditional structures are more ideal in dealing with issues of land. They actually do not want to affiliate to any ministry, but rather be fully independent from government operations while reporting directly to the king."*

IN07 and as detailed by IN06 quoted the Tinkhundla Administration Bill citing that it introduced some ownership right by having all the land surveyed and title and thus enabling it to provide security as follows:

> IN07 & IN06: "The *Tinkhundla Administration Bill proposed that all land parcels in the Kingdom should have some form of title and a survey diagram documented by the surveyor general. Chiefs felt that once a person has title in the land, they won't pay allegiance to the chief which they saw as part of their power being taken away hence a threat. The bill allowed the title holder to use the land as collateral, which is understood that on default, the one owed can take over the land. This is believed to be creating a scenario where the one taking over the land does not need to 'Khonta' and thus the chief loses allegiance. Now the challenge is, how do we come with a Land Policy that is effective while not affecting the chiefs negatively. It is a known fact that when you affect the chiefs, you are indirectly affecting the King, which he would not allow, hence the frustration of the bill. In short, the land tenure system is the one that has some challenges."*

4.3 EMERGENT THEME 2: Rural-urban Linkages

Rural-urban Linkages refers to the flow of (public and private) capital, people (migration, commuting) and goods and services (trade) between rural and urban areas (Florin & Renting, 2015).

4.3.1 EMERGENT SUB-THEME 2.1: Managing Urban Growth

According IN01, local urbanisation is managed through the Urban Government Act. Most of the towns in the country were inherited from the colonial era. Towns that have been declared under the new dispensation are Ezulwini in the 1980s, Malkerns, Buhleni, Siphofaneni, Hlane.

Ezulwini is the major tourist destination of the country. Like it is happening in South Africa, Ezulwini can be matched to Cape town (tourist destination), Manzini to Johannesburg (Industrial Town) and Mbabane to Pretoria as it is the capital city.

Notwithstanding if the land is fertile or otherwise, Ezulwini had to be declared a town because of the tourism vibrancy given that services had to be provided for support. Another justification was Ezulwini's contribution into the country's economic activity or the GDP. These issues can therefore not be overlooked, says IN01.

According to IN01, the benefit of urban expansion is an increase in rates collection. Building regulations apply throughout the country, but it is only in urban areas where it is being enforced. Government has ultimate responsibility to manage land even in the absence of an Act. The ministry of commerce is responsible for industrial land, Government farms under both agriculture and Natural Resources. Matsapha is industrial hence the Ministry of Commerce is responsible but then they do not have a tool, like the Ministry of Agriculture, hence the Ministry of Housing has been given responsibility to manage. This shows the need for all the land to be controlled centrally. The land is currently fragmented. The Constitution says the Land Management Board should be appointed by the King. But practically, that should be polished by the Land Policy. Most of the problems in the country stem from the fact that there is no Land Policy.

IN01 further notes that urban growth commonly happens towards title deed land other than Swazi Nation Land. There are farms owned by the king where he can declare the land urban. There is land owned by the King where he is the chief, headman and umgijimi spread around the country. The Housing and Urban Development Policy does allow for urban agriculture which may not be as extensive. Challenges with urban land are the competing functions. The other consideration is the capacity of the Local Authority as is to provide the necessary services to the expanded territory. The whole country is urbanising at 4% per annum. The ministry measures urbanisation in terms of the modern buildings being built including those in Swazi Nation Land. According to IN02, there is a feeling that:

> IN02: *"recent pronouncement of towns such as Buhleni, Hlane as well as Ezulwini does not seem to have followed the natural growth and adaptation of cities. This is evidenced by the absence of necessary services in such towns. Today government is trying its best to provide the necessary services. There is essentially no plan being followed, everything is just haphazard."*

IN06 noted that, any city's technical and engineering services discourages growth into the peri-urban due to the burden they bring to the already overstretched finances. The city would be required to provide infrastructural services to the newly established urban land while not adding any meaningful value to the city's financial resources.

The Planning and Community Services on the other hand pushes for urbanising of all land pockets in the peri-urban which is directly or indirectly benefiting from the municipal services without paying a cent for them. For example, Mpholonjeni's growth is some form of sprawl as it grows without due consideration of the different land uses such as grazing land and crop farming. There seems to be no planning being followed in the allocation of land. It all looks haphazard. By the look of things, Mpholonjeni desperately needs proper sanitation services, clean water supply, etc which appear be a distance away. Urban boundary extension looks like is the solution to fixing the mess.

IN07 highlighted the challenges that comes with the newly declared towns such as Ezulwini, Malkerns, Buhleni and now Hlane. He said, the urbanisation of agricultural land reduces arable land. 2) the food basket shrinks resulting in an increase in food prices. Exposing many to the vulnerabilities of hunger. The reduction in arable land encourages the use of chemicals to achieve higher yields to meet the available demand at a given point in time. Chemicals are a health hazard people consuming the food. It encourages synthetic or non-organic farming.

> IN09 confirmed IN06 assertion that "*engineers are not willing to expand towards informal settlement as it too expensive to provide services. Their rates do not justify the services".*

The general observation is that settlements in the peri-urban areas want the services and infrastructure provided by the urban areas yet they are not willing to be included as part of the urban area which would require them to pay rates for the services received.

IN10 briefly provided some growth influencers for some of the urban precincts as follows:

Matsapha's peri-urban precinct is overcrowded without infrastructure and sanitation services and is influenced by manufacturing facilities in Matsapha. The main challenge is affordability of accommodation for the workers hence they opt for the affordable accommodation in the periphery. This is so because government has not provided formal and serviced affordable accommodation for these people. These people can only afford one roomed accommodation arranged in a linear fashion like a train commonly called 'Titimela' in vernacular, translated trains in English (IN10).

It is further noted that rural-urban linkages are not visible in the Kingdom as it is in bigger economies. This is so since because towns are pronounced by the king rather than natural growth. The Ministry of Housing and Urban Development would then shelve its plans and scramble to respond to the king's call to provide the necessary services and infrastructure to the newly established town which in most cases does not have the necessary resources or budget. This results in these newly pronounced towns underserviced and development of infrastructure lagging.

Generally, it can be observed that the growth of the newly pronounced towns is influenced by the pronouncement because, prior to the pronouncement there will be no developments. One may be tempted to blame it on government not having the necessary tools in the form of policies and legislation to give direction on urbanisation of rural farmland hence the loss of fertile soils as is the case in Ezulwini. Also of note is that Swazi Nation Land is the most difficult to urbanise, but the king's pronouncement is the magic trick that urbanised Buhleni and Hlane. This is against the backdrop of inability to plan and deliver the necessary services and infrastructure to support such development.

> *IN10 The Draft Land Policy stipulates that urban Land should not exceed 40% of total land in the country. Currently, urbanisation is sporadic in the country and there is no control. The main challenge is that the ministry is not leading urbanisation, but His Majesty is. For example, Buhleni and Hlane were declared towns without any input from the specialists/ professionals in the ministry.*

4.3.1.1 EMERGENT SUB-THEME 2.1.1: Malkerns

IN01, IN09 & IN05 stated that there are reasons for Malkerns being declared a town. They indicated that the Ministry of Housing was assisting the Ministry of Agriculture as it did not have the necessary instruments to control unbecoming behaviour from farm owners where they were subdividing their land and selling for human settlements. The Ministry of Housing had to come in using the Urban Government Act to manage the situation at Malkerns. Malkerns was declared a town so that controls are imposed to assist it in maintaining its agricultural status. The Malkerns Town Planning Scheme states that the town is divided into two land allocations meant to create order in Malkerns such that it continues being an agricultural town. There is a human settlement zone in the centre/core and the remainder, going out of the town is agricultural. Out of the whole land under Malkerns is only about 1% of the total land mass of the town is zoned for commercial use and human settlement. It is very important to observe that, the Ministry of Housing does not have power or authority over Swazi Nation Land.

The Department of Human Settlement (DHU) assisted the Ministry of Agriculture in the absence of policy declared Malkerns a town to assist in the regulation of developmental challenges. This was done to help maintain its agricultural status. It can be noted that by the time of the above arrangement, the damage was already done due to non-regulation where the town had experienced sporadic developments caused by demand for lifestyle estate and residential developments more attractive to the landowners (IN01).

IN01 Further stated that the DHU has been mandated to advance the requirements of the Ministry of Agriculture, such that they would not approve any application for Human Settlement in an agriculture designated land pocket. For lack of any other suitable instrument in the Ministry of Agriculture, the DHU had to step in to close the gap. The development is controlled, such that land designated for agriculture is protected from urban developments.

4.3.1.2 EMERGENT SUB-THEME 2.1.2: Evolution of Urban Centres in eSwatini

IN01 gave a summarised version of the evolution of urban centres in the country. According to him, as previously stated, urbanisation is managed through the Urban

Government Act. Most of the towns in the country were inherited from the colonial era. Towns that have been declared under the new dispensation are Ezulwini in the 1980s, as well as recently Malkerns, Buhleni, Siphofaneni, Hlane. There is always a criterion that is supposed to be followed when declaring a settlement into urban, that is, 1. The availability of Main Road 2. The availability of services, 3. Social services. Notwithstanding if the land is fertile or otherwise, Ezulwini had to be declared a town because of the tourism vibrancy given that services had to be provided for support. Another justification was the Ezulwini's contribution into the country's economic activity or the GDP. These issues can therefore not be overlooked.

On the contrary, IN02 observed that recent pronouncement of towns such as Buhleni, Hlane as well as Ezulwini does not seem to have followed the natural growth and adaptation of cities. This is evidenced by the absence of necessary services in such towns. Today government is scrambling to provide the necessary services. There is essentially no plan being followed, everything is just haphazard.

4.3.2 EMERGENT SUB-THEME 2.2: SNL and Peri-Urban locations

According to IN01, the only time the Ministry of Housing can do something on SNL is when instructed by the King to do so. For an example; in Matsapha; Logoba, and Kwaluseni, the Ministry of Housing does not have jurisdiction over that land. Matsapha boundary extends upto to Sigodvweni, the MR3 Highway is outside Matsapha. Magevini and Tisuka Flats are on Swazi Nation Land. The Eswatini Water Services Treatment Plant is outside the urban boundary. The SNL immediately beyond the boundary is peri-urban land and is characterised by informal settlements, no proper planning of infrastructure and services. IN01 further estimated the night population of Manzini to be about 50 000, while daily population is believed to be about 120 000. The peri-urban settlements have much influence on such populations. Manzini being the centre of the country attracts much of the population from all over the country. The population in the peri-urban areas such as Kakhoza, Sicelwini, Emhlane plays its livelihood in the city although they do not spend their nights there.

IN02 indicated that The Land Management Board, albeit in the absence of the relevant policy, does assist in authorising the allocation of land for business (especially

in the SNL). IIFAD has set-up Climate Smart projects in rural communities and is facilitating the establishment of proxy regulations to effectively manage development within the rural space. The Land Ministry was meant to have ultimate power and control over all land resources and thus managing proper planning and distribution of land resources. The biggest challenge with eSwatini is that land management is fragmented and thus no one or body with the ultimate responsibility and control of land use in the Kingdom. The Ministry of Housing has confirmed having control over urban land only. Other parcels of land are sitting with Natural Resources, Ministry of Agriculture. The gap of the absence of the Land Policy is so glaring such that it is not possible to have a comprehensive Land Development Plan for the whole country.

Peri-urban is not well managed unless the responsible chief takes an initiative to seek advice from the Physical Planners at the Ministry of Housing and Urban Development to assist him in the proper management of the chiefdom like what Chief Sipho Shongwe of Motshane did. Generally, the chaos happening in most of the chiefdoms in the country shows that they are experts in creating chaos in the human settlement on Swazi Nation Land. Siphofaneni is especially suffering from this irresponsible allocation of SNL where SNL is now being allocated to foreign individuals who do not qualify for such land pockets traditionally (IN01).

IN10 proposed that *for a more informative and resourceful background*, it is recommended that Prince Masitsela be included as one of the interviewees. Chiefs' issues are addressed directly through the king, not through government. The chiefs are the King's elders and the king address them so. Therefore, given the status of the chiefs, it is difficult for the king to rule against them in any dispute related to chiefdoms. These Policy gaps also include the boundary disputes between chiefdoms. It can be confirmed that an interview with IN12 fulfilled the proposal by IN10 and it has been detailed under *'4.2.1 Factors Influencing Current Context*.

4.3.3 EMERGENT SUB-THEME 2.3: Research

According to IN07, there is no research instituted by the state being done in connection with land issues. IN06 shared his observation that similar countries like

Botswana have one of the best land tenure systems where the state is the ultimate owner of land where people are given access to a 99year lease and are charged rent. IN07 suggested that the country needs to legislate that if you sell agricultural land, the buyer should know that a certain percentage should remain agriculture. This was the same challenge with Malkerns before the Ministry of Housing came in.

IN11 indicated that several reforms have happened through projects proposed and financed by World Bank. A lot of groundwork has been done by local researchers, but because of the lack of a political will and financial support, some good ideas and proposals have been left collecting dust and not implemented. Where there is no funding, there is no progress.

4.4 EMERGENT THEME 3: Sustainability

Sustainability and Sustainable Development has been used interchangeably to mean the same thing *(Pope, Annandale & Morrison-Saunders, 2004)*. Sustainability, as previously defined in section 2.2.1, is a concept based upon a Three Pillar or Triple Bottom Line model, an interpretation of sustainability which emphasises equal importance on environmental, social, and economic considerations. Thus, can be defined as finding a way to live within the limits of natural systems. *Ibid*

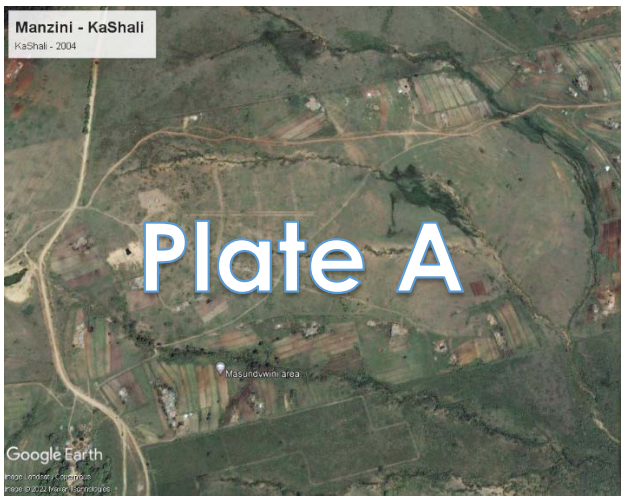
Sustainability assessment on the other hand is a process by which the implications of an initiative on sustainability are evaluated, where the initiative can be a proposed or existing policy, plan, programme, project, piece of legislation, or a current practice or activity.

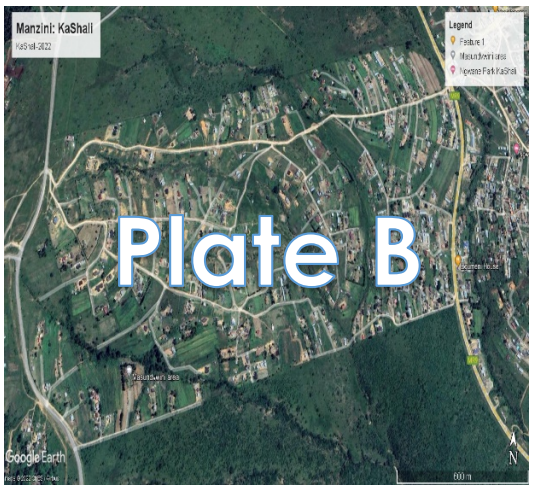
This theme was meant to examine all issues to do with sustainable development in the Kingdom to especially understand how far the country has invested in sustainable systems in relation to land. This theme has the following sub-themes: Land-Use Sustainability, Progress on Implementation of UN-SDGs, Sustainable Farming Practices, Sustainable Rural Farmland Conversions, Sustainable Urbanisation and Food Security.

4.4.1 EMERGENT SUB-THEME 3.1 Land Use Sustainability

Even without doing any form of research, physical evidence shows that the country is heading for disaster without the Land Policy especially on SNL. The anarchy that is being witnessed there where all Swazi Law and Customs are being flouted by the very custodians by allocating settlements on grazing land, farmland or even encroaching even into private farms. Such a mishap is not sustainable especially because built-up land permanently deforms the soil quality (IN12).

IN02 even reiterated the importance of the Land Policy. He listed communities in which the scourge of sporadic land allocation is rife. These communities include Ngculwini and Timbutini in the Manzini Region, Mpholonjeni, Siphocosini, Ezulwini in the Hhohho region, people are selling pastureland to people who want to build houses thus compromising the sustainability of rural farmland. Cattle farmers for example, must wander around looking for pastures due pastureland being allocated to people building houses. Masudvwini, Kashali, Nhlambeni, Mbekelweni, Ludzeludze, Luyengo, are fast experiencing sporadic settlements such that even if the municipality were to be roped in, it will be too expensive to fix. Formalising such settlements is very necessary. Currently this is resulting in informal settlements. Below is a Google timeline of KaShali, an example of such informal settlement over a period of 20 years.





KaShali is located in the outskirts of Manzini and is being influenced by urbanisation. People are finding KaShali more affordable than inner city. Plate A above shows KaShali in 2004. There was literary no form of development. It was virgin land or a greenfield. Fast forward to 2022, Plate B shows KaShali now a built-up area. The painful

thing about it is that there is no proper planning for sanitation services, as well as road infrastructure.

Although the United Nations Sustainable Development Goals means good for the people meant to benefit, unfortunately they are all voluntary and absolutely depends upon the individual countries to allocate resources for implementation. The UN has voluntary guidelines for sustainable development, and they are not enforceable. Guaranteeing soil health is voluntary. UN Global Soil Partnership has what is called Voluntary Guidelines on Sustainable Soil Management (VGSSM). Any country can volunteer to do activities that ensure soil health, and it is not a compulsory exercise. The department is canvassing that UN Global Soil Partnership be part of the FAO Family where the voluntary nature of the partnership can be made compulsory. Success is not on the horizon though says IN07. The Ministry of Agriculture is trying to address SDG No 1 & 2 (To end poverty & No 2 is to end Hunger) by advising against using fertile soils for other uses other than agriculture.

4.4.2 EMERGENT SUB-THEME 3.2: Progress on Implementation of UN-SDGs

The general observation is that the implementation of the UN-SDGs is slow due to it being voluntary. IN07 even suggested that until the UN Global Soil Partnership are incorporated under the FAO Family making it compulsory:

> IN07: *"There are currently no enabling policies for the UN-SDGs, but the department of Soil Sciences in the Ministry of Agriculture has activities planned and focussed on ending hunger and poverty."*

IN10 and IN07 indicated that there are currently no policies per se but rather strategies incorporated with the National Development Strategy (NDS) 1997 to 2022. Strategy 3.4 of the NDS specifically deals with issues that put more emphasises on sustainable agriculture and food security. The strategy is a plan to maximise on the competitive advantage of Eswatini given its highly fertile soils by availing resources for improving agricultural productivity in the country. Such strategies include the Eswatini Agricultural Development Program (SWADE) which has its primary mandate in commercialising agriculture.

> IN07: *"The Ministry of Agriculture also deals with goal number 11. All the goals are applicable for the country. For this purpose, is the alignment of land to the UN-SDGs. The ministry does not take the goals one by one, but they are handled in totality or bundled together. President Museveni of Uganda said, 'I will deal with one goal at a time, I really do not care whether you need me to report on the different MDGs or SDGs. I am currently dealing with the shortage of energy in my country and once I am done, I will move to the next.' He says, he does not have a reason to report to anyone as he is doing it his own way. Energy is a primary ingredient for FDI to create youth employment. For a country to experience realistic growth in industry, it needs to focus on self-sufficiency of key ingredient for a prosperous economy like Singapore did. They focused on strengthening their service industry. Once the key ingredient of the economy has been addressed, everything would just fall in place. For a country to realise sustainability, it needs to customise the SDGs to suite its needs. For an example eSwatini Environmental Authority frowns at developing over wetlands, instead of setting up guidelines for developing over wetlands sustainably without any negative impact. The traditional way of managing the environment guaranteed harmony between the environment and people. As long as there is still no policy in place and its management remain fragmented, disaster is guaranteed in the 2030s to 2050."*

The country has assigned the Ministry of Economic Planning and Development to monitor the UN-SDGs. But unfortunately, there has never been a meeting organised to get input from the different stakeholders. They go and report their ideas to UN without any consultation. They do request input from the individual stakeholders in a fragmented way. There has never been any presentation of each stakeholder in a forum (IN07).

IN08 on the other hand had a different view. As custodians of the UN-SDGs in the country they thought they are doing a great job in their coordination with the different ministries in government as well as other stakeholders. To them it was a big surprise that the stakeholders feel they were left out in the formulation of the report to the United

Nations. This research was such an eye opener to them that they needed to change their approach in engaging the stakeholders.

4.4.3 EMERGENT SUB-THEME 3.3: Sustainable Farming Practices

The theme was meant to link the UN-SDGs and local land policies, trying to understand if there are policies being put in place for sustainable farming practices.

IN07 noted that there are no policies per se, but strategies have been put in place such as Eswatini National Agriculture Investment Program. This strategy was meant to assist agricultural investors as a guide as well as to end hunger and poverty. Most Policies that have been proposed by the ministry are still in draft format. Only the Livestock Policy was successful during the Dr Robert Thwala era, although it has been reported that its formulation was not consultative and thus still needs to be reviewed.

The Ministry does have policies in place such as the Eswatini National Irrigation Policy of 2005 developed by the Ministry of Agriculture, Relevant Ministries, Non-Governmental Organisations and other stakeholders in collaboration with the Food and Agriculture Organisation. This policy was especially put together to give direction on harnessing water resources through dams for irrigation especially on drought prone areas. The Comprehensive Agricultural Policy might be available at the PPCU office. The Ministry's strategic Plan (2018-2023) is also available to give guidance in exploiting the country's natural resources of water and fertile soils to fight unemployment, hunger and improve food security.

IN08 noted that there is still a need for review of existing outdated policies to align with the requirements of the UN-SDGs. There is also a climate change strategy of 2016 that is being implemented. There are also strategies that look into land degradation protection to counter the effects of climate change. There is need to improve the availability of resources for the implementation of UN-SDGs in the country.

IN10 confirmed that Government has embarked on increasing food production to improve food security by leasing out government farms. Unfortunately, this exercise is

facing unnecessary competition from Silulu Trust which is literary taking over all the arable government farms. He further remarked that although t*he* Ministry of Agriculture has been given the mandate to assist farmers by lending them farms to enable them to increase domestic production in order to limit or even eliminate agricultural imports. The truth though is that the South African farmers enjoy economies of scale hence they are able to export at competitive prices as compared to local farmers. To enable the locals to produce competitively, government support is necessary through subsidies. The country needs to be self-sufficient before it thinks of exporting its fresh produce. The country generally has the potential to feed itself with a surplus.

IN10 further notes that unfortunately, in the absence of government support, agriculture is not profitable for the locals resulting in resorting to buying from the grocery shops like Spar, Pick'n Pay or Shoprite which turns to be cheaper in the long run. Currently, because production is not there, running out of space is not an issue in the short-term. Until government changes its attitude towards the support of farmers, the issue of land running out may not be an issue even in the long-term but that would mean dependency on imports.

IN11 & IN09 concur that Mbabane City Council has put together a bylaw for Organic Farming through the Draft Organic Farming Policy. The city has a plan to encourage organic farming or backyard gardens among the city residents.

4.4.4 EMERGENT SUB-THEME 3.4: Sustainable Rural-Farmland Conversions

This theme dealt with available guidelines or policies the state has put in place to manage land conversions of farms to Swazi Nation Land. There are farms owned by Tibiyo TakaNgwane, crownland, land held by the king in trust for the Swazi Nation and finally privately owned farms. It is very unfortunate that only privately owned farms are vulnerable to squatter allocation by nearby chiefdoms. If the Land Policy is not passed into law as quickly as possible, then farms are slowly getting into a situation where they will not meet the minimum thresholds the Ministry of Agriculture specifies for different produce, that is, minimum area of land for a farm to remain profitable.

IN02 made an example of Luyengo as a case in point where farmers did not qualify for maize farming competition as they did not have the minimum land size to qualify. The qualifying land size was a hectare and above. This was another challenge caused by allocating human settlement land into productive farmland and pastureland where allocation happen on grazing land. It has since become impossible to control people who buy land on SNL.

Evidence has shown that it is very difficult or even close to impossible to urbanise Swazi Nation Land. A case in point as quoted by IN07 are SNL land parcels in all the towns called Mangwaneni. Those parcels have remained SNL although the respective town has been forced to service the chiefdom although it has no jurisdiction over it. The town cannot regulate the development that happen over it hence they experience sporadic developments making it a shanty town. Other practical examples include Kwaluseni and Mbhuleni in Matsapha, New Village, and KaKhoza in Manzini.

4.4.5 EMERGENT SUB-THEME 3.5: Sustainable Urbanisation

This theme deals with an Integrated Development Plan which incorporate the relevant Sustainable Development Goals. It is particularly concerned with an IDP that considers Urban Agriculture, Public Open Spaces, Urban spaces that support farms for their services, shopping, financial services and government services. IN11 indicated that land that has been declared Urban tend to be pro-development rather than pro-agriculture in their zoning. The current town planning scheme does not have even one principle of sustainability. The current Building Act for example does not consider sustainability in its approval such as, North - Facing, Solar Energy considerations, etc. Furthermore, Eco-Friendly building models have not been embraced by the city due to the outdated regulation, that is, the Building Act does not allow for it. Regulations that need to be explored for the purposes of sustainable development are especially Land Zoned for agriculture as it is protected against any other use. To convert green spaces and agriculture to any other use is very difficult and not very easy to rezone.

4.4.6 EMERGENT SUB-THEME 3.6: Food Security

Food Security is the second United Nations SDG and it goes hand in hand with goals one and three. Goal One being *No poverty* and the third one being *good Health and Well-being*. The goals in general work in unison given that the whole suite of the goals from 1 to 16 support each other. For example, there is a goal that deal with climate change (Goal no 13) can have huge impact on food security. Another goal is no 6 which is clean water and sanitation which has impact on goal no 3 if not taken care of as well as goal no 11 (sustainable cities and communities). These are just some few examples showing the interlinkages of the UN-SDGs.

IN01 said that agricultural land has low value per m^2 or per hectare than urban land due to its requirement for bigger land pockets to break even. The higher returns generated by urbanisation affect farming negatively especially where there are no laid down controls or regulations to protect fertile farmlands. IN02 on the other hand notes that because of poverty, some of the people in townships will engage in small scale farming for survival, but, once the municipality sets in, it stops them from continuing with their source of livelihoods, which is farming. The municipality's reasoning behind the stopping of agriculture is the pollution believed to be brought by the farming practices which is unfounded (IN11). Municipalities need to include Urban Agriculture in their Town Planning Scheme Post Urban Agriculture.

> IN01: *"Organic farming is one such farming practice that protects fertile soils and is able to achieve high returns due to the non-use of poisonous substances. The country of eSwatini and Kenya has a reputation of having one of the best organic soils, but that opportunity is not being exploited for the benefit of the country economically. The country of eSwatini has a competitive advantage on food production using organics."*

IN05 explained the significance of NAMBOARDs primary mandate as to (1) increase agricultural production and (2) Make farmers to be financially viable (3) Market facilitation which in-turn become a major contributor to Food Security.

> IN05: *"The ministry of agriculture through ESWADE is engaged on building pack-houses in strategic locations around the country to support the farmers by providing storage close by for their fresh produce. The plan is to improve the efficiency in the production of perishables. ESWADE has successfully implemented smallholder irrigation schemes especially in the lowveld. The project began in the early 2000s through the Maguga Dam Downstream project. This project was followed by LUSIP I, II and now III. LUSIP stands for Lusutfu Smallholder Irrigation Program. Quite a number of chiefdoms have benefited from such an initiative from the government of eSwatini as it targets the most impoverished region which has perpetually been affected by drought. Now with the canals being built by government to benefit these chiefdoms has really changed their lives as they now have access to clean water as well. ESWADE has generally been active in expanding crop production in previously disadvantaged rural settlements. Other projects being initiated are known as COMESA Climate Smart which also target drought-stricken areas. The target is making Lavumisa and agricultural town like Big Bend, Simunye and Mhlume food secure."*

IN06 indicated that the city of Mbabane has put together a program for urban agriculture whereby food waste is made into compost for the purpose of farming. He further noted that there is a need for the Land Act to measure and manage the impact of Urbanisation on farming. According to IN07, Food security suggests that you have enough sources of food not necessarily ability to grow the food. Someone in Lavumisa do not have the necessary resources to produce food, therefore, there should be regulation of urbanisation of arable land to ensure maximum productivity for food security.

IN08 complained that productive agricultural land if affected reduces the total land parcel of land suitable for agricultural use. People tend to sell agricultural land for raising money for their livelihood. They sell because most of the time they do not have the capital to make the land productive. Land can be affected by climate change which, when rains decline there is also decline in productive capacity of land. An observation by IN10 shows that eSwatini has been for a long-time dependant on

imports, not that it lacks capacity for sustainability, but only that there is no will to do more. Land is available but it is not exploited to its maximum capacity.

> IN10: *"The soils of eSwatini and Kenya has a reputation of being the best for organic farm products. Such products are in demand especially with grocery shops such as Woolworths Foods. But apparently emaSwati do not take advantage of that market. The question is, why? One may conclude that there is lack of information and empowerment from the part of government. It is very much concerning that such unique and special soils are being converted into non-agricultural use. This type of soils stands to be a competitive advantage of eSwatini if it were to be exploited by the government in office and thus provide the necessary groundwork to empower emaSwati. A practical example of the quality of the agricultural products of eSwatini Sugar, which is only compared to Brazil in terms of quality. The same goes for the avocado produced locally, the quality and taste has no competition. Why are the authorities so hell-burnt on urbanising such high-quality agricultural soils? Why not take advantage of the attractive prices in the market. Studies by the green agenda show that organic produce attract prices as high as five times the normal price of non-organic produce."*

4.5 DISCUSSION OF THE FINDINGS IN TERMS OF THE LITERATURE

Having conducted a literature review in chapter 2 to understand or establish the body of knowledge around the topic, unstructured interviews were conducted. The preceding sections of chapter 4 gave the findings of the study. This section will therefore endeavour to contrast the findings with the literature review and identify any issues of concern as per the findings. This section contrasts the findings from the preceding sections of chapter 4 with literature review in chapter 2 and draws an analysis to arrive at a conclusion. Section 4.5.1 & 4.5.2 below discusses the similarities and differences of the findings from the literature review.

4.5.1 SIMILLARITIES

Competing uses of land and policy challenges:

The slow policy response in addressing the negative effects of urban growth on farm operations and food security has resulted in a strained relationship between environmentalists and farmland preservationist against urban and suburban expansion (Mylott, 2009; Tacoli, 2016). The study confirmed the challenges of not having policies to manage issues of land which has resulted in a number of informal settlements as well as illegal practices especially by chiefs allocating land in private farms. This is threatening food security given that built environment results in permanent deformation of land,

Studies in China (Beijing) show that urbanisation tends to favour land suitable for agricultural production and the factors that influence the choice of agricultural land and urbanisation (Chau & Zhang, 2011; Song, Pijanowski & Tayyebi, 2015). The demand for urban expansion leaves farming vulnerable hence threatening food security. The only way which is being addressed especially by developed nations is policy meant to protect the loss of farmland. In the absence of the land policy, haphazard land allocation is more pronounced in peri-urban areas and continues to create unnecessary competition where productive farmlands are targeted by Silulu Trust for other uses other than food security. NB: IN07 even indicated that the Government Farms Lease Program has been greatly affected by Silulu Trust grabbing the farms by force where the offices are helpless in having the situation under control. IN02 further notes that the new towns such as Buhleni, Hlane and Ezulwini are some examples of the negative impact of the absence of the land policy. This is happening without due consideration of existing legislation on factors to be considered before urban proclamation.

Sustainable Development Goals

Sustainability is a way of living within one's means given the fact that natural resources are limited (Chowdhury & Koya, 2017; Pope, Annandale & Morrison-Saunders, 2004). The Sustainable Development Goals (SDGs) were established to especially address three dimensions namely: economic development, social inclusion and environmental sustainability. The Sub-Saharan Africa is worst positioned in terms of sustainability

ranking and there appears to be a lot of work that needs to be done to improve sustainability (Campagnolo et al., 2016; Topple et al., 2017)).

IN07, and IN10 noted that the country is struggling to implement the UN-SDGs due to the limited financial resources. IN07 further noted that although the UN-SDGs are for the betterment of the world at large, its implementation will remain a challenge given the fact that it is not compulsory. The phenomenon is common with Sub-Saharan Africa as stated in (Campagnolo et al., 2016; Topple et al., 2017).

4.5.2 DIFFERENCES

Policies

Political will is very important in leading the process towards the formation of policies and legislation to give direction and controls. Pope, Annandale & Morrison-Saunders (2004) and Teferi and Newman (2017) all confirm that political will has always been key in the development of policies in the developed world to give direction on urban regeneration and sustainable development.

All interview participants agreed that the land policy challenges in the country are stifling any progress or ground covered through the draft policies and legislation that to date is still in draft format. While other countries are trying their best to have policies in place to manage the use of land, the kingdom still lags behind and this is obviously not sustainable in the long-term.

Rural Urban Linkages

The rural–urban link is improved through greater access to information technology, better road infrastructure, improved education, and changing economic realities. This further result in increased people movement, goods and services, waste and pollution thus blurring the boundaries between the two, that is, rural and urban boundaries (Lichter & Ziliak, 2017; Tacoli, 1998). As rural incomes decrease, rural communities tend to diversify the operations by incorporating non-agricultural income generating activities. Concurrently, low-income groups or households in urban areas may rely on agricultural goods from rural relatives to supplement their income. *Ibid.* Achieving the

sustainable Development Goal of zero hunger by 2030 means considering changes in both rural and urban context (Tacoli, 2016). Amid concerns that rural migrants transfer poverty to urban areas (Tacoli, McGranahan & Satterthwaite, 2015) make the case for citizenship rights and proactive planning for urban growth to reduce disadvantage and poverty. Stopping rural people going to cities only makes poverty less visible, and striping migrants of rights makes it worse (Tacoli, McGranahan & Satterthwaite, 2015).

It can be observed that the increasingly complex connections between rural and urban are beginning to be recognised although it appears to have limited impact or influence on development policy and practices (Tacoli, 1998; Tacoli & Vorley, 2015).

Urban growth of economies, especially those who previously depended on subsistence farming puts a strain to the already struggling agricultural production as it adds more to the existing demand for agricultural produce. The unwillingness of most of the rural population, especially in developing economies, to engage on commercial farming has resulted in the high poverty levels as well as food security challenges. This has given birth to a mammoth challenge for policy makers where they have to try and curb the migration of poverty from the rural to the urban areas where life is even more challenging for those without regular income stream. As stated before, such policies are ineffective, and they have damaging consequences as it also affects the low-income residents rather than just forming a barrier just to immigrants. This therefore renders policies that target immigrants into urban centres not practical due to its effects. Thus, policies that attempt to draw on rural-urban linkages are often unsuccessful because they fail to reflect the true circumstances of the people they are created to help (Mylott, 2009).

Eswatini does not necessarily have policies that manage human migration to urban centres as other countries have done. But rather, people tend to Khonta (Acquiring land using the traditional system) in the chiefdoms in the peri-urban areas or commute to work in town from their rural home daily making it more unique to Eswatini *(Google*

Timeline for Mbabane, Matsapha and Manzini peri-urban areas). This mainly made possible by the size of the country as the economic centres are within +-60kilometres (IN01).

The one thing like all other Sub-Saharan countries is the fact that most rural people are subsistence farmers. The state though has implemented a program called the rural development program through SWADE (Eswatini Agricultural Development Program) where government pump resources to provide irrigation infrastructure and farm inputs (IN05). This in essence increases the commercial farm produce supplied to urban centres in addition to hand work, labour. The difference of this program from other Sub-Saharan neighbours is that the program is unique to Eswatini where the downstream projects are implemented through cooperatives from target communities rather than individuals owning farms.

4.6 CONCLUSIONS

This chapter dealt with the findings and analysis from non-structured interviews. Three emerging themes were identified from the findings namely:

a) Land – where the challenges surrounding the management of land resources both titled, and SNL was discussed as well as the problems that will result from the non-availability of land management tools in the kingdom.
b) Rural-Urban Linkages – discussed the relationship between rural and urban land considering Swazi Nation Land, Title Deed Land and the problems posed by peri-urban SNL and the uncontrolled land allocation resulting in disorganised and human settlements with no properly planned services.
c) Sustainability – dealt with issues around food security, the status of the implementation of the UN-SDGs, the sustainable conversion of farmland and sustainable urbanisation.

Conclusions that can be drawn from the findings were as follows:

I. There is no political will to have the Draft Land Policy passed into law. The general observation is that the dual legislative system has much

influence in this challenge since the traditional leaders (such as the King and chiefs) feel that the Land Policy will remove some of the power from them.

II. The absence of the land policy is causing irreversible destruction to this fixed resource especially where rich agricultural soils are used for human settlements.

III. The Ministry of Housing and Urban Development is diligent in enforcing compliance for Urban Regulations.

IV. Urban regulations are as old as 1963 and thus need to be updated to align with the UN-SDGs and other current legislative regime.

V. The implementation of the United Nations Sustainable Development Goals is at the discretion of the implementing country rendering it ineffective. There was a recommendation to make it compulsory if it's to be made effective.

The following chapter presents the conclusion to this study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5 Conclusions and Recommendations

5.1 Introduction

This chapter draws a conclusion to the research journey right from chapter 1 to chapter 4. Chapter 1 set the scene for the research journey by giving a snapshot of research topic, the research scope, research problem statement and research objectives. Chapter 2 dug deeper into the available body of knowledge for the research topic and then zooming closer home by relating it to the Eswatini Scenario. The third chapter discussed the research methodology by identifying and justifying the most suitable research tool for the topic. Finally, chapter 4 is the main chapter which dealt with the discussion of the findings by identifying the emerging themes where NVivo was used for the exercise. An analysis was drawn from the findings where the findings were compared with the Literature Survey in Chapter 2. This chapter (chapter 5 Conclusion and Recommendations) shall revisit the research objectives and test if they have been met. The next section shall review if the findings are in line with the 'Research Question'. Finally, recommendations shall be drawn from the findings of the research.

5.2 Research question revisited

The research question as proposed in chapter 1 was as follows:

> *How can rural-Urban linkages be strengthened to engender sustainable urban growth in eSwatini?*

The interrelationship between the urban and the rural precinct cannot be denied but the question that lingers is the sustainability of the relationship. A sustainable relationship should be complementary in nature while making sure that the activities of the other does cannibalise the other. There is competition between the two land uses and unfortunately, the closer to the urban precinct a farm is, the more uncompetitive to own or operate it becomes. Urbanisation tends to be more attractive to the farm owner as it draws closer to the urban precinct and the number one temptation is to convert the farming activity into human settlement. This is because, as stated before, the value generated through urbanisation is much higher

as compared to farming in the same period. This therefore justifies the importance of involving the state in managing such a beautiful relationship. The state has to come in to ensure the sustainability of food security.

5.3 Research objectives revisited

5.3.1 Understanding the rural-urban linkages in eSwatini to investigate the creation of value that has direct impact on agriculture.

The research revealed that not only the creation of value through urbanisation had impacted negatively on agricultural land, but also good soils in Swazi Nation Land have suffered as well through informal settlements where land is allocated without due consideration for support allocation such as ploughing fields, grazing land, water sources and recently, the need for power supply. The main aim of this objective was to address the following:

a) The causes of the loss of fertile agricultural soils to urbanisation:
   The literature has shown that urbanisation and agriculture have two major requirements where they both thrive which is proximity to resources such as water and energy, as well as flat land. Fertile land being key enabler for agriculture to thrive is its vulnerability point where permanent structures are built (through human settlements and commercial/industrial developments and infrastructure) is lost forever. The challenge is that urbanisation tends to be more attractive to the investor as it promises higher returns per square metre. Agriculture needs at ten hectares to be able to realise a return to justify one to stay in business. Even then, the return cannot be compared to the return achieved through urbanisation. The only incentive for agriculture to thrive is government support through subsidy and regulation to protect food security.
b) The need for sustainable relationship between Urban and rural land precincts:
   The relationship of the two should recognise that each should benefit on each other's activity. Urban centres provide the market for farm produce, public and financial services as well as retail, training and manufacturing services while the rural and farms provide supplies for fresh produce, labour, market for farm inputs.
c) The influence of urbanisation on Swazi Nation Land:

Swazi Nation Land, especially those chiefdoms located in the peri-urban areas tend to be hugely affected by their proximity to the urban centres. People avoiding property taxes tend to use illegal means to acquire SNL such as buying. The unfortunate challenge is that the pricing is now competing with title deed stands it town with the necessary infrastructure and services. The authorities in the chiefdoms are taking advantage of the situation by charging those in need of land resulting in the traditional processes (of considering water sources, grazing land and ploughing fields and other services) not being followed. This has resulted in human settlements being allocated in portions of land previously reserved for pastureland and ploughing fields. This is a cause for concern as there seems to be anyone taking charge of the situation by bringing order as it used to happen during the Prince Mshelevu era of the Rural Settlement & Development Board. The study revealed that there used to be structures to manage both Swazi Nation Land and Title Deed Land. The Land Management Board currently remains a toothless dog as it it does not have the enabling instrument for it to perform its duties.

d) Loss of vast tracts of land (especially leased government farms) to Silulu Trust: The top secrete trust has its objective only privy to a select few ministers and the executive is believed to be partially the reason for the non-accession of the Draft Land Policy into law. The absence of this law has allowed the continuous looting of the kingdom's resources without a pause in the horizon. This has created anxiety among the government officials responsible for the management of the country's land resource. Unfortunately, there is no solution anticipated in the horizon as long as the status core remain unchanged.

Given the above the objective has been achieved.

5.3.2 Examine the factors responsible for the management of urban growth,

The Ministry of Housing and Urban Development is responsible for giving direction on issues that have to do with urban development and management. Although the governing regulation for city in the country is outdated, as old as 1964, the ministry responsible has been showered with accolades by the relevant officials that the ministry is diligent in enforcing the implementation of the regulations in all the urban

centres around the country. The officers did confirm though that the act is due for review as it is no longer helpful in responding to today's urban needs, which is linked to the UN-SDGs. The study has shown that the country's triggers for urbanisation and urban growth are unique from other countries in that:

a) The king can decide to pronounce a barren land into a town without any studies necessary to inform its feasibility such as proximity of water resources and sanitation, infrastructure, services such as telecommunication as well as support population. Example of such pronouncement are the three new towns namely Ezulwini, Buhleni and Hlane. The study revealed that all these three towns did not have the requisite infrastructure at pronouncement. Currently, the Ministry of Housing and Urban Development is scrambling to facilitate the provision of such services and infrastructure. Although Ezulwini already has attracted the migration of head offices for major parastatals such as Eswatini Revenue Authority (SRA), Eswatini Water Services Corporation (SWSC), Eswatini Communications Commission, Eswatini Railway and Eswatini Energy Regulatory Authority; banks head offices such as First National Bank, Standard Bank shall follow soon; MTN has already taken root, Lidwala Insurance and many more. Of concern is that although such developments are occurring, sanitation infrastructure is lagging behind, Water supply (a reservoir is underway, still at procurement stage). Worst of all, the officials from the Ministry of Agriculture are complaining that fertile soils have been destroyed at Ezulwini and this is a permanent loss to the country. Ezulwini is believed to be linked to Malkerns and the rich fertile soils belt continues all the way through Matsapha and beyond Manzini. This is actually proof that agriculture is in competition with urbanisation and unfortunately agriculture always loose the battle against urbanisation not unless government enacts a policy to protect it. The situation with Buhleni is even worse as currently there is no proper infrastructure, water is either from boreholes or each project is required to build its water supply system. The ministry does not have resources to implement the infrastructure projects for those two newly pronounced towns.
b) Natural Progression: Settlements which have grown to be a hive of commercial activity whether in a peri-urban area or an altogether new urban land are a

trigger for a need for proper planning of services and infrastructure to manage its growth. Government, informed by feasibility studies would then map the growth direction of the town following the growth patterns as informed by the Ministry of Housing and Urban Development.

Given the above the objective has been achieved.

5.3.3 Identify actions required to ensure the sustainable rural-urban linkages.

Throughout the study and the interviews with the participants it can be concluded that the primary challenge for all land problems including sustainable management of the relationship between urban and rural land is the absence of the legislative framework to regulate the use of all land resources for the benefit of all emaSwati. It is painful enough that there are two draft Land Policy documents, one drafted in 2009 and further developed in 2013, but today this has not been signed into law. This therefore confirms that until there is a political will from the executive to accent the Draft Land Policy into law, this will forever remain in draft format and the chaos witnessed around the country due to its absence would get worse.

Given the above the objective has been achieved.

5.4 Revisiting the Aim of this research

The following was the research aim:

> *The aim of the research is to establish an effective pathway to facilitating sustainable urban growth in eSwatini through the strengthening of rural-urban linkages in the country.*

The outcome of the research demonstrates that to achieve a sustainable relationship between urban and rural land, there still exist a major challenge in the Kingdom of Eswatini as far as land regulation is concerned and there seems to be no political will to have it in place. Literature search has confirmed that urbanisation tend to have a competitive edge against rural/farmland hence government needs to step-in through legislation to balance the relationship to guarantee food security by protecting arable

land pockets. The coming into force of land legislation would further restore order in the allocation of land in chiefdoms especially those in peri-urban areas while ensuring sustainability in the use of land resources in the kingdom.

5.5 Recommendations and further research

The scope of the study has concentrated on the Mbabane /Ezulwini /Matsapha /Manzini corridor with further comments on recently declared towns namely Malkerns, Buhleni and Hlane to show the effects of haphazard pronouncement of towns. Based on the conclusions of this study, the following is recommended towards remedying the challenges:

i) The executive be sensitised on the permanent losses of arable land being lost to urbanisation and indiscriminate allocation of land by chiefs for human settlement without due consideration for support services and infrastructure. The only corrective measure to this challenge being signing into law of the draft land policy.
ii) Mass media sensitisation of the nation through civic education exercise to educate the nation to go back to its traditional methods of managing land allocation in Swazi Nation Land where there is a lot of selling and buying of ancestral land meant to pass from generation to generation through Swazi Law and Custom.

Further to this study, it is recommended that research be extended to the following areas of interest:

A) The State of Agricultural Production in the Kingdom of Eswatini: A Study into the progress made in attaining food security;
B) Property Valuation and Real Estate practice in the Kingdom of Eswatini: A study into property valuation trends and its influence on mass valuations;
C) The Eswatini Government Property Stock: A quantitative Analysis of its current state, growth trends, maintenance and recommendations for recapitalisation;

D) Trends in the Human Settlement on Swazi Nation Land and the Evolution of the Land Tenure: A study into the pre-colonial era, colonial era, the post-colonial era and the current trends of settlement processes.

5.6 Conclusion

Having gone through the research process, that is, the interviews, carried out, the findings and analysis, it can be concluded that: most land related legislation that exists in Eswatini were enacted during pre-independence era and have not been updated to align with the demands of the modern trends. Secondly, the Ministry of Housing and Urban Development is doing its best to ensure compliance with the relevant urban legislation (although being outdated) from all urban local authorities and it has a reputation of being punitive if not adhered to. There is also a growing tendency for urban centres to be insensitive to the negative effects of their growth towards arable land which will affect food security in the long run. There is evidence of the non-existence of planning controls in the majority of chiefdoms where land allocation has reduced to human settlements without due consideration for supporting allocations such as pastureland, ploughing fields as well as services such as sanitation, water supply, electricity and other support infrastructure. Finally, the challenges listed above can be blamed on the non-availability of land legislation. The study has confirmed that there is no political will to have the Draft Land Policy signed into law.

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Annexure A – The 17 United Nations Sustainable Development Goals

GOAL	*DESCRIPTION*	*ESWATINI SPECIFIC REPORT*
GOAL 1	*SDG No 1 is to end poverty in all its forms everywhere.in terms of sustainable urban growth, this goal gives direction in terms of growth that protects the poor. The people that forms part of the urban blanket should be empowered economically to the live above poverty line. The urban precinct must provide job security for its inhabitants thus protecting them from the sting of poverty.*	*Population living below poverty line stands at 58.9% down from 63% in 2010. The report further contrasts rural against urban poverty at 70.2% against 19.6%. By region, Lubombo has the highest poverty level at 71.5% followed by Shiselweni at 67.3%. by gender, males stand at 67% against females at 59.4%. A regression from the reported gains is anticipated due to COVID 19 negative impact.*
GOAL 2	***GOAL 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture*** ***Section 4 of Chapter 2 briefly discusses rural-Urban linkages. This section notes that the urban population predominantly depends on rural farmland which supplies them with fresh produce or guaranteed food security. Agriculture is the predominantly source of human livelihood and it forms part of four pillars that sustains human life. These are shelter, food, clothing and air.***	*The report states that the country is failing to meet its target as SDG2 is the country's no 1 priority for providing food security. Maize production stands at 53.3% of its gross consumption requirement.*
GOAL 3	*GOAL 3 Ensure healthy lives and promote well-being for all at all ages*	*a) A decline in maternal mortality rate from 593 per 100 000 in 2012*

GOAL	DESCRIPTION	ESWATINI SPECIFIC REPORT
	Urbanisation is characterised by increased population density which can impact the environment negatively. Urbanisation comes with its positive developments such as infrastructure and services, but together with such developments, there are negative impacts such as increase in waste, sprawl and air pollution as detailed in section 3.2 of this chapter. Sustainability therefore encourages keeping the negative impact to the least possible effect to the natural environment. *A healthy people is a productive people. This goal guarantees or promotes the provision of health services to all classes of people including their well-being. Well-co-ordinated health services are encouraged in the increased densities caused by urbanisation.*	*to 474 per 100 000 in 2018. This is against a target of 120 per 100 000 by 2022 showing a slow decline to reach the target.* *b) There is another slow decline reported on the under 5years mortality rate from 104 deaths per 1000 live births to 74 per 1000 live births in 2017.*
GOAL 4	*GOAL 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all* *Education is the key to open life opportunities. UNESCO (United Nations Education, Scientific & Culture Organisation) encourages that with*	*Government funding availed for primary education saw scholar output grow from 93% in 2016 to 105.2% in 2018, while post-secondary stands below 50%.*

GOAL	DESCRIPTION	ESWATINI SPECIFIC REPORT
	the limited natural resources, the world population ought to live together sustainable. (en.unesco.org/themes/education-sustainable-development) Education for sustainable Development instils in the minds of people to plan and work towards a sustainable future, by changing their behaviour towards issues such as climate change and biodiversity.	
GOAL 5	*GOAL 5 Achieve gender equality and empower all women and girls* *According to the United Nations on sustainable goal no 5, gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable moved. While sustainable urban growth is being pushed, SDG No 5 has to be embraced to realise wholistic sustainability.*	*The country has put in place the legal framework as guided by the Constitution which include the Child Protection and Welfare Act 2012, National Strategy to end Violence (2017 to 2022), Sexual Offences and Domestic Violence (SODV) Act of 2018 with SODV Regulations 2020 and the National Gender Policy of 2020-2030 which specifically caters for gender equity.*
GOAL 6	*GOAL 6 Ensure availability and sustainable management of water and sanitation for all* *Mitigation of urban sprawl moved improved the sustainability of urban growth as the supply of clean water and the sanitation thereof is concerned that is sewage treatment.*	*a) Access to safe drinking water stands at 75.6% up from 67% in 2014. About 67.4% is rural access and 92% is urban population access to clean water.* *b) 46% of the population have access to safe sanitation. Rural population accounts for 47%*

GOAL	DESCRIPTION	ESWATINI SPECIFIC REPORT
		accessibility while 42.3% is for urban population showing a 7% decline from 2014 figures.
GOAL 7	*GOAL 7 Ensure access to affordable, reliable, sustainable and modern energy for all* *Goal No 7 is to reduce the greenhouse gas emissions and the carbon footprint of the energy sector. Urban growth therefore should be guided by policies that encourages sustainable energy sources such as the use of biomass, renewable energy [wind, solar], coal mine methane, natural gas, etc. [www.unece.org/energy.html/). Key areas of work include sustainable resources Management, Deep Transformation of the Energy System, Reducing the Environmental footprint of fossil fuel & Regional Co-operation Projects and Partnerships.*	*The report shows an increase energy access from 69% in 2014 to 82% in 2020. A notable increase on electricity access is on rural from 55% in 2014 to 69% in 2020. This has been made possible mainly due to the Rural Electrification Program (REP).*
GOAL 8	*GOAL 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all* *Increased population density makes economic sense as it makes it easier and cheaper to provide economic services to the population. Urbanisation should therefore*	*a) GDP declined from 2.4% in 2018 to 2.2% in 2019. This the report states that it was caused by the underperformance of the primary sector (mining &quarrying and crop production), from 5.3% to 0.8% in 2019; tertiary sector declined from 2.9% in 2018 to 1.4% in 2019.*

GOAL	***DESCRIPTION***	***ESWATINI SPECIFIC REPORT***
	sufficiently provide stability to the social contract that provide quality jobs, stimulate the economy while being environmentally friendly. [www.un.org/sustainable development/economic-growth]	*b) The rate of unemployment on the other hand decreased from 28% in 2013 to 23% in 2016.* *c) It is anticipated that further decline in economic performance is expected as a result of the negative impact caused by COVID19.*
GOAL 9	***GOAL 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*** ***To guarantee sustainability, infrastructure investment such as transport, irrigation, energy & information and communication technology are key to economic development and employment which is only possible through urban densification.***	***a) All roads that connect major urban centres are tarred. Tarred roads increased from 1 404km in 2016 to 1 503km in 2019.*** ***b) Generally, the implementation of capital projects has been stagnant due to challenges in the fiscus.***
GOAL 10	*GOAL 10 Reduce inequality within and among countries* *In tandem with goal No 1, goal No 10 endeavours to reduce poverty among the least developed countries, landlocked developing countries and small island developing countries. Sustainable economic growth guarantees the inclusion of the underprivileged by involving the three dimensions of sustainable development which are: economic,*	*a) The country is at peace with all its neighbours and other countries.* *b) There is a challenge with a skewed income distribution in the country. This has been given priority in being addressed.*

GOAL	***DESCRIPTION***	***ESWATINI SPECIFIC REPORT***
	social & environmental. Policies to govern sustainable poverty reduction are encouraged through Goal No 10. [www.un.org/sustainable development/ inequality].	
GOAL 11	GOAL 11 Make cities and human settlement inclusive, safe, resilient and sustainable. Sustainable cities and settlements means sustainable urban- rural linkages where there are policies managing urban expansion with agriculture productivity not impacted negatively. Economic growth should be achieved sustainably without straining the land and resources. [www.un.org/sustainabledevelopment/cities].	a) The country has experienced a reduction in informal settlements by as high as 25% improving the livelihoods of people living in cities.
GOAL 12	***GOAL 12 Ensure sustainable consumption and production patterns In this era of increasing consumption of natural resources, sustainable consumption & production is being implemented to promote resource and energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and a better quality of life for all. All challenges of pollution is concurrently being addressed which include air, water and soil pollution to guarantee***	***a) A framework has been established to ensure that the needs of the population are met without compromising the needs of future generations.***

GOAL	*DESCRIPTION*	*ESWATINI SPECIFIC REPORT*
	sustainable rural-urbanrural-urbanrural-Urbanrural-Urban linkages. [www.un.org/sustainabledevelopment/sustainable-consumption-production].	
GOAL 13	*GOAL 13 Take urgent action to combat climate change and its impacts* *With the advent of climate change due to greenhouse gas emissions, sea levels are rising, weather patterns are changing & extreme weather patterns which mostly affect the poorest of the poor. Scalable solutions have been proposed to counter the negative impact of greenhouse emissions. These solutions include, renewable energy and a range other measures that will reduce emissions and increase adaption efforts.* *[www.un.org/sustainabledevelopment/climate-change].*	*a) Climate change issues have been incorporated into the school's curriculum to ensure that they etched into the minds of the younger generation for natural propagation into future generations.* *b) Furthermore, the National Climate Change Policy and Strategy 2016, the National Climate Change Strategy and Action Plan (2014-2019), the National Risk Reduction Policy, and the National Resilience Strategy and Disaster Risk Reduction Plan of Action (2017-2021) has been put together as a framework guiding documents for the combat of climate change and disaster in the Kingdom.*
GOAL 14	*GOAL 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development* *This goal No 14 encourages the careful management of the world*	*N/A*

GOAL	DESCRIPTION	ESWATINI SPECIFIC REPORT
	oceans as they regulate human habitat such as main water, drinking water, weather, climate, coastlines, food as well as the oxygen which guarantees sustainable future. *[www.un.org/sustainabledevelopment/oceans].*	
GOAL 15	*GOAL 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss* *The UN-SDG No 15 notes that currently, thirteen million hectares of forests are being lost every year while the persistent degradation of dry lands has led to the desertification of 3.6 billion hectares. Deforestation and desertification- caused by human activities and climate change-pose major challenges to sustainable development and affected the lives and livelihoods of millions of people in the fight against poverty.*	*Commercialisation of forests has resulted in an increase forest cover from 586 136 hectares in 2016 to 804 350 hectares in 2020.*
GOAL 16	*GOAL 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective,*	*a) The country is regressing as far as this goal is concerned. It has experienced an increase in the number of victims of international homicide from 112 in 2016 to 172*

GOAL	***DESCRIPTION***	***ESWATINI SPECIFIC REPORT***
	accountable and inclusive institutions at all levels *This SDG promotes sustainable development with peace, sustainability, human rights and effective governance, based on the rules of law. The SDG aims to significantly reduce all forms of violence, and work with governments and communities to end conflict and insecurity.*	*in 2021 which has recently been worsened by the lockdowns due to COVID19.* *b) 2016 saw a 73.6% rise in cases of violence from 2015, increasing from 7 729 to 10 504.*
GOAL 17	*GOAL 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development.*	*The National Development Cooperation Policy 2019 as informed by the Aid Policy of 2000 is a framework serving as a guide to relevant agencies of government.*

Appendix B – Interview Outlines

3. INTERVIEW QUESTIONS

Please chose one Government Department (✓)

Ministry of Agriculture & Cooperatives and Department of Human Settlement		Ministry of Agriculture & Cooperatives		Land Management Board		Chiefdom	
eSwatini National Housing Board		Municipal Council of Mbabane		Municipal Council of Manzini		Ezulwini Town Board	
Matsapha Town Board		Malkerns Town Board		NAMBOARD		SWADE	
National Maize Corporation (NMC)							

3.1 Deliverables

As a custodian of land use in the Kingdom, what key deliverables need improvement to allow you to deliver your mandate effectively?

3.2 Urban-Rural Linkages

Having witnessed in recent years, urbanisation affecting historically active agricultural land parcels; what strategy has been put in place to manage the urbanisation of agricultural land parcels?

- What data is currently available detailing the land-use, allocation and land-use plans or framework in the Kingdom?

3.3 Research

Studies made around the world, in particular Mainland China has proven that urbanisation and farming are in direct competition with each other. What has been done (or currently being done) to ensure sustainable urbanisation of such land parcels in the Kingdom?

An Investigation into the Impact of Urban Growth on Sustainable Urban-Rural Linkages: A Case of eSwatini

3.4 Policy

The Kingdom, as a signatory of the UN-Sustainable Development Goals; Do the Land Management Policies of the Kingdom match the requirements of the UN-SDGs? What plan has been put in place to update the policies to ensure they are in line with the UN-SDGs.

a. What plans are in place to monitor the progress of the implementation of the United Nations Sustainable Development Goals?

An Investigation into the Impact of Urban Growth on Sustainable Urban-Rural Linkages: A Case of eSwatini

b. What is being done about sustainable rural/farmland conversions.

c. What tools are available to regulate sustainable urban growth?

d. What are the future plans in the formulation of policy towards sustainable farming practices?

An Investigation into the Impact of Urban Growth on Sustainable Urban-Rural Linkages: A Case of eSwatini

3.5 Determinants of Urban Expansion

a. What are the current guidelines used for informing policy towards urbanisation?

b. What factors are being considered for the management of urban expansion?

3.6 Food Security

a. How has the creation of value through urbanisation affected farming in Swaziland?

An Investigation into the Impact of Urban Growth on Sustainable Urban-Rural Linkages: A Case of eSwatini

b. How does commercial farming compare to subsistence farming and its impact on poverty reduction? Is there any statistics available to that effect?

c. What policies are in place for fertile farmlands protection and guaranteeing food security?

Appendix C – Informed Consent Form Template

CONSENT FORM

UNIVERSITY OF CAPE TOWN

CONSENT TO PARTICIPATE IN A RESEARCH

Research Title: **AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE STUDY OF ESWATINI**

Dear potential participant;

You are being invited in a research study conducted by (Bongani MAGAGULA), a (Master of Science in Property Studies) student at the University of Cape Town. The research is supervised by (Associate Professor Kathy Michell) of the University of Cape Town and the results of the study will be presented to the Department of Construction Economics and Management in fulfillment of the requirements for the degree of (Master of Science in Property Studies) in Construction Economics and Management.

If you have any question or concern about the research, please feel free to contact me, (+268 7 653 9830 or email: bongani.magagula@nwa.co.sz). The research supervisor, (Associate Professor Kathy Michell) may also be contacted at (kathy.michell@uct.ac.za).

Purpose of the study

The primary aim of the study is to establish the nature, strength and value associated with the urban-rural linkages in eSwatini.

Procedures

Your participation in this study is voluntary. If you volunteer to participate in the study, we would consult you to agree a time that would be suitable for a face-to-face interview.

Potential benefits to participants

At your request, the anonymized research findings will be shared to you.

Confidentiality

Confidentiality of all information gathered will be maintained. Each interviewee shall be assigned a four-character code, consisting of two letters and two numbers e.g. IN08. These codes shall be randomly assigned and have no relation to your personal information or the company that you work for. The information gathered through the interview process will be used solely for this research purpose. The raw data of the interview will only be known to the student/researcher.

Participation and Withdrawal

You may choose to withdraw from this study at any time of your wish. You may also refuse to answer any question that you do not want to answer.

Rights of research participants

You may withdraw your consent at any time and discontinue participation without any penalty. This study has been reviewed and received ethics clearance from the University of Cape Town.

Signature of Research Participant/Legal Representative

I have read the information provided for the research as described herein. My questions have been answered to my satisfactions, and I agree to participate in this study. I have been given a copy of this form.

_____

Name of Participant (please print)

_____

Company of Participant

_____

Signature of Participant

Appendix D - Ethics Clearance Certificate

Application for Approval of Ethics in Research (EiR) Projects
Faculty of Engineering and the Built Environment, University of Cape Town

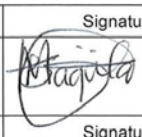
ETHICS APPLICATION FORM

Please Note:
Any person planning to undertake research in the Faculty of Engineering and the Built Environment (EBE) at the University of Cape Town is required to complete this form **before** collecting or analysing data. The objective of submitting this application *prior* to embarking on research is to ensure that the highest ethical standards in research, conducted under the auspices of the EBE Faculty, are met. Please ensure that you have read, and understood the **EBE Ethics in Research Handbook** (available from the UCT EBE, Research Ethics website) prior to completing this application form: http://www.ebe.uct.ac.za/ebe/research/ethics1

APPLICANT'S DETAILS		
Name of principal researcher, student or external applicant		Bongani Themba MAGAGULA
Department		Department of Construction Economics & Management
Preferred email address of applicant:		bongani.magagula@nwa.co.sz
If Student	Your Degree: e.g., MSc, PhD, etc.	MSc Property Studies
	Credit Value of Research: e.g., 60/120/180/360 etc.	60credits
	Name of Supervisor (if supervised):	Associate Professor Kathy Michell
If this is a researchcontract, indicate the source of funding/sponsorship		N/A
Project Title		AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE STUDY OF ESWATINI

I hereby undertake to carry out my research in such a way that:

- there is no apparent legal objection to the nature or the method of research; and
- the research will not compromise staff or students or the other responsibilities of the University;
- the stated objective will be achieved, and the findings will have a high degree of validity;
- limitations and alternative interpretations will be considered;
- the findings could be subject to peer review and publicly available; and
- I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism.

APPLICATION BY	Full name	Signature	Date
Principal Researcher/ Student/External applicant	Bongani Themba MAGAGULA		01/07/2020
SUPPORTED BY	Full name	Signature	Date
Supervisor (where applicable)	Associate Professor Kathy MICHELL		05/07/2020

APPROVED BY	Full name	Signature	Date
HOD (or delegated nominee) Final authority for all applicants who have answered NO to all questions in Section 1; and for all Undergraduate research (Including Honours).	Louie van Schalkwyk		27 July 2020
Chair: Faculty EIR Committee For applicants other than undergraduate students who have answered YES to any of the questions in Section 1.	Louie van Schalkwyk		27 July 2020

Page **1** of **1**

Appendix E – Research Participation Approvals

Department of Construction Economics and Management

Head: Associate Professor Kathy Michell

University of Cape Town, Private Bag X3, Rondebosch 7701
5th Level, Snape Building Upper Campus
Tel: +27 (0) 21 650 3443 Fax: +27 (0) 21 689 2746

Internet: http://www.cons.uct.ac.za
Email: CON-cem@uct.ac.za

11 June, 2020

To whom it may concern

Dear Sir/Madam

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE OF ESWATINI

The study has been primarily motivated by the sporadic urban expansion, where such growth goes to the extent of even gobbling fertile and productive agricultural land especially in the **Ngwenya-Mbabane-Ezulwini-Malkerns-Matsapha-Manzini corridor**. This study will become an invaluable addition to the body of knowledge in the management of sustainable urban-rural linkages in eSwatini.

The research study is to be conducted by Mr Bongani T Magagula, an MSc student at the University of Cape town. I have known him for a combined period of 16years since 2004 as an undergraduate student in the department. I am the research supervisor of his study to which I can affirm that the results of the study will be presented to the Department of Construction Economics and Management in partial fulfilment of the requirements for the **Master of Science in Property Studies.**

To undertake this exercise, Mr Bongani Magagula will be conducting an independent evaluation of the subject matter. It is for this reason that we seek the approval of your office to conduct the assessment within the ministry's departments such as Municipalities, Town Councils, Town Boards, Land management Board and eSwatini National Housing Board. The same will be requested from the Ministry of Agriculture and Cooperatives and its departments responsible for the management of the urbanisation of productive agricultural land.

Should you require any additional information, please do not hesitate to contact me.

Yours sincerely

K. A. Michell.

Kathy Michell (Dr)
Associate Professor & Head of Department
BSc (QS) MPhil PhD MRICS PrQS (Reg. no. 3330) PMAQS

Appendix F – Consent Participation Approvals

ESWATINI GOVERNMENT

Ministry of Agriculture

Ministry of Agriculture
P. O. Box 162
MBABANE
H100

By-Pass Road, Opposite Fire and
Emergency Services,
MBABANE
H100

26 June, 2020

The Head of Department
Department of Construction Economics and Management
University of Cape Town
Private bag X3, Rondebosch, 7701
5th Level, Snape Building, Upper Campus

Attn: Associate Professor Kathy Michell

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE OF ESWATINI (LETTER OF CONFIRMATION)

1. Receipt of your letter dated 11th June, 2020 is acknowledged.
2. The letter seeks to give approval of this office to allow Mr Bongani T MAGAGULA to access the different departments of this Ministry to conduct a research survey on the above subject.
3. The office of the Principal Secretary has approved the request and Mr Magagula has thus been granted access thereof to conduct the research as may be required.
4. Attached to this letter is a letter instructing the different departments as listed to provide Mr Magagula with all the assistance as may be required.

Please do not hesitate to contact the undersigned for additional clarification.

MINISTRY OF AGRICULTURE
PRINCIPAL SECRETARY'S OFFICE
29 JUN 2020
P. O. BOX 162, MBABANE
SWAZILAND

Yours faithfully,

Mr. Bongani MASUKU
(Principal Secretary)

ESWATINI GOVERNMENT

Ministry of Agriculture

Ministry of Agriculture
P. O. Box 162
MBABANE
H100

By-Pass Road, Opposite Fire and
Emergency Services
MBABANE
H100

15 June, 2020

Attention:
ALL DEPARTMENTS

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE OF ESWATINI (MEMO)

1. Please kindly allow Mr Bongani T MAGAGULA to conduct his research within your departments through structured interviews.
2. Mr Magagula is studying towards Masters of Science in Property Studies at the University of Cape Town.
3. This research is in partial fulfilment of the requirements for his Master of Science studies.
4. Please assist him with all the assistance he may require while conducting his research.

MINISTRY OF AGRICULTURE
PRINCIPAL SECRETARY'S OFFICE
29 JUN 2020
P. O. BOX 162, MBABANE
SWAZILAND

Bongani MASUKU
(Principal Secretary)

+

ESWATINI GOVERNMENT

Ministry of Housing and Urban Development

Ministry of Housing and Urban Development
P. O. Box 1832
MBABANE

5th Floor, Income Tax Building
Mhlambanyatsi Road
Mbabane

29 June, 2020

The Head of Department
Department of Construction Economics and Management
University of Cape Town
Private bag X3, Rondebosch, 7701
5th Level, Snape Building, Upper Campus

Attn: Associate Professor Kathy Michell

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE OF ESWATINI (LETTER OF CONFIRMATION)

1. Receipt of your letter dated 11th June, 2020 is acknowledged.
2. The letter seeks to give approval of this office to allow Mr Bongani T MAGAGULA to access the different departments of this Ministry to conduct a research survey on the above subject.
3. The office of the Principal Secretary has approved the request and Mr Magagula has thus been granted access thereof to conduct the research as may be required.
4. Attached to this letter is a letter instructing the different departments as listed to provide Mr Magagula with all the assistance as may be required.

Please do not hesitate to contact the undersigned for additional clarification.

Yours faithfully

Mr. Clifford MAMBA
(Principal Secretary)

MINISTRY OF HOUSING & URBAN DEVELOPMENT
PRINCIPAL SECRETARY
30 JUN
RECEIVED
P.O. BOX 1832
MBABANE
SWAZILAND

ESWATINI GOVERNMENT

Ministry of Housing and Urban Development

Ministry of Housing and Urban Development
P. O. Box 1832
MBABANE

5th Floor, Income Tax Building
Mhlambanyatsi Road
Mbabane

29 June, 2020

Attention:
Mbabane Municipality
Ngwenya Town Board
Ezulwini Town Council
Malkerns Town Board
Matsapha Town Council
Manzini Municipality
~~Land Management Board~~
Eswatini National Housing Board

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE OF ESWATINI (MEMO)

1. Please kindly allow Mr Bongani T MAGAGULA to conduct his research within your departments through structured interviews.
2. Mr Magagula is studying towards Masters of Science in Property Studies at the University of Cape Town.
3. This research is in partial fulfilment of the requirements for his Master of Science studies.
4. Please assist him with all the assistance he may require while conducting his research.

Mr. Clifford MAMBA
(Principal Secretary)

MINISTRY OF HOUSING & URBAN DEVELOPMENT PRINCIPAL SECRETARY 30 JUN 2020 RECEIVED P.O. BOX 1832 MBABANE SWAZILAND

BONGANI **MAGAGULA**

P. O. Box 315, Mbabane, H100 · 7 653 9830

bongani.magagula@nwa.co.sz · www.linkedin.com/in/bongani-magagula-66aa5a17/ ·

Mr Gideon Mhlongo
The Chief Executive Officer
Municipal Council of Mbabane
Mahlokohla Street, Civic Building
P O Box 1, Mbabane, H100

DEAR SIR,

RE: AN INVESTIGATION INTO THE IMPACT OF URBAN GROWTH ON SUSTAINABLE URBAN-RURAL LINKAGES – A CASE STUDY OF ESWATINI.

I am a student with the University of Cape Town studying towards the Master of Science in Property Studies. As a partial fulfillment of the degree, I am required to carry out a research. My research topic is as stated above. The research is focused on the sustainability of urbanisation, as witnessed in some parts of the country such as Ezulwini, Malkerns and Matsapha where rich agricultural land is being urbanised. The research further investigates whether there are policies that manage such land conversions before agricultural productivity suffers.

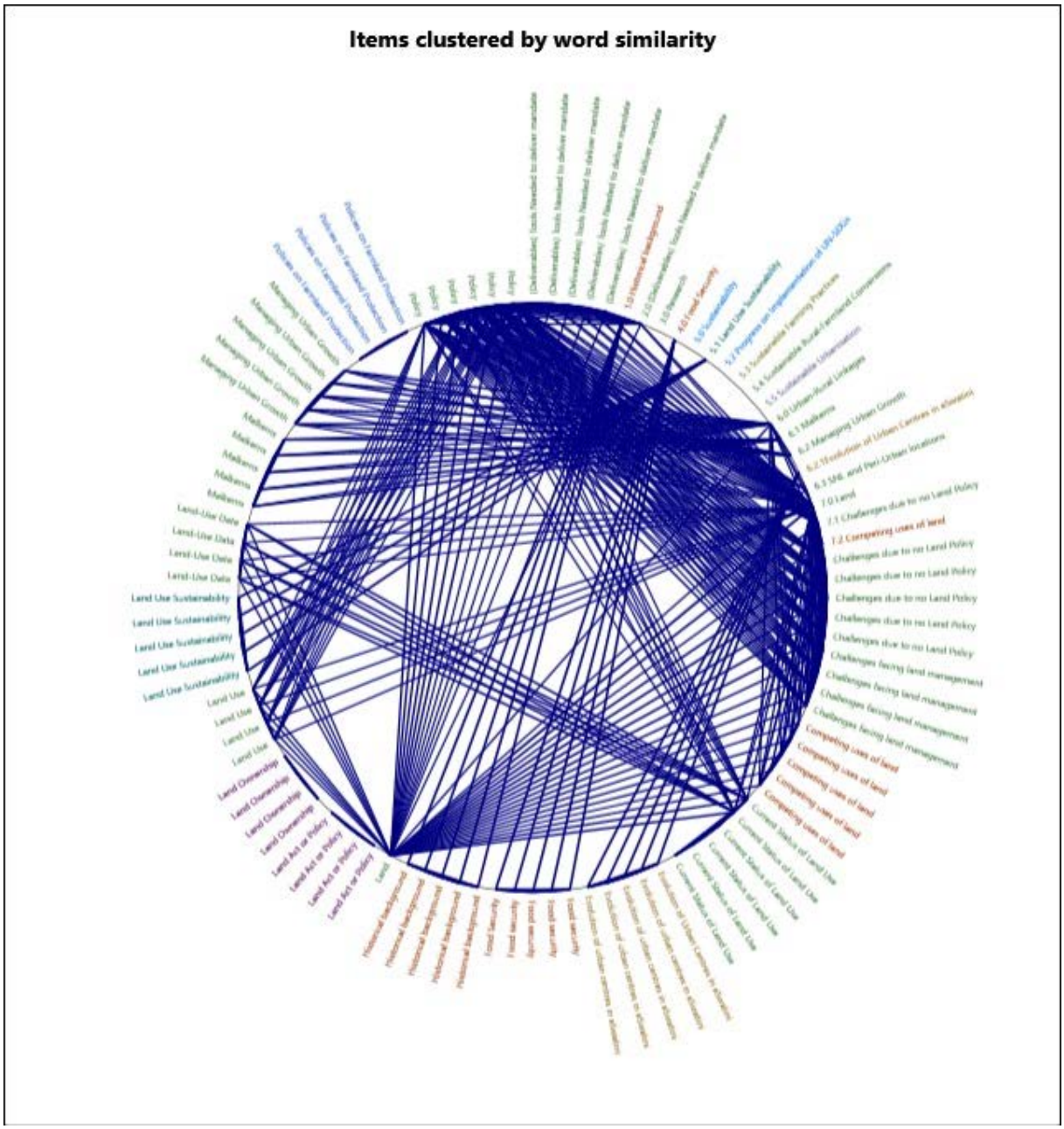
I am thus requesting permission to have survey interviews with some of the city officials such as those in the Planning Department as well as the Community Services Department. The following attachments accompany this request:

- Letter from Supervising Lecturer
- Memo from Ministry of Housing & Urban Development
- Consent Form
- Survey Questionnaire

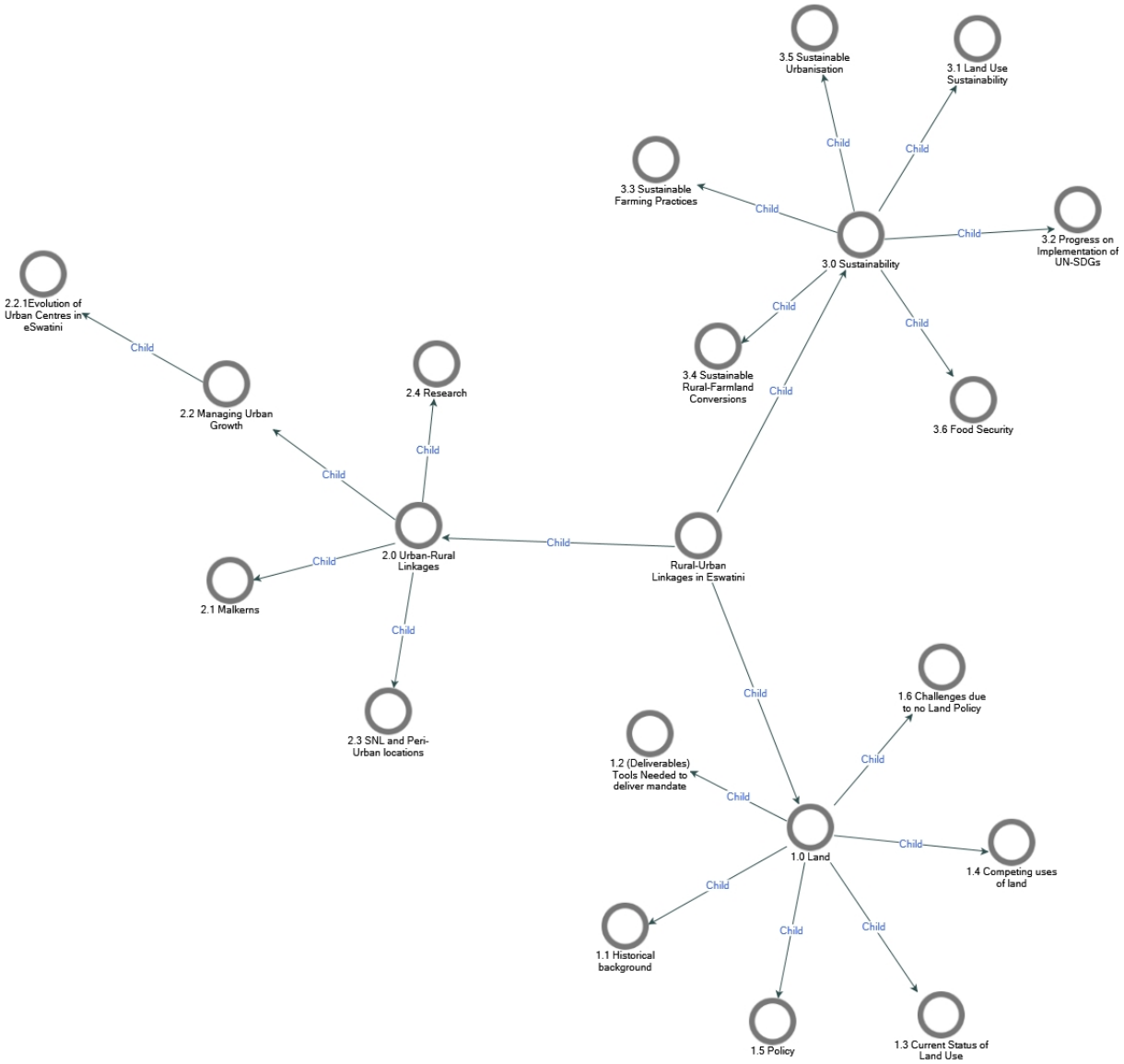
Your's Faithfully,

Bongani J MAGAGULA
UCT Student

Appendix G – Word Similarity – exported from NVivo

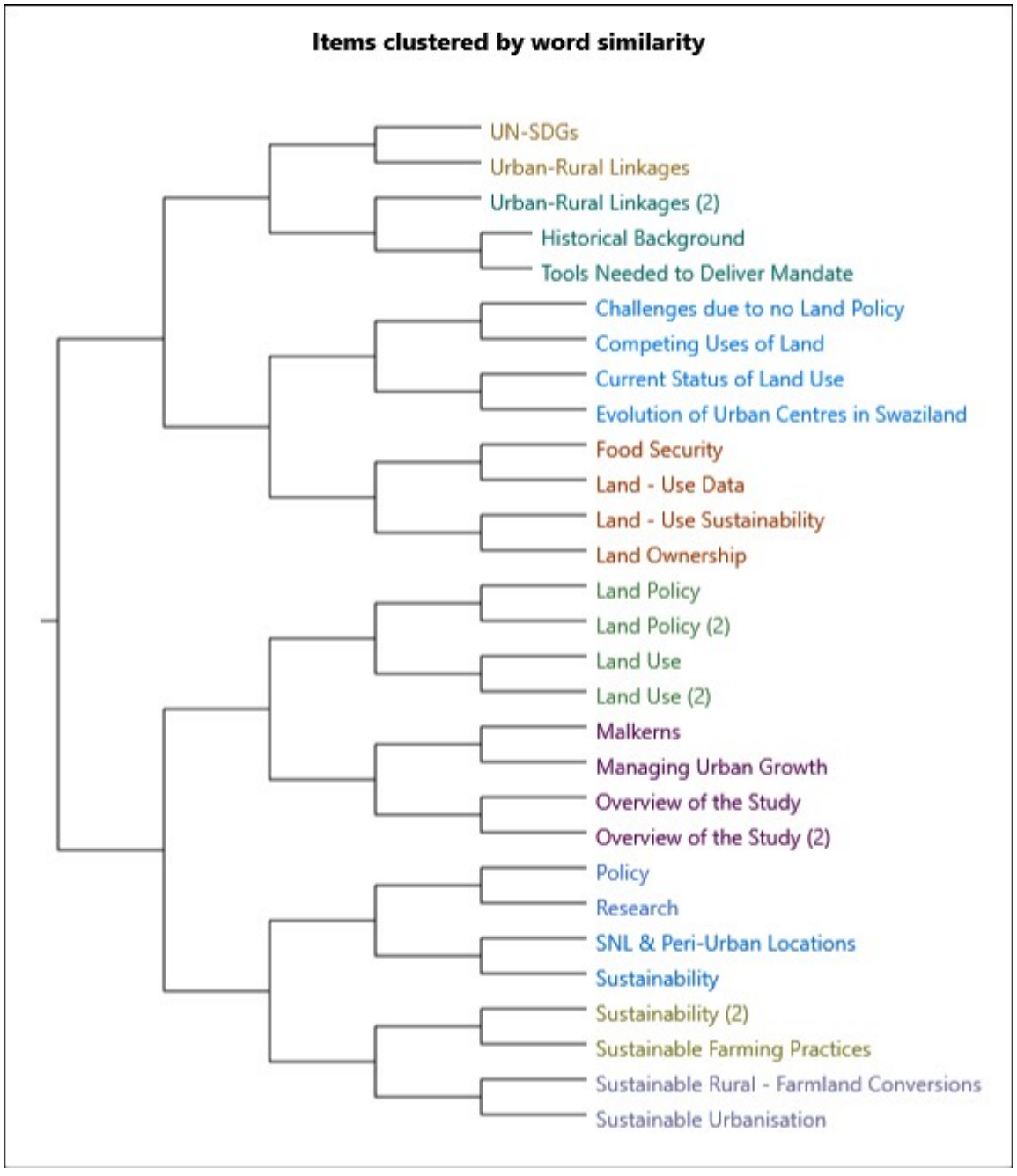


Appendix H – Tree Node Map from NVivo



Appendix I - Word Cloud - Exported from Nvivo

Appendix J – Items Clustered by word similarity – Imported from Nvivo



Appendix K - Emergent Themes – Imported from Nvivo (Phase 6)

Emergent Themes	Description	Files	References
1.0 Land **(Emergent Theme 1: Section 4.2)**	All issues to do with land including but not limited to policies and legislation	10	173
1.1 Historical background	Land policy timeline in the Kingdom	7	15
1.2 (Deliverables) Tools Needed to deliver mandate	Enabling environment for government officials to be able to show progress in serving the nation on land related programs. What the officers need in order to perform.	10	19
1.3 Current Status of Land Use	Notes on Current policy direction and land use controls	9	21
1.4 Competing uses of land	The impact of unregulated land allocation	7	23
1.5 Policy		9	39
1.6 Challenges due to no Land Policy	Challenges resulting from operating with a guiding tool for land	9	49
2.0 Rural-urbanRural-urbanRural-UrbanRural-Urban Linkages **(Emergent Theme 2: Section 4.3)**	Sustainable relationship between rural and urban land	10	54

Emergent Themes	Description	Files	References
2.1 Malkerns	Malkerns as a case for the negative impact of urbanisation in the absence of the Land Act	4	5
2.2 Managing Urban Growth	Policies and regulations in place to manage urban growth	7	21
2.2.1Evolution of Urban Centres in eSwatini	Focus on the process involved in the establishment of urban centres in the Kingdom	2	2
2.3 SNL and Peri-Urban locations	Human settlement management in the locations between Swazi Nation Land and cities or urban centres	3	5
2.4 Research		6	12
3.0 Sustainability **(Emergent Theme 3: Section 4.4)**	What is being done to employ sustainable practices in all activities that include land	9	49
3.1 Land Use Sustainability	Ideas being implemented to guarantee sustainability	3	7
3.2 Progress on Implementation of UN-SDGs	Status of the UN-SDGs since their launch post 2010	4	7
3.3 Sustainable Farming Practices	Any policies being implemented for sustainable farming	5	8

Emergent Themes	Description	Files	References
3.4 Sustainable Rural-Farmland Conversions	How is the conversion of rural or farmland conversions being managed to minimise negative impacts	4	4
3.5 Sustainable Urbanisation	have there been regulations in place to manage the growth of urban centres without impacting negatively on land or human habitat	2	4
3.6 Food Security	What is the government doing to guarantee food security in the Kingdom	7	13