The role of special economic zones in spatial planning in South Africa

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PREFACE

I would like to thank the Lord for His guidance and blessings throughout this study. I would like to express my deepest appreciation to my husband for his constant love and support. This study would not have been possible without the support of my parents, thank you very much mom and dad for this opportunity that you have given me. Lastly, I could not have undertaken this journey without my supervisors, Prof. J.E. Drewes and Dr. M. van Aswegen, thank you for your guidance and valuable advice during the course of this study, I am very grateful.

ABSTRACT

After 1994, South Africa struggled to increase the levels of local and international direct investments necessary to fuel economic development (DTI, 2012:9). Furthermore, the economy had a limited variety of exports and was highly dependent on primary production. These constraints limited growth both nationally and across the globe. African nations are employing growth pole strategies to increase their competitiveness and accessibility to local and international markets while also strengthening economic links around the development of their natural resources (World Bank, 2013:1). A growth pole development strategy such as the development of a Special Economic Zone (SEZ) seeks to establish deep economic linkages around these resources to promote economic diversification, employment creation, and local procurement of manufacturing inputs (World Bank, 2013:3). SEZs are widely regarded as among the most effective tools for overcoming regional development barriers in regional policy (Godlewska, 2016:190). The South African Special Economic Zone Act, Act 16 of 2014, describes SEZs as a tool for economic development that provides incentives to attract specific domestic and international investments and technology in order to increase export and national economic growth.

The role of South African SEZs in spatial planning is examined in this study. This study is underpinned by the assumption that poor execution and implementation of SEZs in South Africa, is the motive why SEZs have not been highly rewarding. Although South Africa adopted SEZs quickly, it's argued that the government didn't pay close attention to all the fundamental spatial planning aspects required to guarantee the success of SEZs. To validate this hypothesis, the study uses South Africa as a case study and also postulates international case studies of developing and developed countries, combining literature with the various institutional and regulatory frameworks that govern SEZs. The study concludes that South Africa is too ambitious when implementing and identifying SEZs. In terms of spatial planning, the SEZs of South Africa does not fail completely and there are quite a few that excel. Recommendations include changing the policy approach, development of appropriate infrastructure and focusing on locational advantages in regions.

Keywords: Special Economic Zones, Spatial Planning, South Africa

OPSOMMING

Suid-Afrika het ná 1994 'n groot probleem in die gesig gestaar om die vlakke van binnelandse en buitelandse direkte beleggings, wat nodig is om ekonomiese groei aan te dryf, te verhoog (DTI, 2012:9). Verder het die ekonomie 'n beperkte verskeidenheid uitvoere gehad en was hoogs afhanklik van primêre produksie. Hierdie beperkings het groei beide nasionaal en regoor die wêreld beperk. Afrikalande implementeer groeipoolstrategieë ten einde ekonomiese bande rondom die ontwikkeling van hul natuurlike hulpbronne te versterk, terwyl hulle ook hul mededingendheid en toeganklikheid tot plaaslike en internasionale markte verhoog (Wêreldbank, 2013:1). ’n Groeipaalontwikkelingstrategie soos die skepping van ’n Spesiale Ekonomiese Sone (SEZ) poog om diep ekonomiese skakels rondom hierdie hulpbronne te vestig om ekonomiese diversifikasie, werkskepping en plaaslike verkryging van vervaardigingsinsette te bevorder (Wêreldbank, 2013:3). SEZ'e word wyd beskou as een van die mees doeltreffende instrumente om streeksontwikkelingshindernisse in streekbeleid te oorkom (Godlewska, 2016:190). Die Suid-Afrikaanse Wet op Spesiale Ekonomiese Sone, Wet 16 van 2014, beskryf SEZ'e as 'n instrument vir ekonomiese ontwikkeling wat aansporings bied om spesifieke plaaslike en internasionale beleggings en tegnologie te lok ten einde uitvoer en nasionale ekonomiese groei te verhoog.

Die rol van Suid-Afrikaanse SEZ'e in ruimtelike beplanning word in hierdie studie ondersoek. Hierdie studie is gebaseer op die hipotese dat swak uitvoering en implementering van SEZ'e in Suid-Afrika die rede is waarom SEZ'e nie hoogs suksesvol was nie. Alhoewel Suid-Afrika SEZ'e vinnig geimplementeer het, word aangevoer dat die regering nie noukeurig aandag gegee het aan al die fundamentele ruimtelike beplanningsaspekte wat nodig is om die sukses van SEZ'e te waarborg nie. Om hierdie hipotese te versterk, gebruik die studie Suid-Afrika as 'n gevallestudie en analiseer ook internasionale gevallestudies van ontwikkelende en ontwikkelde lande, deur literatuur te kombineer met die verskeie institusionele en regulatoriese raamwerke wat SEZ'e beheer. Die studie kom tot die gevolgtrekking dat Suid-Afrika te ambisieus is wanneer dit SEZ'e implementeer en identifiseer. Wat ruimtelike beplanning betref, faal die SEZ'e van Suid-Afrika nie heeltemal nie en daar is 'n hele paar wat uitblink. Aanbevelings sluit in die verandering van die beleidsbenadering, ontwikkeling van toepaslike infrastruktuur en fokus op liggingsvoordele in streke

Sleutelterme: Spesiale Ekonomiese Sones, Ruimtelike Beplanning, Suid-Afrika

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GLOSSARY OF TERMS AND ABBREVIATIONS

Table 1-1: Glossary

AfCFTA	AFRICA CONTINENTAL FREE TRADE AREA
ASEZ	ATLANTIS SPECIAL ECONOMIC ZONE
ELSEZ	EAST LONDON SPECIAL ECONOMIC ZONE
FDI	FOREIGN DIRECT INVESTMENT
GTP	GROWTH AND TRANSFORMATION PLAN
IDZ	INDUSTRIAL DEVELOPMENT ZONE
IPAP	INDUSTRIAL POLICY ACTION PLAN
LFZ	LEKKI FREE ZONE
MMSEZ	MUSINA MAKHADO SPECIAL ECONOMIC ZONE
NDP	NATIONAL DEVELOPMENT PLAN
NEG	NEW ECONOMIC GEOGRAPHY
NEPZA	NIGERIA EXPORT PROCESSING ZONES AUTHORITY
NIPF	NATIONAL INDUSTRIAL POLICY FRAMEWORK
NSDF	NATIONAL SPATIAL DEVELOPMENT FRAMEWORK
NSDP	NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE
RBSEZ	RICHARDS BAY SPECIAL ECONOMIC ZONE
SADC	SOUTHERN AFRICAN DEVELOPMENT COMMUNITY
SDI	SPATIAL DEVELOPMENT INITIATIVE
SDG	SUSTAINABLE DEVELOPMENT GOALS
SEZ	SPECIAL ECONOMIC ZONES
TASEZ	TSHWANE AUTOMOTIVE SPECIAL ECONOMIC ZONE
UNCTAD	UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
UN	UNITED NATIONS

Source: Own compilation

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter includes a basic introduction to explain the context, goals, and objectives of this dissertation. This chapter provides a brief summary of the approach and the components of the research. First, it's critical to comprehend the issues that led to the research theme's necessity as well as what outcomes are anticipated.

1.2 Problem statement

After 1994, South Africa struggled to increase the levels of local and international direct investments necessary to fuel economic development (DTI, 2012:9). Furthermore, the economy had a limited variety of exports and was highly dependent on primary production. These constraints limited growth both nationally and across the globe. African nations are employing growth pole strategies to increase their competitiveness and accessibility to local and international markets while also strengthening economic links around the development of their natural resources (World Bank, 2013:1). A growth pole development strategy such as the creation of a SEZ seeks to establish deep economic ties around these resources to promote economic diversification, employment creation, and local procurement of manufacturing inputs (World Bank, 2013:3).

The concept of SEZs is well known and is adopted across the world. There are various definitions for SEZs and different methods can be used to apply it over the world. Countries are regularly analysing the feasibility and potential of SEZs in order to find new ways to generate and encourage economic development and spatial transformation. Special Economic Zones can be successful tools to encourage industrialization if it is implemented and executed correctly (Zeng, 2016:2). Some SEZs, if implemented incorrectly, can be used for political speculation rather than for the development of an economy, which can fail completely (Zeng, 2016:2). For SEZs to be effective, it has to be implemented correctly, fitting into a country’s status quo and character. A clear framework to implement SEZs is compulsory for each country, and for SEZs to be effective, the implementation framework has to clearly define the roles and responsibilities of the public and private sectors.

1.3 Research aims and objectives

Based on the problem statement above, the main aim of the study is to **investigate the role of Special Economic Zones in spatial planning in South Africa**.

The objectives of the study:

1. Determining the general locality factors associated with SEZs in spatial planning;
2. Evaluating spatial planning policy related to South Africa's SEZ;
3. Evaluating and comparing developed and developing countries' SEZs;
4. Evaluating the SEZs in South Africa using appropriate locality factors.

1.4 Methodology

1.4.1 Literature Study

A descriptive study will mainly be used for the literature review captured in the study and it will be conducted in a chronological manner, where theories and literature from the previous century up to the present will be analysed. The literature study will include various sources on SEZs, and the focus will be especially placed on the growth pole theory of spatial planning. Regional growth pole theories will be thoroughly investigated, in which focus will be placed on the locational aspects of growth poles. The theoretical study of this dissertation will root from the 1800s, where several theories will be considered. Some of the theories will include: the theory of "The Isolated State" in the 1800s, also known as the location theory and how location determines the size of a market. In the 1900s, a range of theories built on the location theory, starting with the theory of industrial location, where location determined transport costs. This was followed by the central place theory, in which location determined the size and class of a town – and the central place theory, where location determined the size and class of an economic region. In the late 1900s, the growth pole theory was put forth, where the location of a settlement can be influenced by economic development and structural change of the surrounding region. In the 2000s, the growth pole theory was modified, and the SEZ theory was created, where potential places of growth are identified mainly due to its location and associated characteristics. The New Economic Geography (NEG) theory in the late 1900s will also be investigated and its impact on spatial planning will be discussed. The NEG theory explains how different economies agglomerate at one specific location, suggesting different models of the formation of economies depending on the geographic location. The theories will serve as a guide in helping to frame the problem and potential proposals of the research study.

1.4.2 Methods of investigation

The SEZs in South Africa will be analysed using a case study approach, combining the literature review with the various institutional and regulatory frameworks that govern SEZs. This approach will enable the researcher to conduct more concrete research, in order to make a clear conclusion of the end results. A qualitative desktop analysis will be done, consisting of case studies of

developed and developing countries across the world which implemented SEZs with varying degrees of success. The countries that were evaluated are: China, Cambodia, Nigeria, Ethiopia and India. The case studies of three Asian and two African countries were chosen in order to get a broad understanding of how each country implemented and manage its SEZs. The SEZs of South Africa will be analysed using a SWOT analysis in order to determine each South African SEZ's strengths and weaknesses according to its spatial orientation. In terms of a more effective policy approach to the implementation of SEZs in South Africa, this study will conclude with a number of recommendations and proposals.

1.5 Demarcation of the field of study

This research study will mainly focus on 12 of South Africa's SEZs and will make use of international case studies from Asian and African countries.

1.6 Chapter division

Chapter 1: Introduction

An overview of the design of the study and the goals of the research are provided in this chapter. This chapter provides a summary of the research to help the reader understand it.

Chapter 2: Research methodology

This chapter aims to discuss the methods used to conduct the research of this study. The research methodology consists of a research type, paradigm and design which will assist the researcher to determine the role of South Africa's SEZs from a spatial planning perspective.

Chapter 3: Regional growth theory

In Chapter 3, regional growth pole theories (location theory and development theory) will be intensively investigated, together with the New Economic Geography theory. Regional growth poles can occur due to various factors, but focus will only be placed on the locational aspects of growth poles. In this chapter a chronological study will be conducted from theories of the 1800s to the newest 2000s theories. This chapter will provide the basis for this study in determining how growth poles occur in terms of the locational aspects and advantages within the larger region.

Chapter 4: Special Economic Zones and Spatial Planning

Chapter 4 analyses the role of SEZs in spatial planning. SEZs will be analysed on how it occurred and its way forward, using growth pole theory. Focus will also be placed on the locational factors that have been used in the past to measure growth poles and/or SEZs.

Chapter 5: Policy and legislation on Special Economic Zones

This chapter will investigate policy related to South Africa's SEZs in order to identify the best policy to implement SEZs in South Africa. Policy and legislation related to SEZs of South Africa will be analysed on a national level and compared on an international level in order to determine any gaps within the policy and legislation.

Chapter 6: International case studies on Special Economic Zones

This chapter will investigate several case studies of developed (China) and developing (Cambodia, Nigeria, Ethiopia and India) countries that implemented SEZs. The successes and failures of each country's SEZs will be identified and discussed in terms of a best-practise approach, which will contribute to the overall research of this study.

Chapter 7: Special Economic Zones of South Africa

This chapter will attempt to analyse the SEZs of South Africa. The successes and failures of each SEZ will be identified and discussed in terms of spatial planning within the South African region. A SWOT analysis will be conducted in order to determine each South African SEZ's strengths and weaknesses according to its spatial orientation. The locality factors identified within the literature study will be applied within this chapter and the Spatial Development Framework of each of the SEZ's municipalities will be analysed in terms of forward planning.

Chapter 8: Synthesis and recommendations

The final chapter will summarise the main issues addressed, as well as provide recommendations in terms of the implementation of SEZs in South Africa. This chapter will attempt to highlight potential growth poles within South Africa, which may be advantageous in the future, as well as aim to identify growth poles which may be disadvantageous within the South African context. This chapter will furthermore attempt to provide proposals for policy initiatives for SEZs to address issues identified throughout the study, based on international best practice and informed by the theoretical base.

CHAPTER 2: RESEARCH METHODOLOGY

2.1 Introduction

"Our design and conduct of research are shaped by our mental models or frames of references that we use to organize our reasoning and observations". ~ *Bhattacherjee, 2012*

This Chapter will discuss the rationale behind the research methodology of the study, as summarised in Section 1.5 above. Research is a vital and effective instrument for advancing humankind (Pandey, 2021:7). It is a structured investigation or action to acquire new information about already-known facts (Pandey, 2021:7). Therefore, research advances knowledge by introducing new knowledge to the pool of knowledge that already exists (Kothari, 2004:1). Simply said, research is the act of searching for knowledge on a topic using a planned, rigorous approach (Kothari, 2004:1). In light of this, the word research refers to the systematic approach that entails formulating a problem, creating a hypothesis, acquiring information, evaluating data, and finding results that may be solutions to the specific problem or generalisations for a theoretical formulation (Kothari, 2004:1).

This study investigates the role of SEZs in spatial planning in South Africa. The research methodology that will be used throughout this study will be discussed in the sections below with reference to the research type, paradigm and design that will be used in this study in order to attempt to ultimately propose solutions to the research problem.

2.2 Different research types

Three categories of research designs can be made depending on the goal of the study, i.e., exploratory, descriptive and explanatory research. Exploratory research is typically applied in new fields of inquiry, with the objectives being: to determine the scope of a particular topic, issue, or action; create some key thoughts; or test the viability of carrying out more in-depth research involving that phenomenon (Nayak & Singh, 2015:9). In this research type, studies are carried out to either research a little-known topic or to look at the viability of carrying out a specific research study. Additionally, exploratory research is carried out to create, enhance, and/or test measuring tools and practices (Kumar, 2011:30). Evaluating the existing literature and/or data, utilizing qualitative research methods like focus groups, in-depth interviews, informal conversations, or case studies, are frequently the first steps in exploratory research. As a result, the data gathered are mostly of a qualitative nature (Nayak & Singh, 2015:62). Thus, researchers analyse the data, quantify it, and then make assumptions. Exploratory research cannot be applied to the larger population.

Research that are exploratory in nature lack hypotheses (Nayak & Singh, 2015:63). It is also possible to conduct an exploratory study to better familiarize the researcher with the topic they intend to study. When there is little information available and existing hypotheses cannot account for the phenomena, researchers use exploratory study design (Nayak & Singh, 2015:63). According to its name, descriptive research attempts to accurately describe the relationships between a community's or a group's features and its members' ideas, suggestions, emotions, behaviours, etc. When a researcher desires to learn more about a topic about which they already have some expertise, they adapt a descriptive study design (Nayak & Singh, 2015:63). This study makes an effort to carefully analyse a scenario, problem, phenomena, activity, or strategy. Such a study's primary objective is to describe what is typical with regard to the issue or problem under investigation (Kumar, 2011:30). Conducting thorough observations and thorough documentation of an interesting phenomena is the goal of descriptive research. These observations must reflect the analytical approach (i.e., they must be consistent, accurate, etc.), making it more trustworthy than random observations made by inexperienced individuals (Nayak & Singh, 2015:9). Research that makes precise predictions or that recount facts and features about a single person, organization, or circumstance are all examples of descriptive research studies (Kothari, 2004:37).

Explanatory research seeks for reasons for phenomena, events, or behaviours that have been observed. It searches for reasons for the why and the how, whereas descriptive research searches for what, where and when of a phenomenon. It also seeks to shed light on the reasons for and factors that explain a relationship between two facets of events or phenomena (Kumar, 2011:30). It seeks to "connect the dots" in research by pinpointing the root causes and consequences of the target phenomenon. One needs strong theoretical and interpretative abilities as well as intuition, insights, and personal experience to come up with explanations for observable events (Nayak & Singh, 2015:9). The type of research that will be followed within this study will be of a descriptive nature in order to accurately investigate the research topic (Nassaji, 2015:129). Descriptive research is intended to explain the natural events that take place within the collected data, such as the different studying techniques implemented by researchers and how it's being adopted (Zainal, 2007:3). The researcher's objective is to explain the data as it occurs (Zainal, 2007:3). To analyse an event and its features is the objective of a descriptive study (Nassaji, 2015:129). This study is more interested in what happened than in how or why it occurred (Nassaji, 2015:129).

2.3 Research paradigm

The term "paradigm" refers to these belief systems or mental models (Bhattacherjee, 2012:17). Therefore, these paradigms include a fundamental set of ideas that direct a researcher's enquiry for a particular research project (Rahi, 2017:1). To understand the meaning of and justify differences in viewpoints of the same human behaviour, it is crucial to comprehend various paradigms (Bhattacherjee, 2012:17). Positivism and interpretivism are currently two prevalent ideologies among social science academics (Bhattacherjee, 2012:18) (Rahi, 2017:1). Advocates of this paradigm believe that experimentation and observation are the only methods to acquire knowledge (Rahi, 2017:1). Positivism often solely adopts theories that can be empirically verified (Bhattacherjee, 2012:18). Positivism is synonymous with the words: scientific method, empirical science, and quantitative research. (Rahi, 2017:1).

The interpretive paradigm's advocates seek a full comprehension of a topic and study into how to interpret their surroundings (Rahi, 2017:1). According to the interpretative school of thought, a comprehensive analysis is necessary to fully understand a topic (Rahi, 2017:1). Synonyms for this method are constructivism, social constructivism, and qualitative research paradigms (Rahi, 2017:1). The interpretive research paradigm argues that individuals perceive social facts in their own manner and that reality and meaning are socially formed (Tubey *et al.,* 2015:225). Interpretive researchers understand and interpret social reality using qualitative research approaches (Tubey *et al.,* 2015:225). According to researchers who utilise an interpretative or positivist method, human behaviour may be structured and predictable (Tubey *et al.,* 2015:226). Interpretivism holds that these patterns are produced out of dynamic meaning systems that individuals create as they interact with one another, in contrast to positivists who see this in terms of the rules of cause and effect (Tubey *et al.,* 2015:226). Considering the discussion above, an interpretive paradigm approach will be applied within this study.

2.4 Research design

The systematic and logical planning and direction of the study is known as the research design. The design is the outcome of converting several research difficulties into a generic scientific concept (Nayak & Singh, 2015:61). Simply defined, a research design is the concept or strategy for research that acts as a guideline for data collection and analysis (Nayak & Singh, 2015:61). It is a process that is conducted to complete research. The blueprint for data collection, assessment, and analysis is the research design (Pandey, 2021:18), which is a map is that is typically created to guide the research (Pandey, 2021:18). The reason why research design is important is that it facilitates the seamless operation of research operations, maximising the quantity of information that can be gathered with the least amount of effort, time, and money (Kothari, 2004:32).

The design aids the researcher in putting their thoughts in order so that they may look for errors and shortcomings (Kothari, 2004:32). Regardless of the fact that there are many other categories for research methodologies, quantitative and qualitative approaches still dominate (Rahi, 2017:1). The following gives detailed explanations of these two techniques. Quantitative research involves gathering numerical data to explain a specific event; certain issues appear to be perfectly suited to quantitative methodology (Nayak & Singh, 2015:157). A study that uses and analyses numerical data using statistical methods is known as quantitative research. Quantitative research methods aim to produce statistically reliable data that reflects the proportion of people who do or think a certain thing (Nayak & Singh, 2015:157). This strategy disregards a person's feelings, opinions, or contextual background in favour of collecting fresh data from a sizable population in line with the issue (Rahi, 2017:1). Quantitative research designs are well-organized and have undergone validity and reliability testing (Kumar, 2011:103).

Qualitative research is more holistic and usually entails a broad gathering of data from several sources to better understand individuals, including their thoughts, viewpoints, and behaviours (Nassaji, 2015:130). A qualitative approach is used to gather comprehensive information about a particular subject and also assumes that one individual represents the group's emotions (Rahi, 2017:1). Researchers that employ qualitative methods engage themselves in a culture or group by taking part in activities, watching individuals and their interactions, gathering biographical information, creating case studies, and examining records or other cultural artefacts that have previously been created (Tubey *et al.,* 2015:226). A qualitative researcher's aim is to discover first hand about the population being investigated (Tubey *et al.,* 2015:226). From the discussion above, a qualitative research design will be applied to this study. This study will consist of a literature review (Chapters 3 and 4) and a case study analysis (Chapters 6 and 7).

2.5 Literature review

A descriptive study will mainly be used for the literature review captured in the study and it will be conducted in a chronological manner, where theories and literature from the previous century up to modern day will be analysed. The literature study will include various sources on SEZs, and focus will be especially placed on location theory and the growth pole theory of spatial planning. Regional growth pole theories will be thoroughly investigated, in which focus will be placed on the locational aspects of growth poles. The theoretical study of this thesis will root from the 1800s, where several theories will be considered. Some of the theories will include: the theory of “The Isolated State” in the 1800s, also known as the location theory – location determines the size of a market. In the 1900s a range of theories built on the location theory, starting with the theory of industrial location – location determines transport costs.

Followed by the central place theory – location determines the size and class of a town – and the central theory, where location determine the size and class of an economic region. In the late 1900s, the growth pole theory was created, where the location of a place can be influenced by economic development and structural change. In the 2000s, the growth pole theory was modified, and the SEZ theory was created, where potential places of growth are identified mainly due to its location. The New Economic Geography (NEG) theory in the late 1900s will also be investigated as well as its impact on spatial planning. The NEG theory explains how different economies agglomerate at one specific location, suggesting different models of the formation of economies depending on the geographic location. The theories will serve as a guide in helping to frame the problem of the research study.

2.6 Case study analysis

A popular method for qualitative methodology is the case study approach, which entails meticulous and in-depth observation of a social unit, such as an individual, a family, an institution, a cultural group, or even the entire community (Kumar, 2011:123). Case study research has been known as an effective method for deciphering and understanding complex issues in real-world settings (Harrisson *et al.,* 2017:1). Identifying the factors that jointly account for the behaviour patterns of the provided entity is the goal of the case study technique (Kumar, 2011:123). It gives a broad perspective and a detailed understanding of a case or cases, a process, and the interactional dynamics inside a unit of study, but it does not make any claims about making generalizations to populations outside of cases that are comparable to the one investigated (Kumar, 2011:123). Several case studies of developed and developing countries who implemented SEZs will be investigated using a desktop analysis approach. The success and failures of each country's SEZs will be identified and discussed in terms of a best-practise approach, which will contribute to the overall research of this study. The SEZ of South Africa will also be analysed in order to determine the success and failures of each SEZ from a spatial planning perspective. A SWOT analysis will be conducted in order to determine the best and the worst South African SEZ according to its spatial orientation. Locational factors will be identified within the literature study, which will be utilised within the case study analysis to determine the success of each SEZ.

2.7 Conclusion

Figure 2-1 below illustrates the summary of the research methodology to be utilised for this study. This study will be conducted from a positivist's approach using a descriptive research type approach. The research design will consist of two parts using a qualitative study approach: a literature study based on interpretive and narrative research and a case study approach investigating both international and national cases.

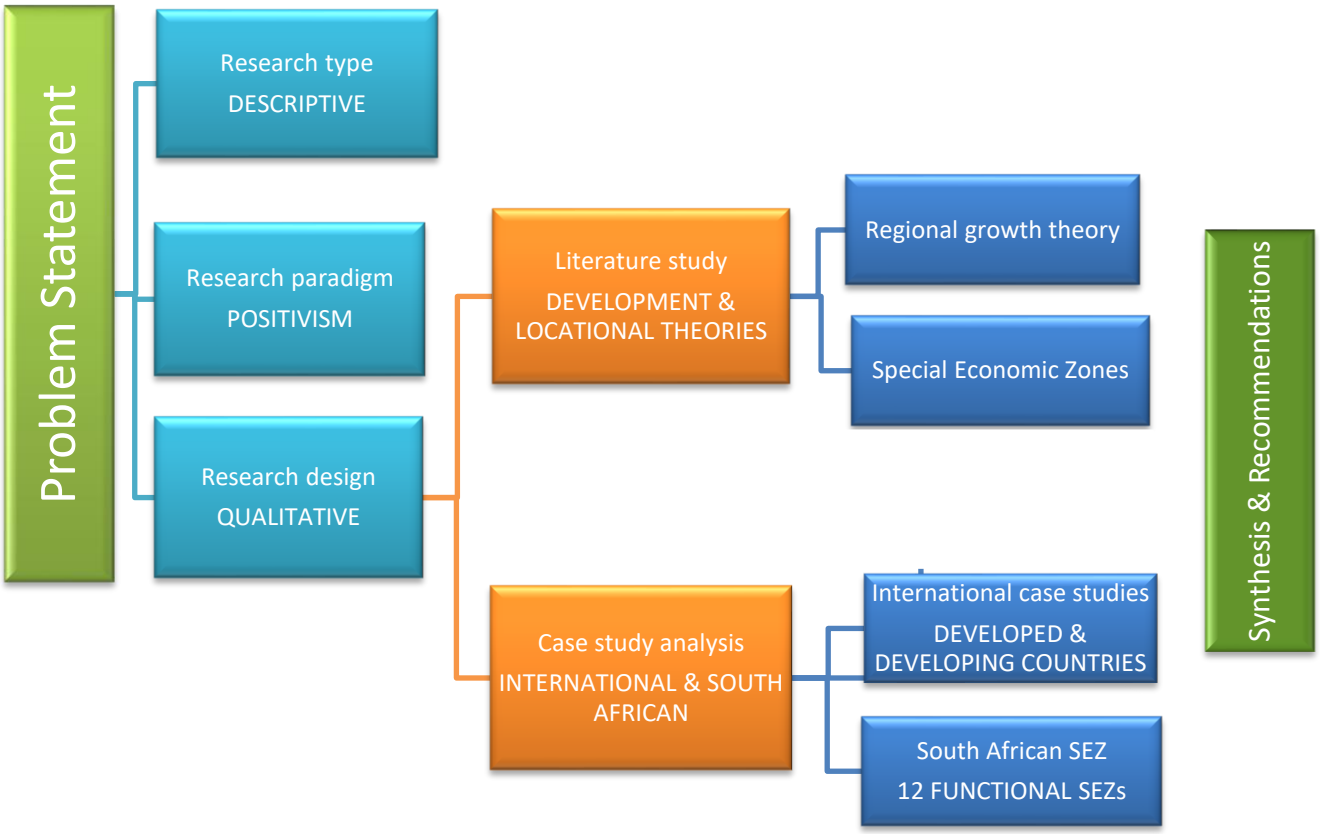

Figure 2-1: Research methodology

Source: Own compilation

CHAPTER 3: REGIONAL GROWTH THEORY

3.1 Introduction

Regional growth pole theory will be investigated, together with the NEG theory. Regional growth poles can occur due to various factors, but the focus will be on the locational aspects of growth poles. A region is often regarded as a uniform area with persistent identity based on its physical and cultural attributes (Fawn, 2009:16). An internal generator can establish a region from a regional centre (Vujadinović & Šabić, 2017:197). In this instance, the presence of a larger metropolitan centre, which transforms the environment as a result of its influence, is the condition that resulted in the establishment of a region (Vujadinović & Šabić, 2017:197). In this chapter a chronological study will be conducted from theories of the 1800s to the newest 2000s theories. This chapter will provide the theoretical basis for this study, determining how growth poles occur in terms of the locational aspects of regional planning. This chapter will attempt to align itself with Objective 1 as indicated in Section 1.3 of this study. Thus, the locality factors will be identified through spatial planning analysis, which will be applied later in the study to determine the feasibility of each SEZ of South Africa.

3.2 Location theory

3.2.1 Background

Location theory arose from a distinctive economic tradition on how input factors were converted into goods, and this practice sought to explain the defining characteristics of this phase of production (Mccann & Sheppard, 2010:651). The distinctive aspect of early location research within this large production practice was an effort to expose the link between geography and production obstacles (Mccann & Sheppard, 2010:651). The general methods used in these classical analyses can be divided into two groups at large, namely the Ricardian trade theory and an analysis of the production function (Mccann & Sheppard, 2010:651). The first group of classic location theory was based on a tradition of the Ricardian trade theory of 1817, in which the factors underlying productive land cultivation were the focus of the research (Mccann & Sheppard, 2010:651). Von Thünen's work expanded the Ricardian method by distinguishing between properties, not on the principle of its varying nature, but on the principle of its different locations (Mccann & Sheppard, 2010:651). Von Thünen focused mainly on agricultural land uses and suggested a theory of localisation of agricultural products in 1826 (Fischer, 2011:471). Von Thünen proposed the concept of an "isolated state" with a single central city, a market district, and a sizable plain of productive farmland surrounding the city (Grotewold, 1959:348).

Only one transportation method exists, and the farmers (producers) supplying the city with goods are resilient to any economic situation that may occur (Grotewold, 1959:348). In the isolated state environment, Von Thünen considered the relationship between (1) the distance of farms from the market area, (2) the price of goods, and (3) the rent of land (Grotewold, 1959:348). The link between the first two factors were quite straightforward – as distance increased from the market area, the transportation costs increased and thus the price of goods also increased (Grotewold, 1959:348). Von Thünen formulated the idea of concentric spheres of various cultivation types around a city's market area by incorporating the principles of location-specific consumer rates, transport and rental costs as illustrated by Figure 3-1 below (Mccann & Sheppard, 2010:651). Agriculture was still the main economic factor of the city, and so this idea tried to describe the relationships among the land uses, the costs of goods, and the production of agricultural products (Mccann & Sheppard, 2010:651).

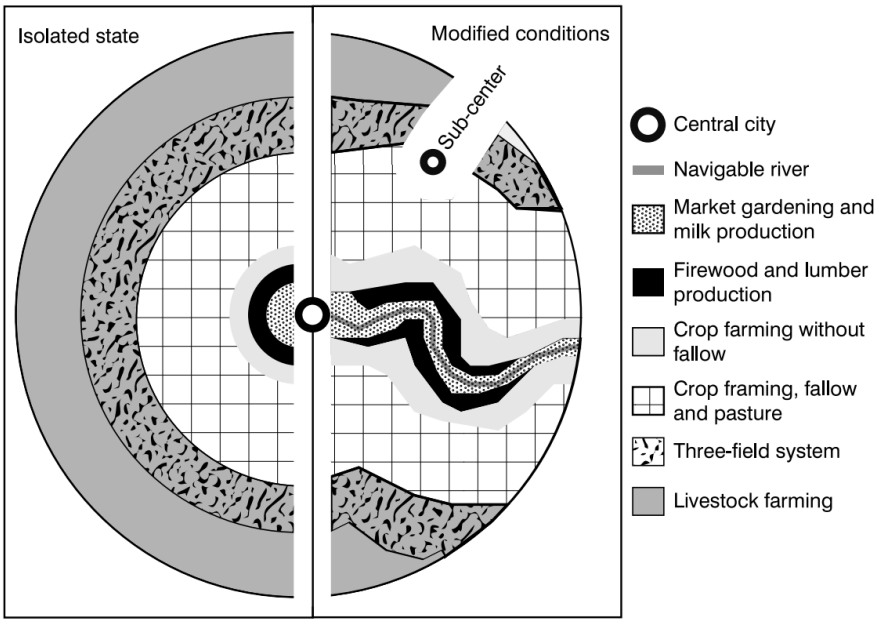

Figure 3-1: The Isolated state model

Source: Rodrigue (2016:200)

The third component, land rent, can be defined as the equity return on land (Grotewold, 1959:348). Renting land in the isolated state depends on the position relative to the market area (Grotewold, 1959:348). A small, isolated state only requires a small amount of land to supply the central city with agricultural goods (Grotewold, 1959:348). As population increases, the demand for agricultural goods will also increase, thus a greater area of land will be required for the cultivation of agricultural goods (Grotewold, 1959:348).

Land closest to the central city is the most valuable because it yields the highest rent; land furthest from the outer production limit was of little value because it yields low rental income (Grotewold, 1959:348). Therefore, the most competitive agricultural activities will locate closest to the market area and agricultural activities that are not competitive enough will locate on the outer rings of the isolated state (Rodrigue, 2016:200). The core of the Isolated State theory focuses mainly on expenditure reducing measures needed for producing and transporting a specific amount of a product from the manufacturing site to the market area, thus considering the transport costs for supplying the required input (Mccann & Sheppard, 2010:651). Alfred Weber developed a similar theory in the 1900s and attempted to establish the general foundation on which a historical structure familiarizes itself, in other words, a theory of locational structural transformation (Isard, 1949:480). The theory describes the location of a city in terms of an industry's transport costs (Isard, 1949:480). To simplify the spatial system, Weber made the following three assumptions: labour is a fixed quantity, the location and size of the market, and the localization of raw materials (Weber, 1929:37). Weber (1929:49) revitalized his theory by considering different factors, i.e., lower wages and alternative modes of transportation at certain places. Accordingly, Weber's research explains that an industry requiring localized materials will locate near the resource sites in order to reduce transportation costs.

Webber's model consists of four stratums: Firstly, the agricultural stratum which acts as the geographic basis for all other stratums. It determines the manifestation of consumption for the primary industrial stratum, supplying for the agricultural stratum (Isard, 1949:480). Secondly, the industrial stratum which also acts as the regional domain of production for the third stratum. The third stratum comprises of several substrata, each substratum is linked with each other and varied in size, the first stratum is the only one linked to the primary industrial stratum (Isard, 1949:480). The three stratums constitute the foundation of an economy (Isard, 1949:480). A fourth, the core stratum of organization, is autonomous of the three stratums. It is constituted of officials, professionals and businessmen with organisational and managerial functions (Isard, 1949:481). The notion of geography set out in the Weber tradition is mainly that of two-dimensional space, in which geography is interpreted through an explicitly geometrical context (Mccann & Sheppard, 2010:652). Geography is understood in terms of the impact on the overall productivity and factor incentives of spatial transaction costs, with no specific function for land per se (Mccann & Sheppard, 2010:652). In this form of analysis, location, labour and land are generally regarded as a binary input, while in the tradition of Von Thünen, land and all non-inputs are considered to be a combined input (Mccann & Sheppard, 2010:651). Pred built on Weber's theory and utilised the theory of substitution, which is well known in the general equilibrium theory (Isard, 1949:483).

Pred argues that the issue with the distribution of economic activities locally is related to the issue with the distribution of the factors of production as any economic activity (Isard, 1949:483). Pred assumes that the majority of the locations, except the of one industry, are fixed. A shift of this industry toward the edge of the city means that capital and labour expenditure (including transportation expenditure) is replaced by land-use outlays. In a turn, the opposite happens towards the core point of consumption (Isard, 1949:484). The application of the substitution principle will generate minimum cost to the site in so far as these two expenditure groups are involved (Isard, 1949:484).

3.2.2 Central Place theory

"We look not at the appearance of a town, but at its function in human community life." ~ Walter Christaller (1966:16).

Christaller developed a hypothesis in 1933 to describe where settlements are located inside metropolitan regions, how big they are, and how they interact with one another (Fischer, 2011:471). The idea of a true interdependence between a city and its rural environs forms the basis of Christaller's thesis (King, 2020:19). A central place is identified as an economic node where the main purpose is to satisfy the local community's needs and desires (Christaller, 1966:16). Christaller stresses that "centrality" is not with regards to the manufacturing of products, but that goods and services are mainly delivered at a centrally located area because of the capital needs related to the establishment of such facilities (Fischer, 2011:478). Christaller aimed to create a central location pattern that satisfied the numerous economic and behavioural requirements while containing the fewest possible urban locations (King, 2020:20). Christaller assumes an infinite, homogenous plain with uniform soil fertility and other natural resources throughout (King, 2020:19). This region has been completely populated, and farmers there earn the same amount of money and have similar needs for products and services (King, 2020:19). It is possible to travel across the plain in either direction, and transportation and freight expenses were simply a function of the distance travelled (King, 2020:19). Christaller further believes farmers are reasonable individuals trying to mitigate their costs and maximize their revenue (King, 2020:19). From the perspective of the consumer, it is suggested that farmers only go to the closest major hub to supply the goods and services that the neighbourhood has asked for (King, 2020:19). The most important factor in determining if a location is actually central is an economic gap, which takes into account transportation costs, customer journey time, and the disutility of the trip (Fischer, 2011:479).

Although the ideal distance that people are willing to go to buy a product is influenced by the economic gap, each person's preference for travelling to a central location will differ (Fischer, 2011:479). It is suggested to offer a variety of goods and services, ranging from high-order items with high thresholds (specialist retail items) to low-order items with low thresholds and ranges (basic goods) (Mulligan *et al*., 2012:407). The most centrally located place offers all the products and services, thereby fulfilling the so-called exhaustive concept (Mulligan *et al*, 2012:407). Other lower order locations in the region that are well-located can supply some, but not all, products that are supplied at the place most centrally located (Mulligan *et al.,* 2012:407). These places, attracting customers from nearby areas, are called central places (Mulligan *et al*, 2012:407). The importance of a centre within a group of centrally placed locations depends less on the number of residents in the centre and more on the extent to which central activities are carried out (Fischer, 2011:479).

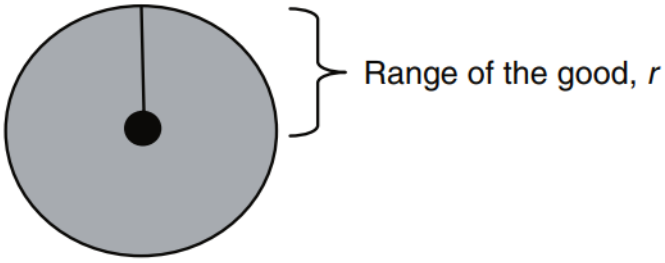

Figure 3-2: Market area of a central place

Source: Fischer (2011:480)

The black dot from figure 3-2 above indicates the centrally located place from which all consumers can be served within the range of the product, shown by the grey area (Fischer, 2011:481). Since some individuals who are not located in a central place cannot be served, additional central areas are required to accommodate them (Fischer, 2011:481). The underlying pattern is the packing of hexagonal circles, refer to figure 3-3 below (Fischer, 2011:481). Christaller's model proposed a hierarchical settlement structure, with hexagonal structures conceptualizing the framework (Christaller, 1966:60). Ideally, the hexagon replaced a circle for full coverage, and the hexagonal arrangements removed some of the overlapping issues within circular arrangements (Christaller, 1966:60).

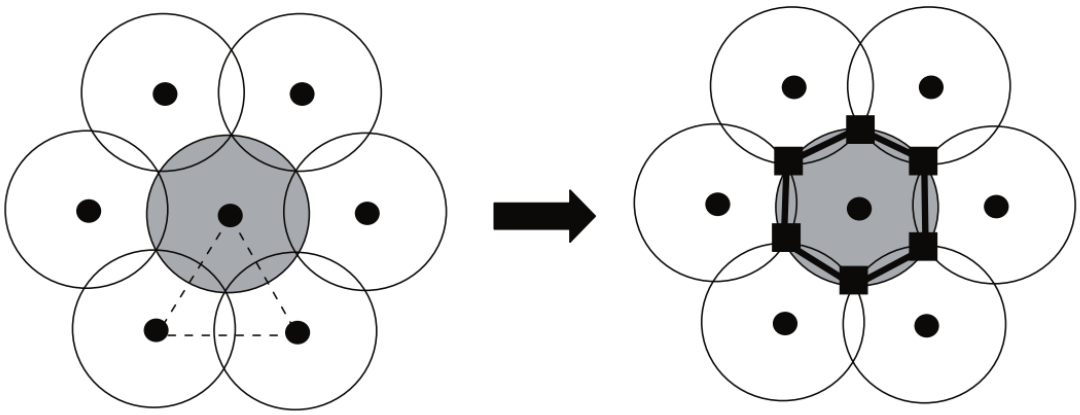

Figure 3-3: Hierarchical structure of central places

Source: Fischer (2011:481)

The introduction of a standard system is the primary feature of Christaller's structure, in which a single level centrally located place offers a specific bundle of goods and services, as well as all bundles common to all lesser central places (Mulligan *et al.,* 2012:408). These market areas are nestled specifically within each other referring to a factor K, refer to figure3-4 below, that Christaller considered to be set in proportion for a given system (Mulligan *et al.*, 2012:408). The study suggests three principles: firstly, the market principle, or K=3, suggesting that a higher order place's market space is three times larger than the market area of the following lower order place (Fischer, 2011:484). Secondly, the transport principle, or K=4, implies that at least four lower order places are served by a single higher order place (Fischer, 2011:484). Third, the administrative theory, or K=7, implying that seven centrally located places — a high order place and six lower order places — are grouped together to form a unit (Fisher, 2011:484).

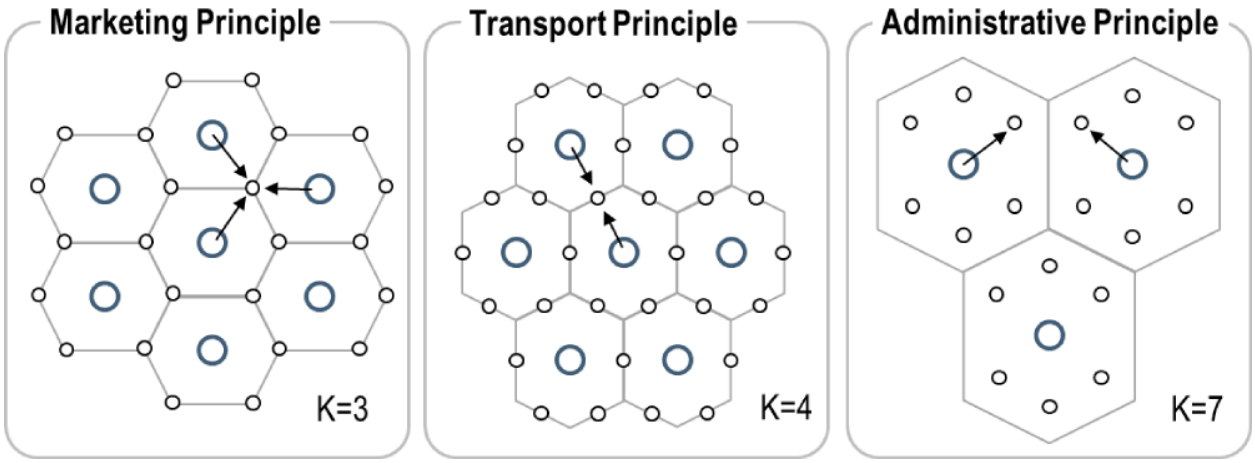

Figure 3-4: Principles of the Central Place theory

Source: Rodrigue (2016:70)

It is clear from figure 3-4 above that there will always be a larger number of lower order areas, i.e., towns of low significance, but as the size and significance of the locations increase, the number of locations decreases (Christaller, 1966:66). The three principles discussed above is of a static nature and the theory also points out dynamic aspects such as the population size, price changes and technological progress which will constantly have an influence on the size and function of a city's centre (Fischer, 2011:485). The benefits of the Central Place theory are its structural versatility and its informative behavioural proposals, particularly regarding consumer travel behaviour (Mulligan *et al.*, 2012:408). In comparison, Lösch created in 1954 a far more complicated system of central bottom-up places whose theoretical basis is a triangular shape of disconnected farms (Mulligan *et al.,* 2012:409). He argued that the hierarchical structure of Christaller was too rigid, and then suggested the use of a hexagonal market area of networks, all of which concentrate on the most centrally located place of the system — called a metropolis (Mulligan *et al.,* 2012:409). The basic assumption from Lösch is that each place is selected in such a way that utility is "as great as possible" (Mulligan *et al.*, 2012:409).

Lösch proposes five conditions that describe equilibrium (Fischer, 2011:488). According to condition 1, each person's location (whether farmer, businessman, or consumer) must be as favourable as possible, meaning that it must result in the highest possible benefit or utility (Fischer, 2011:488). Condition 2 suggests that a great number of places must exist in order to cover the whole region (Fischer, 2011:488). All abnormal income will vanish according to condition 3, leaving prices equal to the costs (Fischer, 2011:488). Condition 4 specifies that all production and distribution areas must be as small as possible (Fischer, 2011:488). Finally, condition 5 states that "it must be a matter of indifference at the boundaries of economic areas to which of two adjacent places they belong" (Fischer, 2011:488). Lösch suggests a large uniform open area with homogeneous transportation characteristics in every direction and equal dispersion of raw materials for manufacturing; a homogeneous population distribution with homogeneous preferences and manufacturing opportunities available to all (Isard, 1949:496). Nevertheless, if one manufacturer perceives it profitable to manufacture goods beyond his needs, so would someone else, and the strength of competition, by discarding all surplus income, which not only eliminates the original producer's market area but also changes the circular market area into a hexagon (Isard, 1949:496). For a market region, the hexagon is the ideal shape for any economy (Isard, 1949:496). A network of a hexagonal market type will completely cover every region, while circular forms will leave empty, unused corners (Isard, 1949:496).

The hexagon reduces transport costs in reaching a specific market, or differently expressed, optimizes the output of the population of a specific region (Isard, 1949:496). The plain for every product is then dissected into a honeycomb (a collection of hexagons) of market zones. Grouping these honeycombs relative to the extent of the market units respectively and assigning the resulting networks to a general, centrally located point of production, acquires a net structure theoretically coherent with the transport effort criterion (Isard, 1949:496).

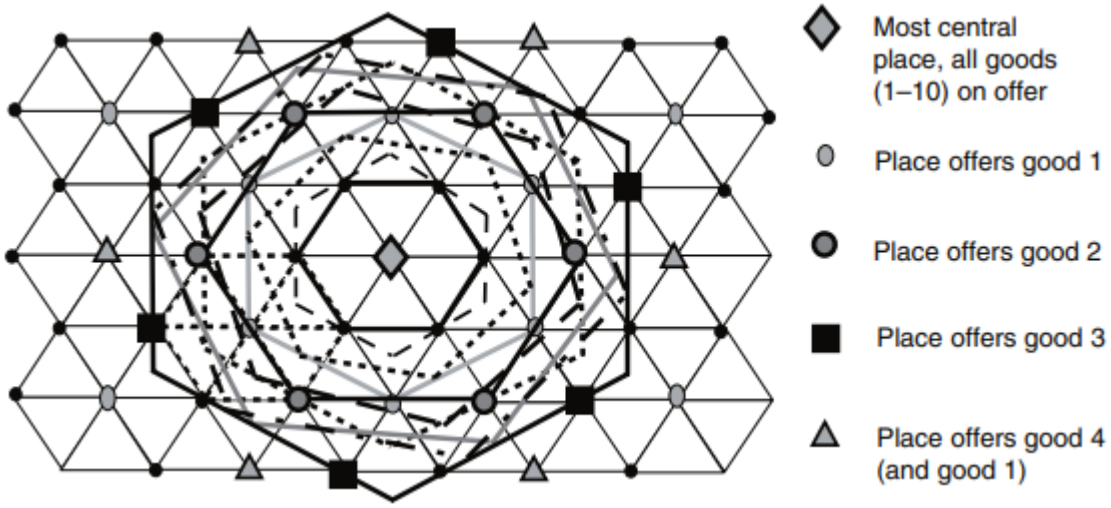

Figure 3-5: Honeycomb structure

Source: Fischer (2011:496)

It is evident from figure 3-5 above that areas with more centrally located places exist, and areas with lesser centrally located places exist (Fischer, 2011:499). Places with more than one class of goods and services are present within the grey spokes. A honeycomb network is the resulting structure for each of the products (Fischer,2011:499). The major city serves as the hub of a network of economic activity rings that serves as the industrial counterpart to Von Thünen's agricultural circles (Fischer, 2011:499). Lösch's approach results in a variety of settings with distinct product specialisations, but not in a rigid hierarchical way. The "smaller" centres can also support "larger" centres, which is more practical than the Christaller principle (Fischer, 2011:499). Richardson (1973:172-175) argued that this uniform plain of Lösch and Christaller is too distant from real life, and that such theories' starting points should be from the spatial structure of an economy preceding industrialisation. Richardson (1973:173) pointed out that such nodes exist and are called locational constants and are fundamentally helpful in the promotion of recognizing the scattering process. Richardson (1973:173) describes these constants as fixed locations that serve as a focus for population agglomeration.

According to Richardson (1973:173), locational constants seek to define the spatial structure of the economy and can be split into three categories:

- A raw material
- A long-established city
- Areas with benefits (land heterogeneity)

Within regional analysis, locational constants perform some significant functions. Firstly, it simplifies the task of developing a spatial planning model by pre-identifying several main locations (this enables prediction of spatial patterns). Secondly, it determines the number of urban centres in an area and, in addition, the agglomeration pull effect of that area. Finally, this theory explains why sectors and individuals do not inherently accumulate in one major centre only but choose isolated development patterns. Richardson (1973: 172-175) explains his theory also portrays the pattern of production of some products. If products are hierarchically categorized by the scale of the market area in which they are exchanged, a specific relationship exists. Lower order products, e.g., bread loaves, manufactured locally as these limits the scope of agglomeration and should therefore be supplied, regardless of their size, in all central places. Higher-order products, e.g., manufacturing of vehicles, tend to increase the range of agglomeration and are therefore only distributed in higher-order and larger-sized central places.

Businesses that provide goods and services usually locate in areas that are convenient for their clients, but they also group together to benefit one other (Mulligan *et al.*, 2012:410). When firms coordinate itself in space, decentralized consumers seek to mitigate the overall costs associated with purchasing these products (Mulligan *et al.*, 2012:410). Firms generally focus on price-location techniques with numerous variables that reduce travel costs for customers and, simultaneously, the agglomeration of firms contribute to the development of a hierarchical structure that produces all potential products effectively (Mulligan *et al.*, 2012:410).

3.3 Development theory

The majority of what is referred to as development theory is classified as grand theories or broad descriptive frameworks (Pieterse, 2010:2). The growth pole idea is one of the first theories of regional development connected to spatial planning (Wojnicka-Sycz, 2013:17). This theory emphasizes the function of propulsive branches and how it influences the development of the environment (Wojnicka-Sycz, 2013:17).

3.3.1 Growth Pole theory

In 1955, Perroux used an abstract economic space to apply the concept of a growth pole. A growth pole can be characterized by a broad group of firms closely connected by a leading sector with input-output connections (Richardson, 1975:163). This propulsive industry and the industries to which it is related innovate and develop faster than pole-external industries (Richardson, 1975:163). However, Boudeville also developed the concept further in 1957 through his idea of a polarized zone, described as a diverse, coherent geographical area where different components interdepend on each other through complementary relationships centred around a regional hub (Richardson, 1975:163). Strictly speaking, the description "growth pole" should be used only where there are propulsive industries inducing growth within an industrial complex (Richardson, 1975:163). Peroux based his growth-pole theory on the idea that economic growth is essentially imbalance (Ke & Feser, 2010:1133). Centres are not territorial, but rather constituted of industrial clusters driven by a propulsive sector or an industry associated with upstream and downstream firms, as illustrated by figure 3-6 below (Ke & Feser, 2010:1133). According to the growth pole analysis, the best strategy to organise spatial capital is through spatial population concentration and the agglomeration of economic activity (Richardson, 1975:164). Although industrial agglomeration is an important factor in the effectiveness of spatial organisation, it is not the only factor (Richardson, 1975:164).

Figure 3-6: Emergence of growth poles

Source: Perroux (1955)

Hirschman defined regional growth in 1958 as a process of industrial activity through input-output relations (Ke & Feser, 2010:1133), defining poles as opposite endpoints of one axis in which trickling-down effects are represented as positive effects, while polarization effects are viewed as negative effects (Godlewska, 2016:190). Hirschman came to the conclusion that, if the two economies are mutually supportive, growth in the "advanced north" has a positive (trickling-down) influence on the "less developed south," and that, if the two economies are competitive, the "north" has a negative (polarisation) impact on the south (Ke & Feser, 2010:1133).

Particularly in a developing country context, using growth pole analysis in the national urban hierarchy to fill in gaps, may promote a national urban network capable of diffusing energy for growth and innovation from the centre to the periphery (Richardson, 1975:164). But translating this approach into operational planning requires coordination among industrial policies, urban infrastructure investment decisions, and transportation planning, both within and between regions (Richardson, 1975:164). Growth pole policy can aim either at geographical clustering of economic activity in general or at creating geographical poles of growth through the location of organizational/industrial poles (Richardson, 1975:164). Furthermore, it should be recognized that the Growth Pole Concept can be implemented in relation to numerous regional issues, such as the revival of deprived regions, the promotion of regional decentralization, the transformation of the local urban structure, and the push towards interregional balance (Godlewska, 2016:190).

3.3.2 New Economic Geography

The NEG theory became prominent after Krugman's (1991) seminal paper when the Central Place theory studies disappeared from the spotlight (Mulligan *et al.,* 2012:416). Inevitably, this theory is closely related with older theories (Krugman, 1998). However, it also consists of a range of unique attributes that qualify as a modern departure (Krugman, 1998). The Dixit-Stiglitz monopolistic open economy with multiple varieties, increasing returns to scale, and labour as the only input serves as the foundation of the Modern Economic Growth model in most cases (Mulligan *et al.,* 2012:416). A perfectly open economy produces a non-trade industry (farming) with consistent returns to scale (Mulligan *et al.,* 2012:416). Many of the shortcomings of the Central Place theory are resolved by modern economic growth models by introducing microeconomic mechanisms that include increasing returns to scale, monopolistic competitiveness, and a "love of variance" among households and firms (Mulligan *et al.,* 2012:416). Geographically, many economic activities are significantly clustered (Krugman, 1998:8), although not all individuals live in one large city, nor does the global economy consolidate production of each product in a single region (Krugman, 1998:8). Obviously, between 'centripetal' and 'centrifugal' forces, there is a contest between forces that tend to encourage regional concentration and those which tend to oppose it.

Table 3-1: Forces affecting geographical concentration

Centripetal forces	Centrifugal forces
Market-size effects (linkages)	Immobile factors
Thick labour markets	Land rents
Pure external economies	Pure external diseconomies

Source: Krugman (1998:8)

The centripetal forces: both 'backward links' – sites with clear access to large markets are desired places for the manufacturing of products due to economies of scale – and 'forward links' – a large local market stimulates the local manufacturing of secondary goods, minimizing downstream producers' costs – are produced by a large local market (Krugman, 1998:8). A concentrated local labour market is strengthened by an industrial concentration, particularly for technical expertise (Krugman, 1998:8), and local economic activity concentrations may generate almost perfect external economies through knowledge spill overs (Krugman, 1998:8).

Centrifugal forces: Immobile factors to consider are land and natural capital, and even individuals in an international context-militate against production concentration, both from the supply side (manufacturing) and from the demand side (scattered elements create a fragmented market, and some production will have an opportunity to move close to the customers) (Krugman, 1998:8). Economic activity concentrations create increased local land demand, increasing land rents, and further provide a disincentive for further accumulation (Krugman, 1998:8). The pattern of agglomeration growth will rapidly become self-reinforcing due to the advantages that producers and consumers receive as a consequence of easy access to inputs and outputs, and larger cities provide more diversity that attracts people and companies (Mulligan *et al.,* 2012:416). Decreasing transport costs trigger more concentration in most NEG models, so that companies can take leverage of the increasing returns to scale (Mulligan *et al.,* 2012:416).

NEG models do, however, have certain drawbacks of their own. These include restrictive manufacturing processes and the possibility of precarious, or "disastrous," results that are susceptible to minute changes in parameters (Mulligan *et al.,* 2012:417). The smallest adjustments in transport costs in the basic models, for example, can often contribute to concentration or equal shares in either region (Mulligan *et al.,* 2012:417). The perceptions of growing returns suggest that significant shocks can produce devastating results, which are typically not supported by empirical study based on natural and man-made disasters (Mulligan *et al.,* 2012:417).

3.3.3 Special Economic Zones

SEZs are typically the practical application of growth pole theory, situated within strategic areas in order to promote economic development and growth. This is the main reason why SEZs are considered worldwide as an economic development tool, which stimulate economic growth at various levels depending on each area's developmental state and available resources. SEZs are explicitly specified duty-free enclaves and, in order to fulfil the requirements of trading, taxes, and tariffs, are considered international territory (Chaudhuri & Yabuuchi, 2010). The zones are used as a tool for policymaking to encourage systemic changes, industrial growth, and trade and financial liberalisation (Chaudhuri & Yabuuchi, 2010). SEZs are a tool of economic policy for fostering the growth of certain regions or industries, which they do in terms of the economy. On the contrary, it is an element of economic space from an economic geography perspective, able to create modern spatial frameworks and locality benefits (Godlewska, 2016:193). SEZs are geographically separate locations conducting business on favourable terms, in physical terms (Godlewska, 2016:193). The zones are directed towards attracting potential investors (Godlewska, 2016:193). One of the major factors for the region's economic growth is the relationships that large firms establish with the community (Godlewska, 2016:193). SEZs are legislative, administrative, and tax structures designed to make it easier for a developing country to draw export-oriented industrial activity, which would not take place otherwise (Warr & Menon, 2016:1).

Weak domestic infrastructure, investment instability, expensive legislation, and trade restrictions are all factors that would otherwise deter this initiative (Warr & Menon, 2016:1). The SEZ's purpose is to reduce the price of these barriers of growth, thus encouraging employment creation capital to the country, which would not have happened otherwise (Warr & Menon, 2016:1). The zone creates a favourable environment for investment inside a certain geographic area, but it does not specifically address problems that occur in the environment for investment outside of the zone (Warr & Menon, 2016:1). Production fragmentation is a global industrial trend driven by the expansion of SEZs (Warr & Menon, 2016:2). As a result, demand for the facilities provided by the zones has increased. This tendency allows labour-intensive processes of a final good's total manufacturing process to be split into several parts, each with a different cost structure (Warr & Menon, 2016:2). Individual processes may take place in various regions worldwide, where costing factors vary greatly, thanks to international exchange in intermediate products (Warr & Menon, 2016:2). Since their labour force lacks the appropriate training, the most labour-intensive production processes may be more attractive to developing countries, but not the ones requiring the greatest level of skill (Warr & Menon, 2016:2). Although these zones are different from each other, they all share similar characteristics.

SEZs have characteristics in common that contribute to its uniqueness, which typically operate under more flexible economic regulations than those that typically apply to issues like labour; land use; international investment and government services. Zones are typically serviced with efficient customs services and fast-track registration and certification, typically through one-stop-shop facilities. SEZs have significantly better and safer infrastructure compared to the local economic climate and financial incentives. Investors in the SEZs often enjoy capital freedoms as well as some degree of tax advantages and perks (Zeng, 2016:3). SEZs are classified according to its land uses and location. Table 3-2 below fully explain the different SEZs that exist worldwide:

Table 3-2: Different SEZs

Name	Definition
Free Trade Zones	Also known as commercial free zones, are fenced in, duty free areas, offering warehousing, storage and distribution facilities for trade, transhipment, and re-export operations.
Export Processing Zones	Industrial Estates aimed primarily at foreign markets. Offering firms free trade conditions and a liberal regulatory environment.
Comprehensive Special Economic Zones	Also called multi-functional economic zones, are large and consist of a mix of different land uses or economic activities.
Industrial Parks	Manufacturing based sites operating at a smaller scale.
Bonded Area	Also known as Bonded Warehouses, are specific buildings or secured areas in which goods may be stored, be manipulated or may undergo manufacturing operations without duty payments. Similar to a free trade zone but is subject to customs laws and regulations.
Specialized Zones	Consist of science/technology, petrochemical, logistics and airport-based parks/zones.
Eco Industrial Zones/Parks	Focus on ecological improvements in terms of reducing waste and improving the environmental performance of firms. They often use an "industrial symbiosis" concept and green technologies to achieve energy and resource efficiency.

Source: Zeng (2016:2)

3.4 Conclusion

This chapter provided a broad background of regional growth pole theories in spatial planning and how the theories evolved over time into the modern SEZ theory. At first, attention was given to location theory (see Section 3.2) providing a perspective on how growth poles emerge and exist in a space. Section 3.3 focused on development theory, on how markets/industries within growth poles agglomerate and what factors play a role for their agglomeration. Section 3.4 focused on the NEG theory, many of the shortcomings of the theories discussed in the abovementioned sections are resolved by modern economic growth models by introducing microeconomic mechanisms.

These mechanisms to be implemented depends on the location and type of market area within a space to ensure the success of a growth pole. The last section within this chapter provided a broad perspective of SEZ theory, classifying growth poles based on its function and strategical location. This theory intertwines all the theories discussed above, producing the best growth pole within a regional area. The SEZ theory will be discussed in depth in the chapters that follow. This chapter provided a broad background of regional growth pole theories in spatial planning and introduced numerous spatial measures to determine the best location of a growth pole. When assessing South Africa's SEZs, these spatial considerations will be taken into account and serve as a basis for a regional understanding of SEZs and subsequent proposals. The following chapter will provide a thorough examination of the evolution of SEZs, which will ultimately assist in the evaluation of South Africa’s SEZs.

CHAPTER 4: SPECIAL ECONOMIC ZONES AND SPATIAL PLANNING

4.1 Introduction

SEZs have proven to be an effective tool for economic development all over the world (UNCTAD, 2021:25). In the late 1990s and early 2000s, their use, which had previously been inconsistent, dramatically increased. More recently, another wave of SEZ expansion has occurred, particularly in emerging and developing nations (UNCTAD, 2021:25). Governments all over the world have resorted to SEZs as an instrument to promote economic growth, productivity, and innovation in response to the increasing demand from global competition to increase the relevance of global value chains and attract mobile industrial activities (UNCTAD, 2021:25). In this chapter, SEZ will be analysed from a spatial planning perspective, using the theory discussed in Chapter 3. Locational factors will be identified from the theory discussed in the chapter above, which will be utilised to evaluate the SEZs of South Africa and internationally. This chapter will also attempt to align itself with Objective 1 as indicated in Section 1.3 of this study. Thus, the locality factors will be identified through spatial planning analysis, which will be applied later in the study to determine the feasibility of each SEZ of South Africa.

4.2 The analysis of Special Economic Zones

SEZs are geographical areas that have the potential to boost investment, employment, and revenue growth (World Bank, 2013:4). It is a place where efficient economic activities grow rapidly due to the presence of economies of scale and agglomeration, competitiveness and collaboration, entrepreneurship, and backward/forward links (World Bank, 2013:4). The key factor is a localized inherent revenue producer with significant economic potential. Mineral reserves, tourism destinations, fertile land, large workforce or other geographical advantages could each serve as the foundation for localized growth (World Bank, 2013:4). SEZs also require the availability of a basic infrastructure network (roads, railroads, river transport, and electricity). And, particularly in Africa, proximity to markets or trade routes to establish trading ties with the rest of the world (World Bank, 2013:4). While one aspect of a SEZ approach involves improving the “hard” infrastructure (e.g., roads and ports), infrastructure isn't enough to make an economy competitive on its own (World Bank, 2013:4). The “soft” infrastructure, the laws and policies that promote or discourage the establishment and productivity of businesses, also require consideration (World Bank, 2013:4). A SEZ takes both the hard and soft factors into account through a spatially aware, proactive, multi-stakeholder approach (World Bank, 2013:4).

It looks to enhance local competitiveness and economic opportunity through strategic interventions, such as capital infusion and public-private partnerships (PPPs) to build and upgrade infrastructure and/or policy reforms that have the potential to attract further investment in such a way that it provides present stakeholders reason to buy-in to the reform process (World Bank, 2013:4). Successful SEZs draw in Foreign Direct Investment and the increased investment encourages the formation of new firms and local industry. In certain types of labour-intensive work, increased investment results in more jobs (World Bank, 2013:4). This creates local wealth and increases the tax base for governments, which can use this revenue to expand, for example, access to health treatment, clean water, and education (World Bank, 2013:4).

Generally, if enforced correctly, SEZs provide two distinct benefits: “static” or “direct” economic benefits and “dynamic” or “indirect” economic benefits, as listed in the table 4-1 below. Static economic benefits are those that are immediate and result from the utilization of SEZs as instruments for trade and investment policy (Farole, 2012:26). This includes job creation, export expansion, government revenue, and foreign exchange earnings (Zeng *et al*., 2010). In contrast, the longer-term structural and developmental benefits are the ones that have a dynamic economic impact (Farole, 2012:26). Skill development, technological growth, competition for diversity, and efficiency improvement of local businesses are among the more "dynamic" or "indirect" economic benefits (Zeng *et al.,* 2010). In general, unless the zones are very efficient, the "indirect" gains are more difficult to obtain (Zeng *et al.,* 2010). The aforementioned advantages can typically increase a region's or country's competitiveness (Farole, 2012:26).

Table 4-1: SEZ Benefits

	Direct benefits	*Indirect benefits*
Employment Generation	■	
Foreign exchange earnings	■	
Foreign direct investment	■	
Government revenue	■	
Export growth	■	
Skills upgrading		■
Testing field for wider economic reform & Demonstration effect		■
Technology transfer & adoption of modern management practice		■
Export diversification		■
Enhancing trade efficiency of domestic firms		■
Cluster facilitation		■
Urban and regional development, & even green growth		■

Source: Zeng *et al.* (2010)

4.3 Implementation of growth poles

Economies at various stages of development have quite different views on the economic importance and policy goal of SEZs (UNCTAD, 2021:139). The majority of the SEZs in developed economies are duty-free areas. In order to enable intricate cross-border supply chains, The goal of SEZs is to relieve burdens associated with tariffs and, more importantly, the administrative burden of customs procedures (UNCTAD, 2021:139). In contrast, the main goal of SEZs in developing economies is often to develop, diversify, and upgrade sectors by attracting FDI. In fact, SEZ program adoption is more likely to occur in countries with historically poor FDI attraction (UNCTAD, 2021:139). Although SEZs are generally developed through a "top-down" strategy by means of government policy, the majority of economic agglomerations are developed through a "bottom-up" approach in an organic manner (Zeng, 2010:6). Since cluster formation takes time and requires a market-based environment, clustering development through the strictly top-down approach should be approached cautiously, especially in developing countries where many such initiatives have failed (Zeng, 2010:7). Nevertheless, the obstacles do not usually prevent countries from promoting the development and growth of evolving agglomerations, particularly by strengthening the market climate and taking the necessary governmental steps (Zeng, 2010:7). The efficiency of SEZs, at least within the zone or park, needs a quite competent government and an efficient market system (Zeng, 2010:7). However, unless market indications are obvious and the local authority has a good understanding of the local competitive advantages and economic situation (both local and foreign), which are typically outside the scope of the local authority, it may increase the probability of failure to develop a SEZ using purely a cluster technique (Zeng, 2010:7).

4.4 Locational factors and growth poles

Given a metric space and a set of known points, a mathematician would presumably characterise a location issue as answering the following question by selecting a number of extra points to maximise a function of the distance between the new and current points (Eiselt & Marianov, 2011:1). An explanation from a geographer may be that the aim is to identify the locations of many centres that serve an area where certain markets or communities are known to exist (Eiselt & Marianov, 2011:1). Business administration students will want to know where market catchment areas are in relation to potential clients, while computer scientists may want to know how many equal geometric forms are necessary to cover a given region and where their centroids should be (Eiselt & Marianov, 2011:1). These opinions all agree that the following are the essential components of a location problem: a measured area with predetermined sites for a fixed or variable number of additional places as well as a set of allocated locations (Eiselt & Marianov, 2011:1).

To understand how cities increase productivity, one must first understand agglomerating economies. An isolated business can take advantage of internal economies of scale: a large business can take more advantage of fixed costs and boost productivity through labour division (Farole & Sharp, 2017:1). It cannot, however, take advantage of the competitive advantages that come from external economies of scale. These benefits result from a variety of factors, including decreased transportation costs, the capacity to pool resources and services with various businesses, a competitive labour market, and information and knowledge spillovers (Farole & Sharp, 2017:1). Successful SEZs reap the benefits of pre-existing assets, including trade and transportation-related infrastructure, which provide connectivity on a local and global scale. Political factors should not be used to determine where the SEZ will be located; instead, economic and spatial factors should be taken into account (Cornelius *et al*., 2020:8). According to Farole (2011), the success of SEZs is significantly influenced by the zones' geographic location. When political factors take precedence over commercial or economic considerations when choosing a location, the relevant authorities in charge of SEZs neglect to address the ensuing issues with supply access, labour skills, and infrastructure connectivity.

According to some, the success of an economic zone will depend on its proximity to ports and airports if it is created with the intention of generating exports, and if it is created with the intention of developing the production sector, its closeness to raw materials and a labour force that is properly educated will determine its success (Cornelius *et al.,* 2020:8). Economic zones must have high-quality infrastructure in order to succeed. The administrative and infrastructure conditions that businesses in SEZs must deal with are important because they have an impact on manufacturing costs. The further a zone is from its supply of raw resources or export channels, the more probable it is that it will fail (Cheong, 2018). Zeng (2016) emphasized that SEZs don't have to be separated from other economic sectors, for them to succeed, their value chains must include linkages to local suppliers and be based on a local comparative advantage. A suitable working environment is necessary both within and outside of a SEZ in order to preserve linkage between the zone and the local economy and its markets (Cornelius *et al.,* 2020:8). The development of SEZs shows a clear correlation between one’s economic performance and the standard of one’s hard and soft infrastructure (Cornelius *et al.,* 2020:8).

4.5 Are South Africa’s SEZs effective in terms of spatial planning?

According to Farole and Sharp (2017) there are two issues related to South Africa’s SEZs: The majority of zones are being targeted at areas where labour-intensive and significant industries are not anticipated to be competitive. This implies that employment creation may be constrained even if the SEZs are successful in luring investment. Additionally, the SEZ's economic geography's dynamics are very value chain specific (Farole & Sharp, 2017).

For example, beneficiation may make more sense to be economically close to natural resources like mines in particular mineral value chains. A recent report from the World Bank (2017) examined 237 SEZs in 19 countries and found that these SEZs have large spill-over effects and that these impacts erode quickly across spatial distance. Positive spill-overs from SEZs were specifically determined to be substantial only up to 10 km out from the zone (World Bank, 2017). This highlights crucial concerns regarding the placement of SEZs within a metropolitan setting, because zones are likely to function better in denser areas (World Bank, 2017). While industrial parks and industrial estates historically served as important locations for medium- and large-scale manufacturing and were incorporated into the urban centres of large cities, technological, global, and manufacturing strategy changes have had a significant impact on how cities approach industrial land (Farole, 2017:19). As suppliers want to co-locate, one outcome is that prosperous SEZs frequently lead to the establishment of new edge cities (Farole, 2017:19). The locations of the metropolitan zones vary greatly throughout South Africa. COEGA SEZ (20 km from the core of Port Elizabeth) and Dube SEZ (about 40 km from the centre of Durban) seem to fulfil the definition of an edge city (Farole, 2017:19). However, in both instances, the choice of the zone's location was somewhat influenced by the site of the significant infrastructure project that the zones were to be built around (Farole, 2017:19).

Where the zones should be located within metropolitan areas is less of a concern than how these zones may be effectively connected to the labour and product markets to have the greatest impact on the creation of inclusive jobs in the context of spatial and economic development planning (Farole, 2017:20). Unfortunately, the public sector in South Africa has developed a reputation for creating expansive and imaginative plans but frequently having trouble putting them into practice – a situation known as the "Shenzhen Syndrome" (Hartley & Morrow, 2021:5). SEZs are large, expensive, and drawn-out industries that require a great deal of dedication and endurance to succeed (Hartley & Morrow, 2021:5). SEZs have, in fact, had a difficult time taking off in sub-Saharan Africa since they are frequently seen as a "silver bullet" for growth and a "quick cure" for failing economies. Adopting this limited perspective will lead to SEZs that are unique only in name (Hartley & Morrow, 2021:5).

4.6 Conclusion

Chapter four provided a thorough discussion of SEZs and also identified its role SEZs play in terms of Spatial Planning and the impact of such zones on a country’s economy, if implemented correctly. The following chapter will attempt to provide an evaluation of international and national policy and legislation on SEZs, which will ultimately assist in the evaluation of South Africa’s SEZs.

CHAPTER 5: POLICY AND LEGISLATION ON SPECIAL ECONOMIC ZONES

5.1 Introduction

In the post-apartheid period, there have been few sustained national policies which have explicitly aimed to target development spatially. While some policies such as the National Spatial Development Perspective attempted to make statements about where development should be supported, these have not had much influence, and policies have often gone in different directions (Harrison *et al.,* 2008). Some policies and programmes of course have a spatial element, and others have included levels of spatial targeting. This chapter will investigate policy and legislation related to SEZs from an international and national perspective, in order to identify the best policy and legislation to implement SEZs in South Africa (as indicated by Objective 2 in Section 1.3). Policy and legislation related to SEZs will be analysed on an international and a national level in order to determine any gaps within the policy and legislation, refer to figure 5-1 which illustrate all related policy that will be discussed in detail.

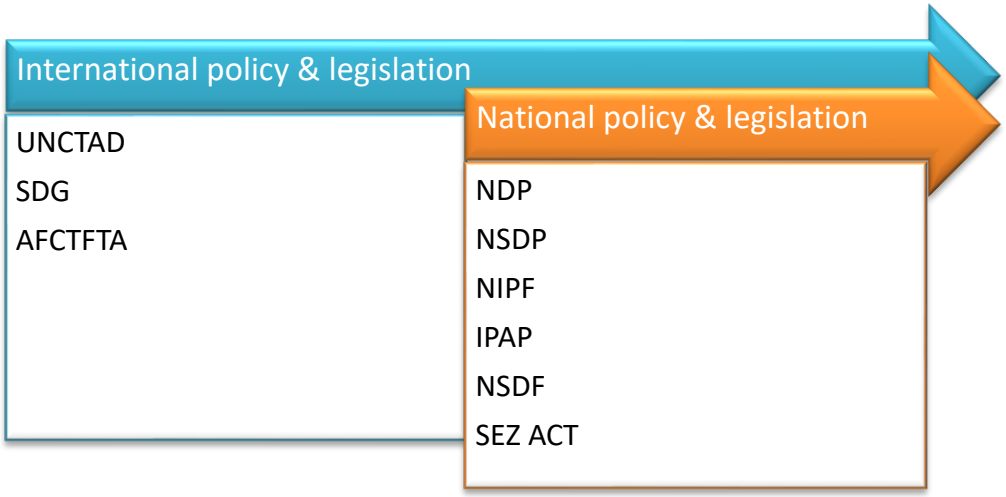

Figure 5-1: Summary of policies

Source: Own compilation

5.2 International Policies and Legislation

This section will briefly discuss international policies and legislation on SEZs, focussing on whether SEZs are implemented and developed correctly from a spatial planning perspective. It will specifically refer to the SEZ Development Ladder of the United Nations Conference on Trade and Development (UNCTAD), the Sustainable Development Goals and the African Continental Free Trade Area (AfCFTA).

5.2.1 UNCTAD (SEZ Development Ladder)

In 1945, South Africa was one of the UN's (United Nations) founding 51 members, the number of UN members has increased from its initial 51 in 1945 to 193 recently (DIRCO, 2022:2). Due to worldwide opposition against the apartheid policy, the United Nations General Assembly banned South Africa from participating in its operations in 1974 (DIRCO, 2022:2). In 1994, South Africa was readmitted to the UN after becoming a democracy and the democratically elected government has been pursuing a foreign policy that is focused on the UN's importance to the multilateral system since 1994 (DIRCO, 2022:2). The UN constitutes of various development policies and programmes, and it is South Africa's duty as member of the UN to implement and support such development policies and programmes. Therefore, an important policy "tool" for South Africa to consider when developing and implementing SEZs within the country is the SEZ development ladder. The SEZ development ladder categorizes different types of SEZs according to each country's economic size. In developed economies, zones designed to draw export-oriented industries are increasingly focusing more on services and vertical integration, whereas in developing economies, SEZs have shifted away from focusing solely on storage and logistics and toward manufacturing and services (UNCTAD, 2021:140).

The SEZ Development Ladder categorizes a country's economy into four groups, refer to table 5-1, with each group having its own unique set of objectives and type of SEZ. The first group is high income economies; this type of zone will ultimately support the global value supply chain by promoting cross border trade. The type of SEZ to be implemented is a free zone, not producing any product but rather acting as the distributor of goods across the globe. These countries' economic climates are seen as being highly attractive, and several of them offer alternative governmental initiatives to encourage trade in cross-border distribution networks (UNCTAD, 2021:139). The second group is upper middle-income countries; this type of zone focusses on promoting research and development (R&D) and specialised services through technological innovation. The type of SEZ to be implemented is a specialised zone, focussing mainly on attracting technological industries and highly skilled services such as financial services. The most innovation-driven zones are found within advanced emerging economies (UNCTAD, 2021:140).

The third group is middle income countries, this type of zone promotes industrialisation and global value chain integration. The type of SEZ to be implemented is also specialised, orientated towards international trade and export processing industries such as the automotive and electronics industries. Zones with specialized industries are more prevalent in middle income countries (UNCTAD, 2021:140). South Africa can be categorised under this third group of the SEZ Development Ladder. The majority of South Africa's SEZs are of a specialised nature, for example the East London SEZ and Tshwane SEZ is focused on the automotive sector, promoting and attracting such industries. South Africa is at the forefront of global value chain production and is a major trade route between Africa, Europe, Asia and America, therefore establishment of specialised zones focused on export orientated manufacturing is the preferred way to go. If each SEZ is implemented in such a manner, no zone will be redundant and ineffective within the spatial system of the country. The final and fourth group is low-income countries, this type of zone is centred on resources that seek to attract processing industries, as well as stimulate industrialisation and diversification. SEZs are being implemented by these countries to boost exports, industrialization, and manufacturing (UNCTAD, 2021:140). Zones that are focused on industrialisation and employment creation are crucial in such countries (UNCTAD, 2021:140).

Table 5-1: SEZ Development Ladder

	Zone policy objectives	Prevalent zone types
High-income economies	• Provide an efficient platform for complex cross-border supply chains • Focus on avoiding distortions in the economy	• Logistics hubs free zones only (not industrial free zones) • Innovation and new industrial revolution objectives pursued through science parks without separate regulatory framework, or though incentives not linked to zones
Upper-middle-income economies	• Support transition to services economy • Attract new high-tech industries • Focus on upgrading innovation capabilities	• Technology-based zones (e.g. R&D, high-tech, biotech) • Specialized zones aimed at high value added industries or value chain segments • Services zones (e.g. financial services)
Middle-income economies	• Support industrial upgrading • Promote GVC integration and upgrading • Focus on technology dissemination and spillovers	• Specialized zones focused on GVC-intense industries (e.g. automotive, electronics) • Services zones (e.g. business process outsourcing, call centres)
Low-income economies	• Stimulate industrial development and diversification • Offset weaknesses in investment climate • Implement or pilot business reforms in a limited area • Concentrate investment in infrastructure in a limited area • Focus on direct employment and export benefits	• Multi-activity zones • Resource-based zones aimed at attracting processing industries

Source: UNCTAD (2021:140)

5.2.2 UN: Sustainable Development Goals

The Millennium Development Goals (MDGs), which inspired a global movement to overcome poverty in all of its forms from 2000 to 2015, laid the groundwork for the 17 Sustainable Development Goals (SDGs) (Woodbridge, 2015:1). Although the SDGs will be applicable to all UN member states and are significantly more extensive and ambitious than the MDGs, the MDGs solely applied to poor countries (Woodbridge, 2015:1). Recent ground-breaking treaties reached by the UN will advance social justice and environmental sustainability worldwide if they are implemented correctly. One hundred ninety-three countries have adopted the Sustainable Development Goals (SDGs) from 2015. There are 17 aims that are committed to eradicating poverty, safeguarding the environment, and promoting the prosperity of all. One hundred sixty-seven countries have ratified the 2016 New Urban Agenda (NUA), which establishes a new worldwide norm for urban planning, management, and habitation. The New Urban Agenda is regarded as the vehicle for achieving the Sustainable Development Goals in urban areas, and the two agreements are closely related.

In order to provide a comprehensive framework to control and monitor urbanisation around the world, the New Urban Agenda acts as an accelerator of the Sustainable Development Goals (SDGs), particularly SDG 11 - Make cities and human settlements inclusive, safe, resilient, and sustainable (UN-Habitat, 2020:10). Since 95% of urban expansion will occur in developing countries, Sustainable Development Goal 11 sets goals and identifies indicators to monitor development (UN-Habitat, 2020:10). Since the SDGs were announced in 2015, sustainable development and inclusive growth have taken a prominent position on the global agenda. The SDGs establish the global community's development goals for the remaining eleven years of the development agenda's anticipated 2015-2030 timeframe (UN-Habitat, 2020:10).

SEZs are under a lot of pressure to reduce the harm they cause to the environment and communities and to engage in commercial activities that would promote the SDGs (Narula & Van der Straaten, 2019; UNCTAD, 2014). Governments ought to consider UNCTAD's suggestion to create Model SDG zones. Three pillars would serve as the foundation of these: (i) a strategic focus on luring investment in SDG-relevant activities; (ii) the highest level of environmental, social, and governance standards and compliance; and (iii) encouraging inclusive growth through linkages and spillovers (UNCTAD, 2019). But there's always room for improvement, particularly in a number of areas related to sustainable urbanisation, including environmental legislation, sustainable supply chains, and renewable energy. If SEZs adhere to the strictest international norms and proactively support the SDGs, they can not only help SEZ firms develop sustainable business models, but also serve as a catalyst for scalable SDG business models outside of SEZs (UNCTAD, 2019).

SDG model zones may also provide amenities that are advantageous to the urban population. For instance, waste management facilities with increased capacity or other utilities that have advantages outside the zone, including water treatment facilities, can supply the grid and service the zone at the same time (or provide outside the zone). Additionally, they might provide services like health care, education, and amenities that would assist the urban regions close by. Working with such excellence, SDG model zones would essentially turn the competition for resources into a competition for talent, giving the impact of sustainable development a new competitive edge.

5.2.3 African Continental Free Trade Area (AfCFTA)

The AfCFTA was signed by 44 African nations in 2021, consequently, it has become the world's largest free trade area in terms of participation since the World Trade Organization was established (UNCTAD, 2021:62). The AfCFTA is regarded as a crucial step in advancing the African Economic Community, as proposed by the Organization of African Unity's 1991 Abuja Treaty, and in achieving Agenda 2063's vision of a wealthy and united Africa (UNCTAD, 2021:62). The African Union is promoting a number of initiatives, including the AfCFTA, to increase structural reform and the competitiveness of African industrial products (UNCTAD, 2021:62). Practically, the AfCFTA treats products made in SEZs as domestic goods, allowing them to circulate freely within the region on par with non-SEZ products, provided they meet certain criteria based on rules of origin (UNCTAD, 2021:73). This clause might, in principle, assist the continent's industrialization and integration processes, considering that SEZs will be able to sell their products to all AfCFTA member countries, depending on how strict the rules of origin are (UNCTAD, 2021:73).

The African Union's objective to establish an African Economic Community has the AfCFTA as a key tenet. It is increasingly being cited as the cornerstone of rebuilding the African economy following the COVID-19 crisis. Prior to that, the AfCFTA was designed to support African industrialization and increased economic independence (UNCTAD, 2021:73). Therefore, the potential of the AfCFTA goes well beyond expanding trade flows and even economic concerns; in fact, there have even been conversations about the AfCFTA's potential to promote a green transition and contribute to peace and security (UNCTAD, 2021:73). High hopes have been placed on what the AfCFTA may or should accomplish (UNCTAD, 2021:73). It has the ability to start a cascade effect in which the advantages of bigger markets spur more trade and investment, which ultimately results in increased productivity, higher value added, and employment, as well as export diversification, all of which boost incomes and further expand the market. Manufacturing trade within sectors has the most potential for growth, but other service-related activities also have potential for growth. The benefits of a successful AfCFTA agreement and implementation extend to both the potential for the agricultural sector and the digital market (UNCTAD, 2021:73).

AfCFTA enables industries situated within SEZs to trade freely among each other within Africa, which strengthen global value chains between the rest of the world and Africa. This agreement also assists landlocked countries to trade not only by air or railway but also by water (harbours), incurring no export and import taxes which lead to cheaper local manufactured goods. This in turn assists in stimulating the African economy, which will ultimately lead to higher economic development and alleviating poor economic conditions.

5.2.4 SADC Industrialization Strategy and Roadmap

The SADC Industrialization Strategy and Roadmap was introduced in 2015 with the goal of fostering structural change and boosting the sub region's overall competitiveness (UNECA, 2022:7). It is rooted in industrialization, which serves as a catalyst for economic change and competitiveness (UNECA, 2022:7). The strategy is based on the assumption that industrialization will be facilitated by regional integration (SADC, 2015:1). It acknowledges that the development and execution of industrial policy will take place primarily at the national level and that the establishment of a compact industry between the public and private sectors is essential for the policy's success (SADC, 2015:1). Regarding greater regional integration, the SADC Industrialization Strategy and Roadmap aims to promote significant economic and technological development at national and regional levels (SADC, 2015:1).

The SADC countries are at various stages of industrialisation, with South Africa leading the way both on the continent and in the region (UJCI, 2017:2). Due to its historical dependence on the primary sector for economic growth, South Africa has historically been at the mercy of fluctuations in the worldwide price of commodities as well as environmental issues (UJCI, 2017:2). This increases the need for industrialization (UJCI, 2017:3). The SADC Industrialisation Strategy and Roadmap (2015) gives valuable frameworks and strategies for South Africa's rapid industrialization; however, execution is the main challenge (UJCI, 2017:3). This framework enables SADC countries to trade freely among each other, which will ultimately establish a well-connected network between each country’s SEZs. This well-establish network of SEZs will lead to economic growth, and ultimately to economic development within each SADC country.

5.3 Policies and legislation: South Africa

This section will briefly discuss national policies and legislation on SEZs, focussing on whether SEZs are implemented and developed correctly from a spatial planning perspective. It will specifically refer to the National Development Plan, the National Spatial Development Perspective, the National Industrial Policy Framework, the Industrial Policy Action Plan, the National Spatial Development Framework, and the SEZs Act.

5.3.1 National Spatial Development Perspective (NSDP)

The NSDP serves as a roadmap on how the government can respond to emerging demands. The NSDP provides practical implementation procedures and key modalities for South Africa's economy. The NSDP (2006) emphasizes the importance of the kind of space the economy needs to accomplish the goal of a better life for everyone. It recognizes main localities within South Africa where growth and development successes are critical to achieve the national goals. It is also a significant milestone in intergovernmental cooperation, as it is the product of extensive consultations between the government and regional and local authorities.

The NSDP (2006) identify core economic areas with high economic growth through the following:

- High potential for economic growth;
- A variety of economic activities;
- High population densities;
- The formal and informal sectors of the economy;
- High levels of formally provided infrastructure;
- Numerous options for modes of transportation, good transportation connections, and intermodal connecting facilitie;
- A wide range of education and health services and facilities;
- High concentrations of formal and informal institutional density;
- Strong relationships to the international community;
- Local governments that are capable and have access to resources like large and diverse talent bases and tax bases that are reasonably high;
- A great sense of positivity and faith that leading a better life is achievable.

Figure 5-2 indicates the macro distribution of areas of economic significance in South Africa. It is clear that the highly concentrated areas as well as all the capitals of each province are the focus areas for economic growth and development. The NSDP (2006) emphasizes that the main objective for South Africa to achieve overall GDP growth is to create incentives for each focus area in order to attract investors, which will directly encourage economic growth and development in each area. This policy does not mention or identify any SEZs because the trend of implementing such zones became apparent after the adopting of the policy. The NSDP indirectly identified areas to implement such zones (as discussed above) which could be considered by the government when identifying and implementing the South African SEZs.

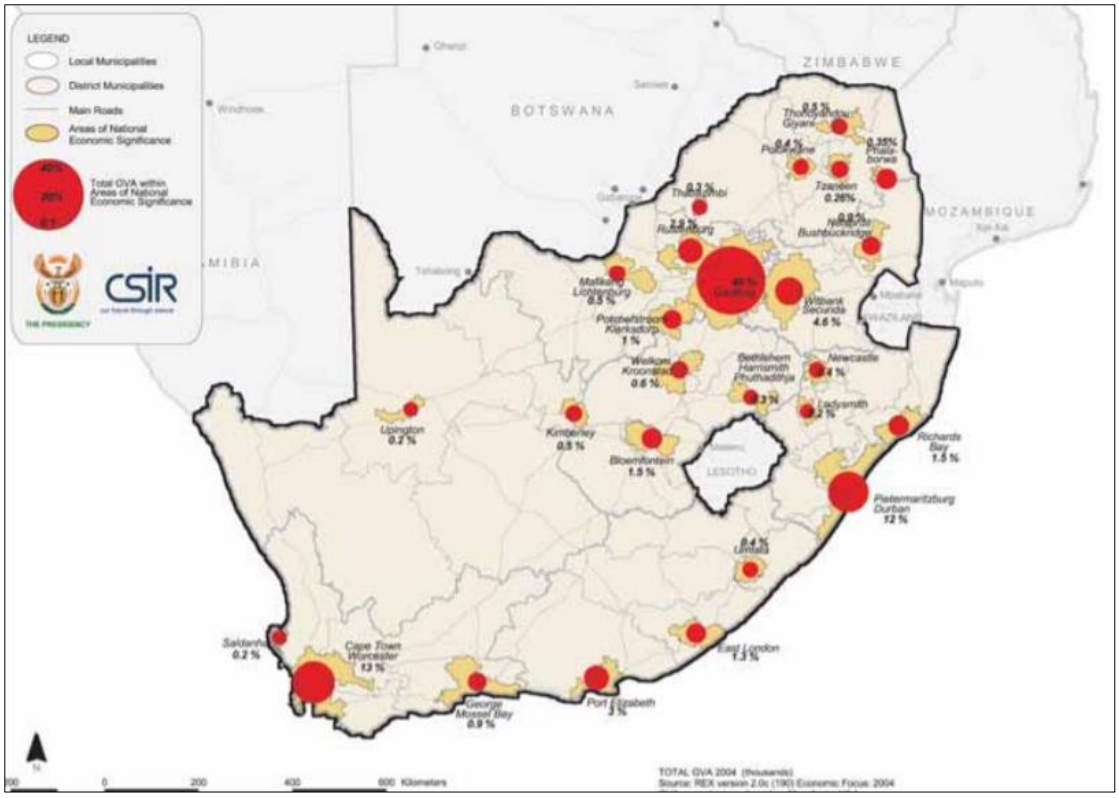

Figure 5-2: Areas of national economic significance

Source: NSDP (2006:71)

5.3.2 National Industrial Policy Framework (NIPF)

The National Industrial Policy Framework's short-term policy initiatives, the Industrial Policy Action Plan (IPAP), became heavily dependent on SEZs in South Africa (Cornelius *et al.,* 2020:12). The IPAP puts the NIPF's framework and justification for promoting industrial growth in South Africa into practice through designing targeted interventions in the most important economic sectors, particularly manufacturing. Global competitiveness (generally) is still a problem, the IPAP therefore works to encourage spending on increasing local manufacturing capacity, productive capability, and skill sets. The NIPF set out to accomplish the following primary goals:

- Economic restructuring and mitigating the possibility of deindustrialization;
- Changing the growth path of the economy to one that is more labour-intensive, value-added, and ecologically sustainable, especially in the case of globally competitive non-traditional trading of goods and services;
- Concentrating economic activity on historically disadvantaged groups and areas;
- Contributing to Africa’s overall industrial growth.

The NIPF established a framework and an implementation mechanism, known as IPAP, for addressing cross-cutting and sector-specific constraints (and maximising opportunities), to lead South Africa on a stronger economic growth path, with a strong emphasis on the manufacturing sector as a key driver of balanced development (TIPS, 2015). It can be concluded that the NIPF was the first policy who established the idea of adopting SEZs in South Africa in order to support economic growth. The IPAP implemented this idea which ultimately led to the SEZ concept within South Africa.

5.3.3 National Development Plan

The National Development Plan (NDP) 2030, which includes the SEZ regime in South Africa, recognizes the development of industrial zones and trade promotion as vital interventions (Cornelius *et al.,* 2020:12). The NDP focuses on various development factors; among others it also focuses on South Africa's growth as a viable and developing state, able to take action to address historical injustices, and a thriving private sector capable of investment, employment, and market penetration (National Planning Commission, 2013). The NDP does not particularly mention SEZs, but the whole idea of SEZs stems from this policy. Chapter 5 of the NDP is the most relevant for SEZs; it reads as follows (National Planning Commission, 2013): "*South Africa needs to respond to this trend, by enhancing competitiveness in areas of comparative advantage that can draw more people into work. By improving the skills base and increasing competitiveness, the economy can diversify, offsetting the distorting effects of elevated commodity prices on the Rand*".

A devotion to using public and private procurement methods to support domestic industry and employment development is also mentioned, suggesting that the implementation of SEZs will offset such phenomena (National Planning Commission, 2013). The main message conveyed by this chapter is the development of South Africa's economy by the stimulation and investment in various private and public sectors of the economy, in order to offset employment creation and economic growth nationally. The NDP's primary goal is a high growth plan, which it has so far failed to achieve. The average growth rate between 2012 and 2019 is only at 1,4%, whereas the NDP aspires to attain a growth rate of 5,4% (National Planning Commission, 2013). This suggests that the economy would have made far less progress than the NDP predicted by 2030. This suggests that the NDP was only a vision, and not a plan. The NDP cannot be implemented if it is driven from a political viewpoint and not from a spatial planning viewpoint.

5.3.4 Special Economic Zones Act

The Special Economic Zones Act, Act 16 of 2014 (Government of South Africa, 2014) is South Africa's specific legislative framework for SEZs, and additional duties of the SEZ Advisory Board include being a specialised regulatory oversight committee. The SEZ programme was established in 2007 in an effort to improve the potential of the present Industrial Development Zones (IDZ) programme and to address a number of significant problems that were thought to have hindered the program's effectiveness. The Special Economic Zones Act of 2014 (Act No. 16 of 2014) replaced the Manufacturing Development Act as the legislation governing IDZs. All IDZs established under the Manufacturing Development Act were declared SEZs under the Act's transitional provisions. In 2012, a SEZ policy was introduced, and in 2014, the SEZ Act was gazetted. The purpose of establishing SEZs, according to the SEZ Act, is to:

- Promote the growth of an industrial complex and give targeted businesses and industries in the manufacturing sector and tradeable services a strategic national economic edge;
- Establishing infrastructure to facilitate the expansion of certain industrial activities;
- Increasing both domestic and foreign direct investment;
- Providing a location for focused investments;
- Facilitating the beneficiation of minerals and other natural resources;
- Making use of current technology and industrial capabilities, fostering integration with regional industry, and increasing value-added output;
- Encouraging regional growth;
- Creating decent jobs and other benefits for the local economy and society, such as enhancing economic participation by supporting the growth of small, micro, and medium-sized businesses and promoting the transfer of skills and information;
- The establishment of fresh, creative economic ventures.

The SEZ programme's goals are to promote a more comprehensive industrialization growth path for South Africa, the development of regional economies that are productive and competitive, with strong upstream and downstream linkages to primary value chains and balanced regional industrial growth, (Cornelius *et al.,* 2020:15). To promote job creation, competitiveness, skill and knowledge transfer, and exports of benefited products, this entails luring private investment (local and foreign) to labour-intensive areas (Cornelius *et al.,* 2020:15). The initiative is based on the IDZ programme. Government’s assessment of the IDZ programme notes that significant success has been achieved in attracting investment and increasing value added manufacturing (Cornelius *et al.,* 2020:15).

It also points to implementation challenges including insufficient stakeholder coordination, poor institutions, absence of IDZ incentives, and absence of integrated planning (Cornelius *et al*., 2020:15). To ensure that SEZs are appealing, it is also beneficial to have specific incentives that only apply to businesses inside SEZs, but end once the businesses leave the area. To prevent unfair competition, the incentive mechanism should also be uniform throughout all SEZs (Cornelius *et al.,* 2020:15).

5.3.5 Industrial Policy Action Plan (IPAP)

The IPAP is an action plan that is especially concerned with the limitations in South Africa's industrial sector and how they affect economic growth. The IPAP suggests cooperative strategies and potential remedies for the South African restrictions that have been identified. Reiterations of this strategy take into account the necessity to support the variety of policy tools that the government can use in an effort to address the concerns highlighted. The following are the major goals of the IPAP, which are consistent (IPAP, 2019:37):

- Diversification of the economy;
- Promotion of labour absorbing industries;
- Industrialisation model focussed on inclusive growth;
- Contribution towards industrial development in Africa; and
- Movement towards a knowledge economy.

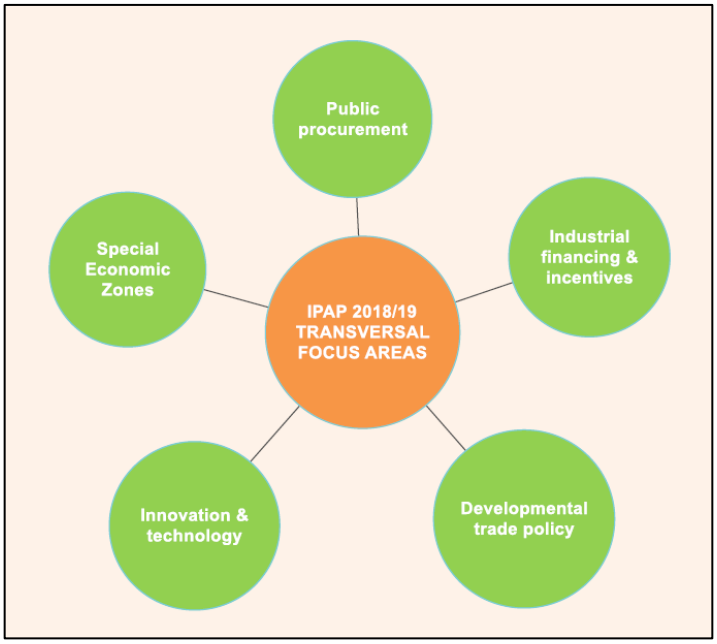

Figure 5-3: IPAP focus areas

Source: IPAP (2019:61)

The IPAP's transversal priority areas have been proposed as a means of achieving IPAP's main goals. IPAP (2019:60) proposes to concentrate on the industrial sector and encourage economic growth in South Africa through six primary transversal priority areas. Figure 5-3 depicts the six primary transversal priority areas listed in the IPAP (2019:60), one of which is the creation of SEZs. The SEZ initiative, according to IPAP (2019:60), aims to encourage decentralisation of industrial development by accelerating growth and development in certain South African areas. The SEZs provide incentives to encourage industrial growth in specific areas. In addition to creating new SEZs in other regions, it is suggested that these SEZs be extended in their current locations. In order to encourage foreign investment and boost export capacity in the already-existing SEZs and other industrial clusters, IPAP (2019:60) develops SEZs as dynamic platforms. SEZs have shown to be a successful tool for advancing industrialization in some of the top developing countries in the world. In essence, the SEZ programme supports the majority of China's current industrial capacity, making it a highly competitive net exporter of value-added goods (IPAP, 2019:91). The capacity constraint with regard to technical know-how among development practitioners across the three realms of government is the one obvious barrier in connection to the development of the SEZs (IPAP, 2019:92). The success of a SEZ program is based on the ability of the implementing agencies to plan, create, develop, administer, and operate the zones, according to lessons learned from international experience. Therefore, ongoing institution and capacity building is required for any SEZ programme to be successful (IPAP, 2019:92).

5.3.6 National Spatial Development Framework 2050

The National Spatial Development Framework (NSDF) stems from the NDP in order to assist the NDP in achieving its goals through spatial planning, as mandated by the Spatial Planning and Land Use Management Act, 2013. Since the Good Hope Plan of 1981, the NSDF is the first formal national planning framework that gives a clear and unique geographical expression to the use of financial resources to sculpt South Africa's spatial economy (Drewes & Van Aswegen, 2013:201). The NSDF will hopefully allow South African planning to overcome previous roadblocks and properly plan for growth and development in an orderly and acknowledged manner (Drewes & Van Aswegen, 2013:202). Figure 5-4 below indicates the regional economic growth and employment areas within South Africa. It is clear that the coastal area and the capitals of each province are the areas with the highest employment rates and also the areas with high to moderate GVA growth. The NSDF emphasizes that the main objective for South Africa is to achieve overall GDP growth, to promote inclusive economic growth and encourage spatial transformation within each focus area in order to attract investors, which will directly encourage economic growth and development in each area (South Africa, 2020).

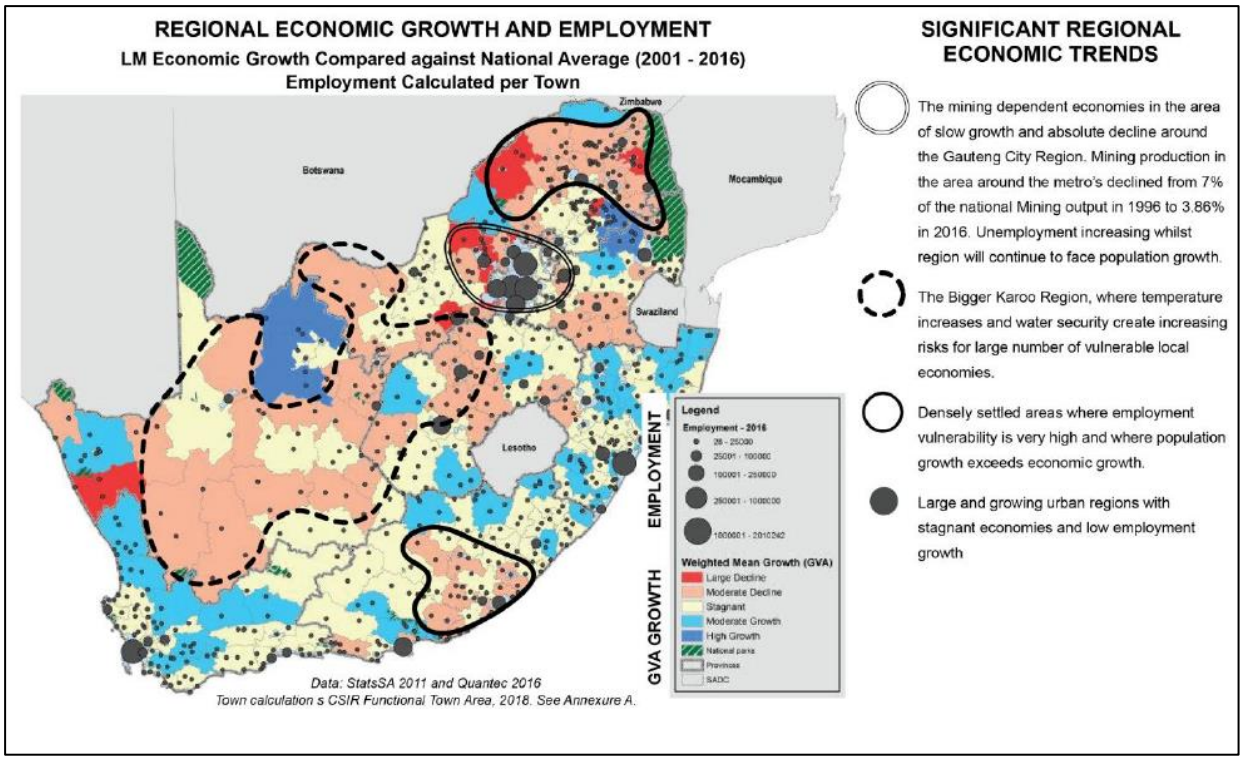

Figure 5-4: SDF Focus areas

Source: South Africa (2020)

5.4 Conclusion

Policies desired to alleviate spatial inequalities will impact industrial results since industrial policies rarely have geographically neutral outcomes (Farole & Sharp, 2017). Places, especially cities, will be impacted and influenced by the choices made in pursuing spatial and industrial strategies (Farole & Sharp, 2017). Policymakers may be considered as being almost irresponsible in their use of regionally and locally differentiated policies, as well as urban policies, to promote industrialization and job creation if they seldom utilise the ability to integrate industrial policy as an instrument for regional development (Farole & Sharp, 2017). The government is currently implementing SEZs as a spatial planning tool within South Africa. It is clear that authorities have attempted to solve the problems with IDZs and to implement a programme that is more appealing to investors This will ultimately stimulate job creation and attempt to concentrate growth on both growing and lagging regions, but it is also clear that success cannot be ensured. The necessary policy and legislation related to the study were fully discussed in this chapter. This chapter is linked to Chapter 8, where some of the policy and legislation will be used to substantiate the research.

CHAPTER 6: INTERNATIONAL CASE STUDIES ON SPECIAL ECONOMIC ZONES

6.1 Introduction

This chapter will investigate several case studies of developed (China) and developing (Ethiopia, Nigeria, Cambodia and India) countries which implemented SEZs. Thus, attempting to achieve Objective 3 of this study, as indicated within Section 1.3. The successes and failures of each country's SEZs will be identified and discussed, which will contribute to the overall research of this study. The success stories and lessons learned identified in this chapter from each international case will assist in determining the best policy and implementation approaches, which will be applied when comparing the SEZs of South Africa.

6.2 International case studies on Special Economic Zones

SEZs are now a common component of worldwide industrial activities; in 1997 there were less than 1 000 SEZs across the globe and by 2018 this had grown exponentially to over 5 000, with 2 543 located in China alone (Hartley & Morrow, 2021:13). Similar zones have been constructed and reproduced in other countries in an attempt to emulate China's achievements, with some academics labelling this global movement as "zone fever" (Wong & Tang, 2005:303). However, some research indicates that not all SEZs have been effective in luring investors, and that concerns about labour exploitation in these areas shouldn't be disregarded (Farole, 2011). SEZs may or may not have an impact on growth, with some academics hailing them as "vehicles of globalization" (Nel & Rogerson, 2010:2). Case studies from developed countries (high and upper middle-income economies, as discussed in Section 5.2.1) and developing countries (middle- and low-income economies, as discussed in Section 5.2.1) will be briefly discussed in the sections below, in order to fully understand the success and failures of these zones. Each case study will be analysed from a positivist's perspective in a descriptive manner as discussed in detail in Chapter 2 above. A convenient sampling method was used to identify the case studies which were analysed within this chapter. The case studies that were identified is based on sufficient research conducted of each country's SEZs in order to properly research each SEZ of the country from a spatial planning perspective.

6.2.1 China (developed country)

China is one of the countries that has had the most success implementing SEZs to bring about substantial economic improvements (Zeng, 2015:3). Since the start of its reforms and open-door policy in 1978, its GDP has increased at an average yearly pace of more than 9% (Zeng, 2010:12).

China started by creating four SEZs near Hong Kong, Macao, and Taiwan along the coasts of Guangdong and Fujian, as illustrated by figure 6-1 (Zeng, 2010:12). As a result, existing port facilities are easily accessible and strategically positioned for international trade (Sit, 2007:76). To avoid both potential dangers and political influence, the SEZs were strategically placed far away from Beijing's political power centre (Zeng, 2010:12). After proving successful, the zone concept was gradually adopted across China in various forms. Certain SEZs, like the high-tech industrial parks, were developed with more complicated goals in mind (Zeng, 2015:3).

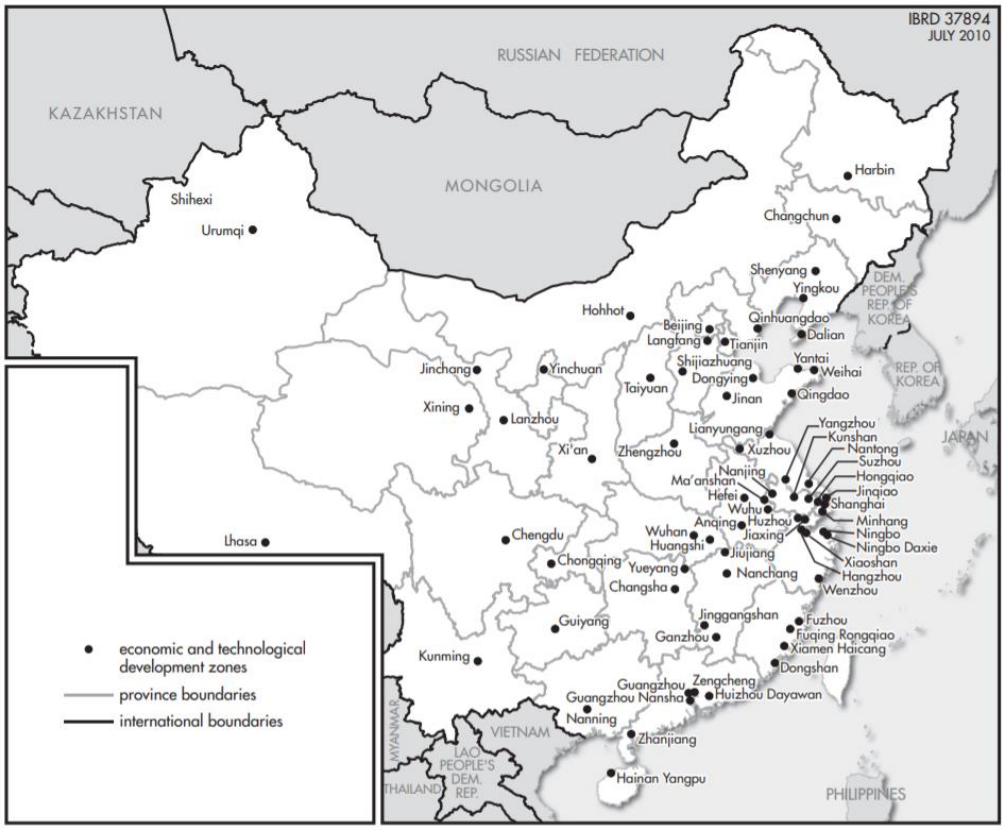

Figure 6-1: China's SEZs

Source: Zeng (2010)

China has had extraordinary growth rates due to a mixture of favourable policies and the correct combination of manufacturing elements in SEZs (Zeng, 2010:12). FDI has aided the rise of rural industrialisation, exo-urbanization, and an export-oriented economy in China since 1979, particularly in coastal areas (Han *et al.,* 2019:4*).* The persistent development of SEZs has been largely credited with China's remarkable economic achievement over the last 30 years (Cisse, 2012). SEZs and industrial hubs have significantly aided China's economic development (Zeng, 2010:2). It has also made a significant contribution to domestic GDP, employment, foreign direct investment and exports, in addition to the numerous industrial clusters (Zeng, 2015:3).

When it comes to China's successful SEZs, many are located near large cities on the coast, where strong links to international markets exist due to long-standing foreign trade traditions (Hartley & Morrow, 2021:15). Although the success of China's SEZs cannot be overrated, it took years for them to become operational, necessitating a considerable commitment from the Chinese government and a clear timeline (Hartley & Morrow, 2021:5).

6.2.1.1 Success stories

China's SEZs were successful for a number of reasons, however the circumstances and conditions may have varied from case to case. Their success nevertheless highlights the following:

- *Strong commitment and support from the government* – The government has a strong commitment to and support for testing out market-oriented economic. Despite the fact that there initially a significant amount of scepticism, the senior officials were determined to implement SEZs gradually. Such commitment provided a steady and supportive macro-environment. Additionally, the national government took steps to decentralise its power and promote the creation of transparent, advantageous legal and policy frameworks for SEZs (Zeng, 2015:5; Tao *et al.* 2016:6).
- *Land Reforms* – The State owned most of the land before 1981 and with the implementation of the SEZs, the State leased the land to private developers and later sold it off as a means of attracting big investors. The reforms assisted with the successful development of SEZs in China (Zeng, 2015:5; Tao *et al.* 2016:6).
- *Investment incentives and corporate independence* – To pursue businesses to invest in the zones, the SEZs had a range of financial and non-financial incentives and industrial policies in place, such as standardised administrative processes, good infrastructure, fast customs clearance, and reduced tax rates (Zeng, 2015:5).
- *Technological innovation and strong links with the global economy* – Through value or supply chains, SEZs are connected to international companies and industrial clusters. This linkage promotes industrial competitiveness and assists in achieving economies of scale and corporate efficiency (Zeng, 2015:6).
- *Clearly defined goals, standards, and competition* – Regardless of the fact that there are several zones, the bulk of them have particular goals with regard to GDP growth, exports, employment, income, and FDI creation. Due to these goals, the zone management is dealing with a lot of responsibility and pressure. The SEZs are highly competitive with each other, which increases their efficiency (Zeng, 2015:5; Tao *et al.* 2016:6).

- *Location advantages* – The majority of SEZs in China are situated along the coast or close to major cities, boosting their access to the global market. SEZs can also easily access key infrastructure, such as harbours, airports, and trains. Due to their excellent locations, SEZs in the Min Delta region, adjacent to Taiwan, and the Pearl River Delta region, close to Hong Kong, China, benefit the most (Zeng, 2015:5; Tao *et al.* 2016:6).

6.2.1.2 Lessons learned

While the majority of the lessons learnt from China's SEZs are positive and encouraging, there are a few that other countries should try to avoid while pursuing SEZ projects. These lessons consist of:

- *Local level mushroom approaches, followed by high-level imperfections* – Many local governments and localities started to emulate the success of SEZs in the coastal area in the 1990s and early 2000s by creating numerous industrial zones and parks to attract investment without carrying out the essential planning and analysis. This resulted in significant resource loss, damage to the environment, and the downfall of many of them (Zeng, 2015:6).
- *Environmental damage* – A large number of SEZs in China face significant environmental and resource problems as a result of China's growth model, which prioritises low-tech, labor- and resource-intensive output. Performance of the GDP used to be the primary goal for Chinese government officials. According to the World Bank, China's environmental liabilities amount to around 8% of their GDP. Since then, China has attempted to formulate fiscal policies that encourage enterprises to adopt green technology in an effort to address these issues. China has also implemented stronger environmental rules (Zeng, 2015:7).
- *Disparity between social and economic development* – Several SEZs, especially those located in rural or undeveloped areas, are substantially behind in providing the necessary social and urban facilities despite the fact that they have seen great economic success. These areas struggle to draw talented individuals and leading investments, and they have a great difficulty maintaining their growth or renewing their industrial infrastructure (Zeng, 2015:7).

6.2.2 India (Developing country)

In 1965, India developed Kandla SEZ, its first export processing zone, and in 2000, India adopted SEZs which were classified as foreign territory for the purposes of trade, customs, and taxes (Palit, 2009). Twelve new SEZs were created between 2000 and 2005. However, the bulk of the SEZs were the outcome of initiatives by the state and private investment in SEZs was not encouraged under the strategy (Aggarwal, 2012:893).

The initial Indian zones were thought to be underperforming due to a lack of strong commercial connections, modest economic growth, restricted exports, and weak governmental management (Palit, 2009). Four hundred sixty-four SEZs with a total area of approximately 150 000 hectares were identified in 2004, having a preference for the coastline, and with the services, biotechnology, power, and warehousing industries dominating (Shah, 2008). The 2004 Trade Policy and related SEZs Act aimed to treble India's global trade share (Jain, 2008). According to the SEZ Act of India, SEZs should support FDI, foster employment, and promote exports (Martensson & Olsson, 2012:1). In accordance with the Act, in addition to the 143 operational zones, the SEZ Board has formally approved 584 new zones (Martensson & Olsson, 2012:1).

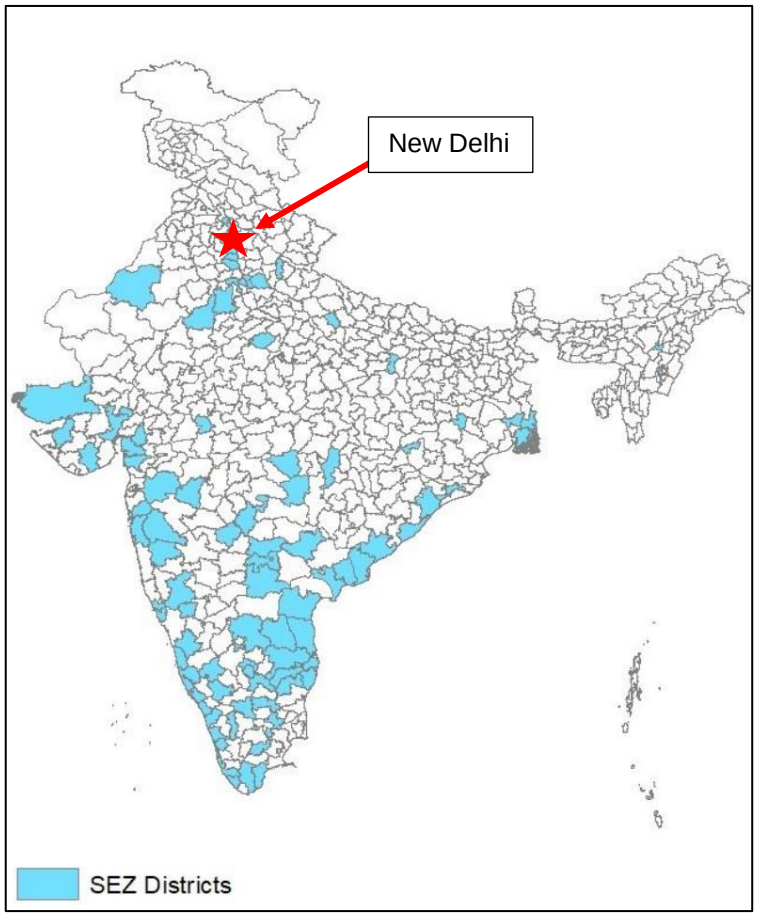

Figure 6-2: India's SEZs

Source: Tewari (2020:16)

It is evident from the map (see Figure 6-2) that SEZs are concentrated in coastal districts and are more widely dispersed throughout the country's peninsular region (Tewari, 2020:15). The factors that may have led to the location of SEZs in this area are dense population and abundant water resources (Tewari, 2020:15). The majority of the development in the northern region of the nation has mostly taken place in the districts that border New Delhi (Tewari, 2020:15). SEZs are dispersed in 94 districts across the nation in terms of quantity (Tewari, 2020:15).

The zones of India have been credited as helping to create jobs and reducing poverty, with better transportation, health, food, and social security in the zones than elsewhere. However, it is thought that the development of human capital and technology in SEZs has been less effective. The Reserve Bank of India is also worried about income loss, land speculation, and large-scale land purchase that displaced farmers and compromised food security. Additionally, it is worried about unequal regional growth and the widening of economic inequalities (Jain, 2008; Palit, 2009).

Among the difficulties SEZs face in India are the following (Shah, 2008):

- Zones are usually too far from transit centres;
- They rarely serve as efficient export clusters;
- Expropriation of land affects local people; and
- SEZs rarely create robust links to the local economy.

Zones were first implemented by India as a simple export incentive programme to create FDI through import substitution (Aggarwal, 2012:897). There were no coordinated attempts made to protect the Indian zones from the local economy's investment climate or to establish connections with the local sector to increase the consequences of spill-overs (Aggarwal, 2012:897).

6.2.2.1 Success stories

SEZ exports have grown significantly in recent years. In 2011, the SEZ proportion of all exports increased to 28 percent, surpassing China's rate (Martensson & Olsson, 2012:1). Over two million employment opportunities were anticipated to be created via SEZs. Although optimistic, it seems realistic, given that the zones employed more than 676 000 people in 2011 (Martensson & Olsson, 2012:1). India is experiencing tremendous and essential export growth, job possibilities, development of infrastructure, and new FDI mainly because of SEZs (Khurud, 2013:2; Palit & Bhattacharjee, 2008:170).

6.2.2.2 Lessons learned

Both geographically and in terms of industry, the distribution of SEZs is extremely irregular (Martensson & Olsson, 2012:2). Additionally, while shipments abroad were essentially constant over time, exports from SEZs increased over time (Martensson & Olsson, 2012:2). This is either because relocation rather than expansion is to blame for the increase in the SEZ export share or because the increase was mostly driven by the service sector (Martensson & Olsson, 2012:2). This amounts to about 1% of the annual tax revenue received by the federal government. Meanwhile, the most contentious public debate around SEZs now centres on land reform (Martensson & Olsson, 2012:2).

India has experienced a rise in protests, some of which have been violent, as was the case with the demonstrations in Nandigram, West Bengal (Martensson & Olsson, 2012:2). Ineffective law is primarily to blame for the new land acquisition issue (Martensson & Olsson, 2012:2). The Land Acquisition Act of 1894 grants governments the authority to purchase land if it is in the public interest, although market value is ill-defined and no individual is obligated to claim (Martensson & Olsson, 2012:2). India can make an effort to enhance the present SEZ strategy. By altering either the SEZ fiscal incentive structure or the SEZ Board's directives, it might alter its approval procedure to attract more international investors and manufacturing firms (Martensson & Olsson, 2012:2). The alternative course of action is to completely move away from SEZs in favour of more extensive economic reform (Martensson & Olsson, 2012:2). Tax advantages are not as significant for attracting foreign investors as the general business environment, physical infrastructure, and accessibility to skilled labour. India must promote investments, expand employment possibilities, and enhance social welfare programmes if it is to keep expanding (Martensson & Olsson, 2012:2). Their SEZ policy, as it now stands, does not advance these goals.

6.2.3 Cambodia (Developing country)

SEZ was initially launched by the Cambodian SEZ Board at the end of 2005 (Tam, 2019:90). It has been regarded as one of the steps to enhance Cambodia's business environment for both local and international businesses (Tam, 2019:90). Only in 2014, nine of these zones were operational in the country, with another 20 SEZs set to open soon, see Figure 6-3 (Warr *et al.,* 2015:6). Nearly all of Cambodia's SEZs are privately owned and operated (Warr *et al.,* 2015:7). Their manufacturing industry is dominated by garment companies outside of the SEZs (Warr *et al.,* 2015:7). The industrial base in SEZs is more varied and has more businesses producing electrical goods, and home furnishings than it does outside of these SEZs, this is therefore less true inside these zones (Warr *et al*. 2015:7). One of the government's goals in constructing SEZs was to diversify the economy, and this goal has been realized to some extent (Warr *et al.,* 2015:7).

In terms of both forward and backward links, the experience of Cambodia so far indicates that SEZs are not intimately related to the country's local economy (Warr *et al.,* 2015:13). SEZs may have a large demonstrative effect, despite the fact that SEZ enterprises are not intimately related to domestic firms in Cambodia (Warr *et al.,* 2015:13). By demonstrating that manufacturing investment can be successful outside of the trade preference-driven, labor-intensive garments sector that currently dominates manufacturing in Cambodia, the development of SEZs may indirectly encourage FDI outside the zones, though this outcome will take time (Warr *et al.,* 2015:13).

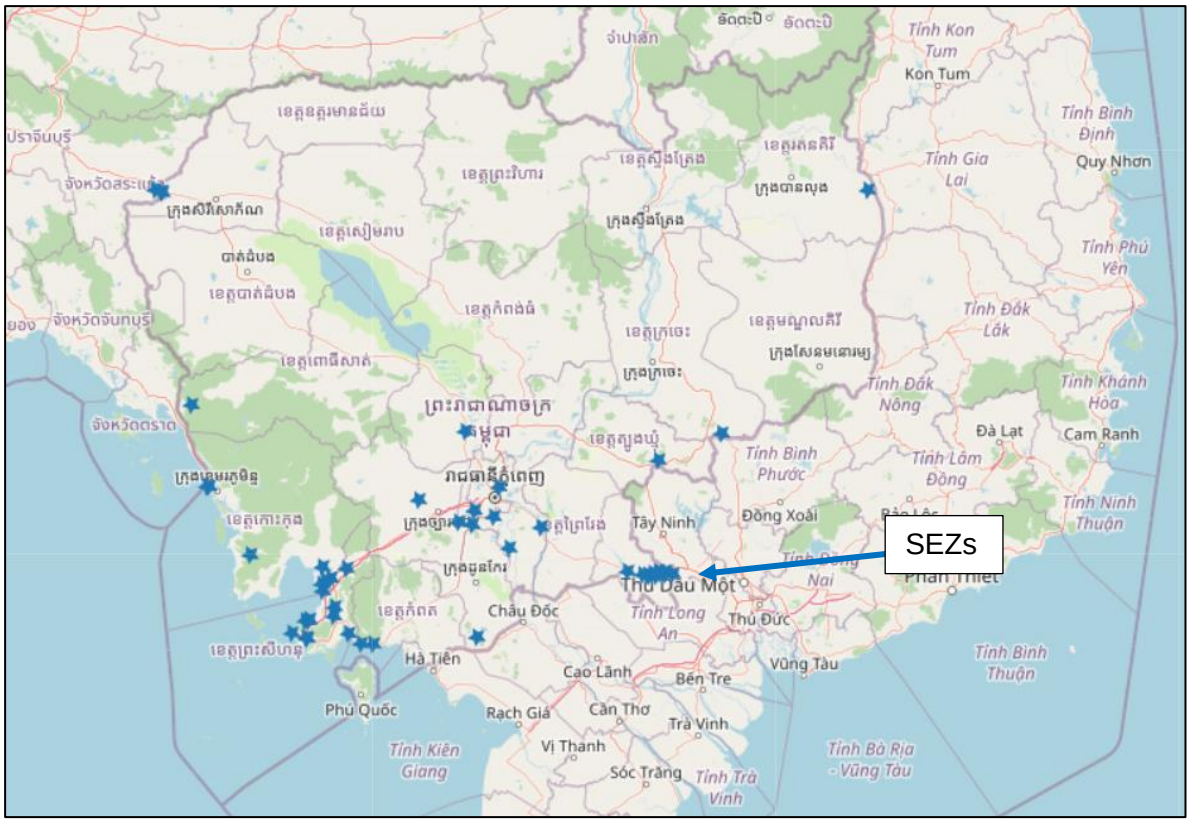

Figure 6-3: Cambodia's SEZs

Source: https://opendevelopmentcambodia.net/profiles/special-economic-zones Accessed on: 7 November 2022

The government has given private sector developers the responsibility of creating and running the zones, which is an interesting component of Cambodia's SEZ policy. In many other nations, considerable and the creation of SEZs is typically linked with pointless public sector setup costs. It also adds to the long-term viability of SEZs by introducing more market discipline into their operation and management (Warr *et al.,* 2015:13).

6.2.3.1 Success stories

Due to Cambodia's cheap labour costs and preferential tariff treatment, the European Union and the United States were first drawn to the SEZs of Cambodia (Warr *et al.,* 2015:14). The government's decision to contract with private sector developers for the creation and maintenance of the zones is an intriguing aspect of the Cambodian SEZ programme (Warr *et al.,* 2015:14). Through this, it has been possible to prevent the high setup expenditures for the public sector, which are sometimes wasted when SEZs are established in other countries (Warr *et al.,* 2015:14). Additionally, it adds to the SEZs' long-term viability by introducing stronger market disciplines into their operation and administration (Warr *et al.,* 2015:14).

Since Cambodia's SEZs were first introduced at the end of 2005, it has quickly evolved (Artuso *et al.*, 2014:73). Twenty-three zones have been established across the country due to the government's solid support of the initiative and openness to private sector creation and operation (Artuso *et al.*, 2014:73). A number of these zones have been effective in luring foreign investors from a variety of manufacturing industries, even if many of them are still in the early stages of planning. Since 2011, investment growth in the zones has increased quite rapidly, with substantial diversification occurring, especially in the light industrial sector (Artuso *et al.*, 2014:73).

6.2.3.2 Lessons learned

Cambodia's SEZs programme has shown early success in attracting investment to new markets, such as electronics and light industries (Artuso *et al.*, 2014:55). SEZs do not yet appear to have significantly enhanced business performance or had an influence on the local economy; rather, it seems to have only a little effect on the investment climate industries face (Artuso *et al.*, 2014:55). In spite of the fact that the zones provide a number of advantages, such as one-stop shops and improved border clearance procedures, investors continue to express concern over the fact that the zones are not providing the favourable investment conditions they had hoped for. (Artuso *et al.*, 2014:55). The road for foreign investors considering relocating to Cambodia may be paved with a system of clever incentives and improved investment protection, taking advantage of its affordable labour costs and its advantageous geographic location at the hub of the ASEAN Economic Community (Artuso *et al.*, 2014:55). Cambodia may also consider designing and executing a zero-corruption plan to curb corrupt practises in the SEZs. Monitoring this approach would be possible in the regulated setting of the SEZs and have a significant impact on improving Cambodia's reputation as a destination for FDI (Artuso *et al.*, 2014:55).

6.2.4 Ethiopia (Developing country)

The Growth and Transformation Plan oversees Ethiopia's economic development 2011-2015 (GTP), and its overarching goal is the eradication of poverty through the development of an industrialized country with productive and advanced agriculture sectors (UNDP, 2015:15). SEZ development is allowed in the following medium- and large-scale manufacturing sectors that are included in the GTP as one of the approaches to promote industrialization. Goods used in agricultural processing include textiles and clothing, leather and leather products, sugar, cement, metal and engineering, chemicals, pharmaceutics, and chemicals (UNDP, 2015:15). Three thousand five hundred thirty-seven hectares of land were prepared for SEZ construction by the Ethiopian Ministry of Finance and Economic Development in February 2014. On these plots, seven SEZs are being proposed for development or are already being constructed, refer to Figure 6-4 (UNDP, 2015:15).

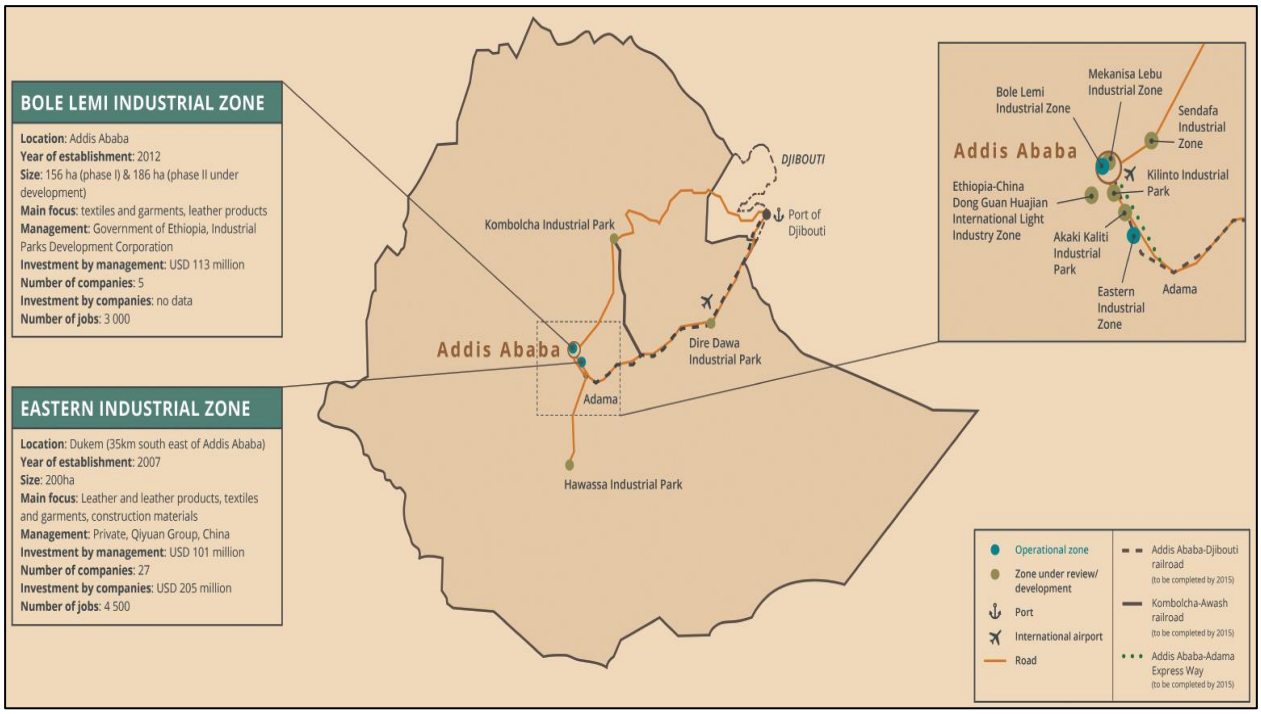

Figure 6-4: Ethiopia's SEZs

Source: UNDP (2015:16)

The first government-run SEZ in Ethiopia is called Bole Lemi Industrial Zone and consist of an area of 156 hectares in size and is situated approximately 10 kilometres from Addis Ababa's major business centre. Direct access to Addis Ababa International Airport is available from the SEZ and the main highway connecting Ethiopia's ports of entry with Djibouti and Djibouti (UNDP, 2015:19). The Eastern Industrial Zone (EIZ), one of the first six Chinese Special Economic Zones in Africa, is run and controlled by Chinese descendants which is situated near Dukem, 35 kilometres south of Addis Ababa (UNDP, 2015:19). Both the Addis Ababa-Djibouti highway and -Port railway line pass through Dukem, and it will have its own railway station after the railway line is completed (UNDP, 2015:19). The majority of Ethiopia's exports are handled by the Djibouti Port which is approximately 730 kilometres east of the zone (UNDP, 2015:19). It's unclear whether developers or the Chinese government participated in choosing the zone, which isn't ideal considering its distance from the capital and lack of access to international transportation networks (UNDP, 2015:19).

6.2.4.1 Success stories

Recently, Ethiopia has been hailed as a success story for economic expansion, attracting FDI, and reducing poverty. From 2008/09 to 2018/19, Ethiopia has one of the fastest growing economies in Africa, with average annual growth rates of 9.8% (UNCTAD, 2021:102).

Since 2010, FDI inflows have increased by roughly 50% annually, totalling to $4 billion in 2017 (UNCTAD, 2021:102). Placing Ethiopia among the top African countries for attracting FDI. The SEZ system in Ethiopia is unique largely due to its sources of funding, which is different from the conventional methods of obtaining money for zone development (UNCTAD, 2021:102). Through the sale of a sovereign bond on the global financial market, the Ethiopian government raised money and in 2014, the sale of Eurobonds earned almost $1 billion, which was subsequently used to develop SEZs (UNCTAD, 2021:102). Thus, the Ethiopian story may serve as an excellent example of a country that successfully combined investment promotion with other important areas of policy with its SEZ strategy, while simultaneously establishing the institutions necessary to carry out the plan. High-level political support for the overall plan and an intervention to resolve tensions and barriers allowed for the coherence and integration of policies (UNCTAD, 2021:111).

6.2.4.2 Lessons learned

Both investors and the government learned a valuable lesson from the establishment of the EIZ (Tang, 2019:12). Even though the government created a thorough industrial strategy in 2002 to encourage the export of goods made with a lot of labour, real development did not start until the EIZ was founded (Tang, 2019:12). The EIZ's success demonstrated how a SEZ might boost production efficiency by providing enough access to infrastructure like sewage treatment, telecommunications, and water (Tang, 2019:12). By gathering data on a SEZ-sized scale rather than by individual enterprises, the government was better equipped to oversee industrial production and investors had easier access to the infrastructure required (Tang, 2019:12).

The EIZ showed Ethiopia that a SEZ may assist in addressing corruption problems and bureaucratic inefficiencies, in addition to upgrading infrastructure (Tang, 2019:12). A company may wait up to eight years before receiving a land lease certificate before the EIZ was established, and there was a lot of rent hunting going on during that time (Tang, 2019:12). A SEZ, on the other hand, gave the government the opportunity to bargain with the SEZ developer over a sizable parcel of land in a public negotiating process, where the SEZ developer may sublease each stand to investors at a set price. Investors were able to save time while duplicate administrative procedures were streamlined for all stakeholders (Tang, 2019:12).

6.2.5 Nigeria (Developing country)

The establishment of several SEZs is a notable component of Nigeria's industrial sector (Chete *et al.,* 2014:13). The national government has issued licences to 25 free trade zones, as illustrated in Figure 6-5 (Chete *et al.,* 2014:13). The Nigerian Export Processing Zones Authority (NEPZA) is a national government institution in charge of overseeing the establishment of free zones in the

country, and is in charge of making sure that the country's overall industrialisation process is well-planned and organized (UNDP, 2015:23). Customs, police, immigration, and other comparable institutions in the zones are all operated by NEPZA, in partnership with the zone developers, to provide a "one-stop shop" for investors (UNDP, 2015:23).

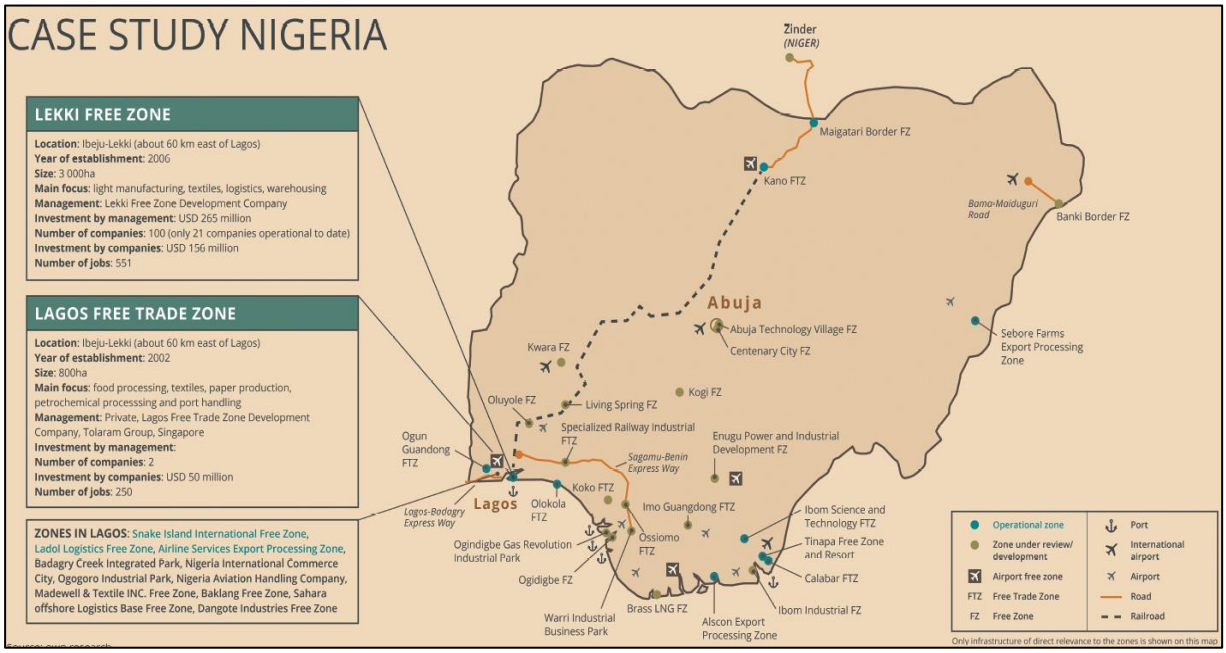

Figure 6-5: Nigeria's SEZs

Source: UNDP (2015:22)

Information and communications technology (ITC) is a booming industry in Nigeria (Chete *et al.,* 2014:14). The Lekki Free Zone (LFZ) is a 16 500-hectare free zone located on the Lekki Peninsula, roughly 60 kilometres from the metropolitan of Lagos (UNDP, 2015:31). The distance between Apapa Port, Lagos' major port, and the Lagos International Airport is 50 kilometres and 70 kilometres, respectively (UNDP, 2015:31). LFZ is 2,5 hours' drive away from the metropolitan Lagos. It is difficult to reach due to limited public transportation options (UNDP, 2015:31). However, if completed, the distance between the LFZ and the proposed Lekki International Airport would be roughly 10 kilometres (UNDP, 2015:31).

The Lagos Free Trade Zone has an area of 850 hectares and is located 60 kilometres from the metropolitan of Lagos (UNDP, 2015:31). The Lagos Free Trade Zone is being constructed as a multi-product and logistics centre for all of West Africa (UNDP, 2015:31). Numerous petrochemical and petroleum facilities, as well as agricultural and other manufacturers, will be located in the Lagos Free Trade Zone (UNDP, 2015:31). Despite having all the hallmarks of a standard Export Processing Zone, the Lagos Free Trade Zone is more strategically advantageous because of its proximity to the Lekki Port (UNDP, 2015:31).

In order to stimulate growth in a number of key industries and associated value chains, the adoption of SEZs and cluster growth have been supported by Nigeria's most recent economic policy (Makarem *et al.,* 2016:3). To develop a successful SEZ, the site, strategy, planning, legal and regulatory framework, customs, administrative capability, management, as well as political will and long-term commitment, must all function in harmony (Makarem *et al.,* 2016:3). Political and economic issues have so far primarily distorted one or more of these criteria, which has hampered the development of SEZs in Nigeria (Makarem *et al.,* 2016:3).

6.2.5.1 Success stories

Authorities with significantly dissimilar interests and incentives must collaborate to develop a SEZ successfully (Makarem *et al.,* 2016:49). Customs and SEZ programmes in Nigeria have been in conflict for a long time. The Oil and Gas Free Zone Authority and the EPZ Authority, both founded in 1992, were at odds for many years about which organisation had control over a variety of crucial operations (Makarem *et al.,* 2016:49). Nigeria still need to learn from mistakes made and must focus on the already established zones for it to be successful and effectively contribute to the local economy.

6.2.5.2 Lessons learned

Nigeria’s SEZs face various challenges and the following lessons can be learned from the implementation and management of such zones:

- *Institutional and legal structure* – The NEPZA Act does not correspond to the present zone activities. For instance, the legislation prohibits the importation of goods produced or processed in the zones to the local market. This caused a significant challenge for each of Nigeria's zones. This issue has caused many potential investors to hesitate and delay investments (Zeng, 2012:16).
- *Relocation problems* – Government officials made commitments to deal with land acquisition and resettlement concerns in a number of zones. However, these commitments were broken or only partially kept, preventing continued zone. This is especially prevalent in the zones that have grown the most (Zeng, 2012:16).
- *Infrastructure* – There are various degrees of this underlying problem for each zone. The capacity and reliability of Nigeria's current infrastructural base are truly insufficient to support the country's projected industrial expansion. Nigeria still has significant infrastructural gaps regardless of government investments, especially in terms of electricity generation (Zeng, 2012:16) (Chete *et al.,* 2014:30).

6.3 Conclusion

For a SEZ to succeed and thrive, a strong long-term vision is necessary, accompanied by institutional support. One of the essential components to attracting major investments is effective collaboration between various levels of government authorities and the business sector. Infrastructure investment and the development of "integrated clusters" are essential to maintain communication and coordination across various zones and to improve performances at the zone and national levels. From the case studies of developed and developing countries, the following conclusions can be made:

- *Implementing SEZs to resolve the market failures* – These limitations may relate to land, infrastructure, logistics of commerce, etc. if the constraints can be overcome by national reforms, industry-wide incentives, or universal strategy, SEZs may not be necessary. SEZs should not be taken lightly because it is a highly expensive project that requires meticulous planning, design, and administration. Instead of concentrating on tax incentives, developing countries can take more proactive steps to improve the business climate, including infrastructural improvements. They could also adopt "smart incentives" that encourage technology transfer, local economic links, and skill-training projects (Zeng, 2015:10).

- *A strong and long-term commitment from the government, a solid legal and regulatory framework, and efficient institutions* – In order to guarantee continuous policy interventions and the sufficient provision of numerous public goods, a strong and long-term commitment from the government is also required. A proper system of communication and cooperation between the national, provincial, local, and other public entities must also be established (Zeng, 2015:10).

- *Integrating industrial orientation and strategic planning to implement and design the most accurate development model* – Depending on regional comparative or competitive advantages, the most appropriate model should be the foundation and be a component of the national or regional development strategy for SEZ activities. Strategic planning and industrial orientation exercises should be used to thoroughly analyse the underlying factors in order to choose the best model that is based on local advantages. Such an initiative will also assist the zones in maximising the exploitation of technology transfer and technical expertise while meeting local needs (Zeng, 2015:10).

- *A workable, practical plan that starts small* – Prior to scaling up, it is critical to make one or two zones work. China first started with just four zones at extremely critical places, and once the programme was effective, it was subsequently implemented throughout the entire economy, even if there were several conflicts between zone programmes at a later time (Zeng, 2015:10).

- *Stronger ties with the local economy* – Zones must make the most of their distinct comparative advantages and include local industries and hubs into their value chains. Contrary to many of the developing countries, developed countries' SEZs are generally well integrated into the existing local clusters, strengthening one another through business ties. Developed countries' SEZs also support the formation of joint ventures between foreign and local investors (Zeng, 2015:10).

Given the distinct histories of each country and the variances in location, legislation, and economic activity that affect performance, it is evident from the discussion above that the success of SEZs varies greatly between each country and that there is no set formula for success (Jain, 2008). At the same time, it is crucial that SEZs have strong links with the domestic market rather than acting as isolated enclaves (Farole, 2011). Practically speaking, it is deemed crucial to choose locations carefully and provide a high degree of private sector management and flexibility (Farole, 2011). Strong supply-side factors including skills, local entrepreneurial potential, a defined strategy, attractive incentives, state capacity, and a willingness to integrate SEZs into the local economy, in addition to large domestic markets, appear to have contributed to higher success (Farole, 2011). Future zones must avoid problems including inadequate infrastructure, improper cost analysis, labour exploitation, low local skill and entrepreneurship levels, zone placement in remote areas, limited economic integration with the host economy, and others (Farole, 2011). SEZs are becoming more popular around the world, and the concept is gaining momentum (Zeng, 2016:21). Yet varied outcomes across economies, governments, and regions show that the zones are not a panacea for growth (Zeng, 2016:21). Zones must be effectively implemented and carefully adjusted to a country's specific condition in order to be successful (Zeng, 2016:21). They are not a good development tool in all circumstances (Zeng, 2016:21). A precise structure is needed to direct SEZ activities in countries where they are considered relevant, given the diverse and complicated conditions under which zone programmes operate (Zeng, 2016:21). This kind of framework should specify the responsibilities of both the public and private sectors (Zeng, 2016:21). Creating appropriate social and environmental standards, establishing necessary legal and regulatory frameworks, conducting economic feasibility analyses, strategic planning, and devising ways to ensure the supply of suitable infrastructure are all urgent responsibilities (Zeng, 2016:21).

CHAPTER 7: SPECIAL ECONOMIC ZONES OF SOUTH AFRICA

7.1 Introduction

SEZs are one of South Africa's government's strategic regional planning tools for driving economic growth and deepening industrialisation in South Africa. Thus, by promoting the beneficiation of the country's abundant resources and providing a variety of benefits to businesses based inside these zones through incentives and services provided by the national, provincial, and local governments. These benefits and services help businesses become more efficient and productive, which boosts their competitiveness. The locality factors identified within the literature study will be applied in this chapter and the Spatial Development Framework of each SEZ's Municipality will be analysed in terms of forward planning. This chapter will firstly discuss the background of SEZs in South Africa and its current operating status in the country. It will also attempt to align itself with Objective 4 as indicated in Section 1.3 of this study. Thus, analysing and comparing the SEZs of South Africa from a spatial planning perspective in order to determine each South African SEZ's strengths and weaknesses according to its spatial orientation will be done using a SWOT analysis technique.

7.2 Growth poles in SA

Industrial Development Zones (IDZs), which are potential specialized zones for export-oriented manufacturing and are situated close to an international transportation node, and Spatial Development Initiatives (SDIs), which are based on a "development corridor" concept, were both implemented in the late 1990s (Rogerson, 2001). IDZs were created as a part of a strategy to reposition South Africa in the international economy in the 2000's (DTI,2012:9). To boost growth, employment, and inclusiveness, the goal was to "attract foreign direct investment and export of value-added commodities" (DTI 2012:13). The SDIs had varying degrees of success, with the most well-known, the Maputo Corridor, assisting in the improvement of Maputo's transportation linkages (Rogerson, 2001). Only four IDZs were established between 2001 and 2010, Coega (2001), OR Tambo International Airport (2002), East London (2002) and Richards Bay (2002). Despite this, not all of the designated IDZs have been constructed; the largest at Coega has not yet reached its full potential, while the smaller IDZ in East London has attracted very little investment (CDE, 2012). SEZs are formally recognized in South Africa as a geographically defined region of the country designated and focused on economic activities that are backed by unique laws and supporting mechanisms (DTI 2012:5). South Africa considered the 'SEZ Bill' in 2011, and in early 2012 another significant step was taken with the publication of a national policy for the development of the SEZ programme (DTI, 2012b).

After the limited impact and performance of the Spatial Development Initiatives (SDIs) and Industrial Development Zones (IDZs) during the preceding 15 years, SEZs represent the reintroduction of an explicit regional development policy for South Africa (Rogerson, 2008; CDE, 2012). SEZs are a key government endeavour in South Africa, according to worldwide experience, and have the potential to benefit local residents, as well as domestic and foreign corporate investors, significantly (Zarenda, 2012).

Each South African SEZ promotes the following benefits for investors within each zone:

- The drop in the corporate tax rate from 28% to 15%;
- Industrial property of the highest calibre with infrastructure supporting export-oriented manufacturing;
- A designated internal custom controlled area that is specifically restricted to facilitate services to expedite shipping and clearing;
- Duty-free imports of production-related inputs, such as equipment and other assets utilized in manufacturing with a view to exporting completed goods; and
- VAT exemptions for goods purchased in South Africa under particular guidelines.

7.3 Analysing the Special Economic Zones

The SEZs were mainly found in coastal areas since the emphasis was on export promotion in South Africa, where the IDZ system predominated (Cornelius *et al.,* 2020:18). The primary driver for designation is the requirement to boost exports because the majority of already active SEZs are located in coastal regions (Cornelius *et al.,* 2020:18). However, after policy changes, more regions started to show interest in SEZs, this increased the amount of applications from different regions of the country (Cornelius *et al.,* 2020:18). Even if this also covers domestic trade, trade advantages remain the strong argument. SEZs in South Africa therefore have a higher likelihood of utilizing the transportation nodes and succeeding (Cornelius *et al.,* 2020:18). According to the Department of Trade and Industries, the location of all of the SEZs has been carefully selected with regards to resources and infrastructure within each area. Currently there exists 12 designated SEZs within South Africa (see Figure 7-1), 11 SEZs are already operational and one is still non-operational:

Operational SEZs:

1. Richards Bay SEZ (Kwa-Zulu Natal)
2. Dube SEZ (Kwa-Zulu Natal)
3. East London SEZ (Eastern Cape)
4. Coega SEZ (Eastern Cape)

5. Atlantis SEZ (Western Cape)
6. Saldanah SEZ (Western Cape)
7. Musina-Makhado SEZ (Limpopo)
8. Maluti A Phofung SEZ (Free State)
9. OR Tambo SEZ (Gauteng)
10. Tshwane Automotive SEZ (Gauteng)
11. Nkomazi SEZ (Mpumalanga)

Non-operational SEZ:

12. Bojanala SEZ (North-West)

The following section will analyse each SEZ of South Africa, determining the strengths and weaknesses of each zone using the SWOT analysis technique to ultimately determine if each SEZ was carefully selected in terms of spatial planning.

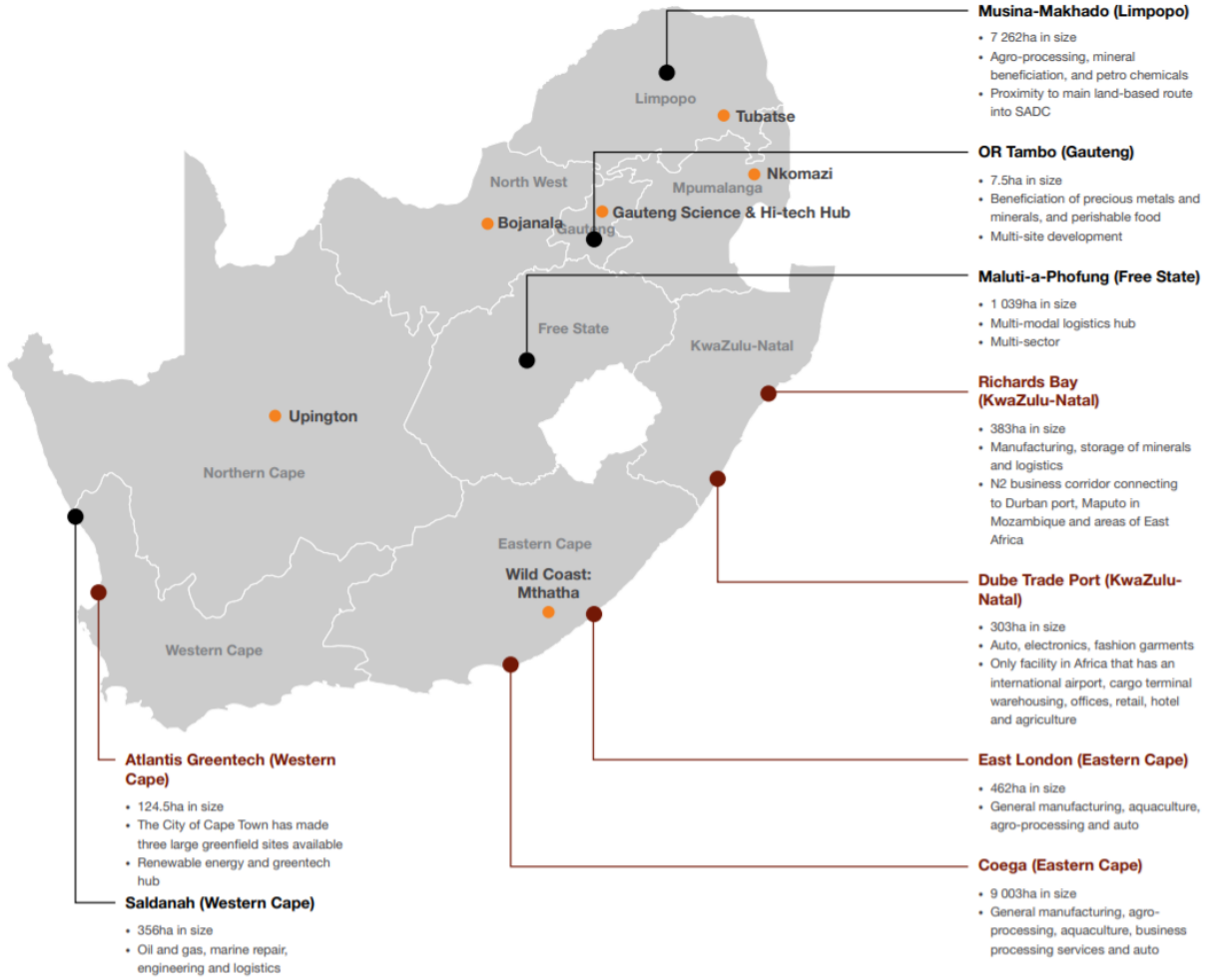

Figure 7-1: SEZs of South Africa

Source: DTI (2020)

7.3.1 Functional SEZs

7.3.1.1 Richards Bay SEZ (Kwa-Zulu Natal)

The Richards Bay Special Economic Zone (RBSEZ) is a strategic government programme related to the overarching strategy plan of the South African government, which adheres to NDP policy. The RBSEZ is the South African government's sector-specific zone around the Richards Bay harbour, allowing it to stand out and offer significant value to targeted industries (RBIDZ, 2018:4).

The RBSEZ is established with a total land size of 467 hectares and is situated on the outskirts of the city and next to the harbour of Richards Bay, which is regarded as South Africa's premier bulk port (RBIDZ, 2018:4). The RBSEZ is also located close to the N2 national corridor, connecting Kwa-Zulu Natal's two main ports, Durban and Richards Bay, with Mozambique's capital city, Mozambique and also with the rest of the eastern African region (RBIDZ, 2018:4). The RBSEZ consists of four separate portions of land, consisting of approximately 44 erven which accommodates industrial-related land uses within the area. The RBSEZ's overall goal is to support long-term economic growth and job creation in the following industries: Manufacturing of metals; Renewable energies; Information and communication; Agriculture; and Marine industry development (RBSEZ, 2018).

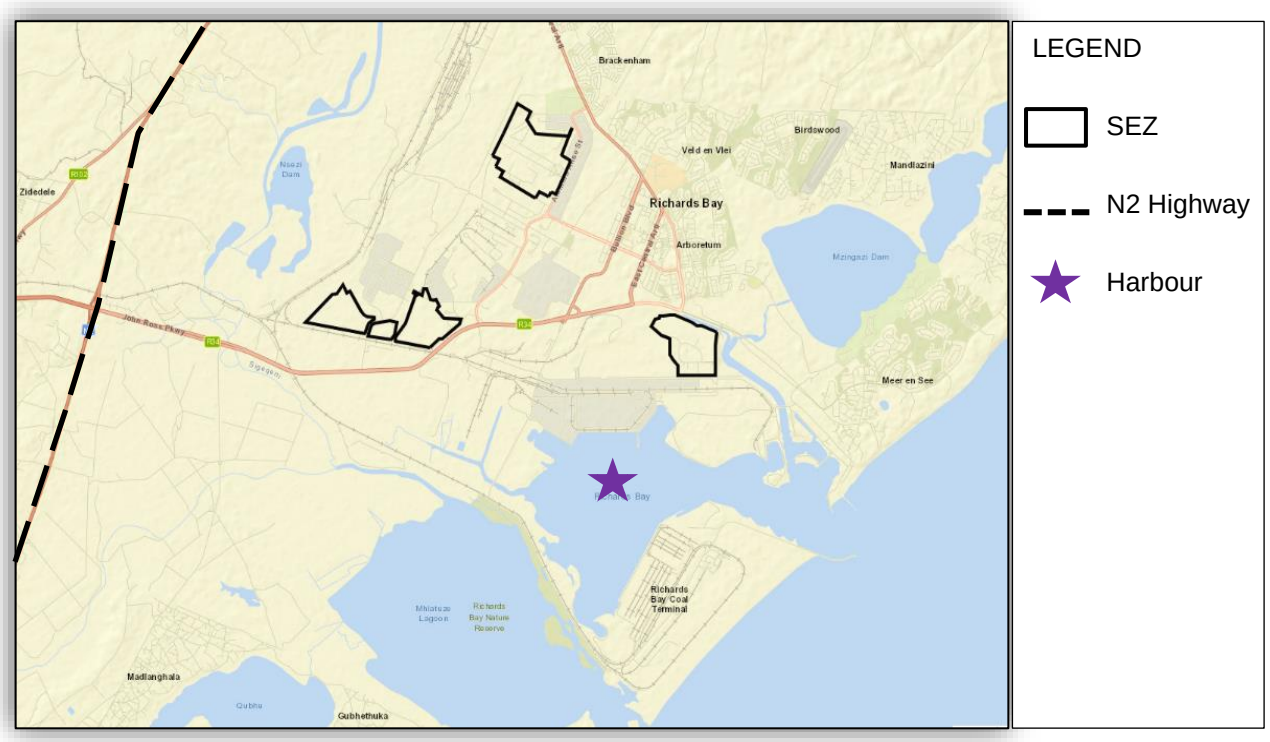

Figure 7-2: RBSEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-2 above illustrates a clear picture of the locality of the RBSEZ. The RBSEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The RBSEZ is favourably located close to the port of Richards Bay, one of South Africa's major freight handling ports. The RBSEZ is also located next to the busiest national railroad, the railroad descends from the Highveld through rural KwaZulu-Natal and ends at Richards Bay's port after beginning at Mpumalanga's coal-rich mines. The RBSEZ is also in close proximity to the N2 corridor, linking Richards Bay with Mozambique to the north and Durban to the south. In terms of locality, the RBSEZ is excellently located. The only negative aspect of the RBSEZ is the fact that the portion of land is not closely located to form an enclosed industrial park, suggesting that management of the zone will be fragmented and agglomeration of similar industries within the zone will be lost.

Table 7-1: SWOT analysis of RBSEZ

STRENGTHS	**WEAKNESSES**
• Next to Richards Bay International seaport. • <100km from King Shaka International airport. • Access to good infrastructure and transportation routes (N2 highway and highveld/Richards Bay national railroad). • Accommodate a diversity of economic activities, from Agriculture related to Industrial related.	• Limited land area. No room for expansion. • The land within the zone is fragmented and cannot be managed as an enclosed industrial park. Coherence among the businesses will lack and will eventually create small zones within the RBSEZ, operating as individual entities.
OPPORTUNITIES	**THREATS**
• Surrounded by a diversity of mineral resources, increasing favourability of industrial related industries to locate within the zone. • Proximity to an international seaport, strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources

Source: Own compilation

From a spatial planning perspective, Richards Bay SEZ is very well located as it is connected with the N2 highway (national corridor) and the Highveld/Richards Bay national railroad. The RBSEZ is also situated next to Richards Bay International seaport and close to King Shaka International Airport, making it ideal for an international company to thrive within South Africa.

uMhlathuze Local Municipal Spatial Development Framework

The uMhlathuze Local Municipality (2022:272) acknowledges the RBSEZ as a key contributor to the manufacturing sector of the Municipality. However, the IDP also acknowledges that all the focus is placed on the RBSEZ, and as a result small businesses suffer due to great economic barriers of entry (uMhlathuze Local Municipality, 2022:272). The suggestion of the IDP to eliminate such barriers is to establish a manufacturing cluster focusing on various manufacturing projects, which in turn stimulate the local economy of the municipality (uMhlathuze Local Municipality, 2022:272). The uMhlathuze Local Municipality (2022:228) incorporated the RBSEZ within the Richards Bay Multimodal Facility Precinct, connecting Richards Bay Public Transport Facility with the RBSEZ. The map below (see Figure 7-3) from the SDF indicates the strategic development areas around the zone and also indicates the proposed development vision of the uMhlathuze Local Municipality for the RBSEZ, including the precinct plan as discussed above. This precinct will increase accessibility to the zone by the promotion of various modes of transport and will also encourage economic development within the area.

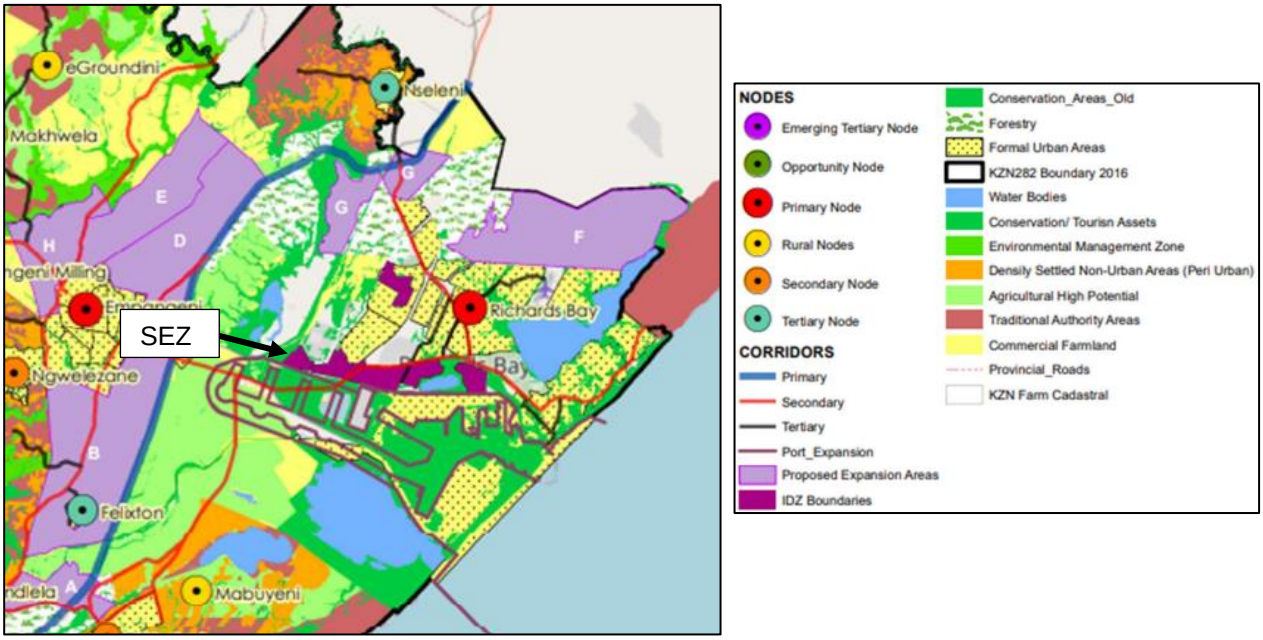

Figure 7-3: uMhlathuze Local Municipal Spatial Development Framework

Source: uMhlathuze Local Municipality (2022)

7.3.1.2 Dube Trade Port SEZ (Kwa-Zulu Natal)

Dube Trade Port is the world trade hub and gateway for South Africa to the world (DTPC, 2020). Dube SEZs is one of a kind in Africa consisting of an international airport, a cargo terminal, warehouses, office park, a shopping centre, hotels, and an agricultural sector (DTPC, 2020).

Dube SEZ is approximately 30 kilometres north of Durban and is linked with the African countries by road and rail (DTPC, 2020). Five business zones make up the master-planned airfreight and passenger hub known as Dube SEZ (DTPC, 2020):

- Dube Trade Zone: A 69-hectare, fully serviced industrial zone for the manufacture, assembly, and distribution of electronics, logistics, pharmaceuticals, and aerospace that will grow to 300 hectares.
- Dube Cargo Terminal: a cutting-edge facility for managing freight that, since its opening in 2010, has had zero cargo loss owing to technological monitoring and transporting secured goods through local statutory institutions.
- Dube Agri Zone: a high-tech, futuristic farm that specializes in high-value, specialized agricultural and horticultural goods and has the continent's largest climate-controlled growing facility enclosed in glass. Specialized greenhouses with flowers and plants will be examined by the Agri Lab because they all require quick air transfer.
- Dube City: a 3-minute drive from the passenger terminal, a 12-hectare premium business and hospitality district; and
- Dube iConnect: The greatest alternative for local data recovery is Dube iConnect, a prominent cloud infrastructure supplier and trending telecommunications infrastructure that provides digital services locally managed in KwaZulu Natal as well as the Dube TradePort area.

Figure 7-4: Dube SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-4 above illustrates a clear picture of the locality of the Dube SEZ. The Dube SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The Dube SEZ is favourably located next to King Shaka International Airport, one of the biggest passenger and freight airports in South Africa. The Dube SEZ is also located next to the N2 corridor, linking it with Richards Bay to the north and Durban to the south. In terms of locality, the Dube SEZ is excellent located. The Dube SEZ is situated on one portion of land, operated as an enclosed industrial park. The zone will promote agglomeration among industries, increasing positive spill-overs within the province and ultimately for South Africa.

Table 7-2: SWOT analysis of Dube SEZ

STRENGTHS	**WEAKNESSES**
• Next to King Shaka International Airport. • Access to good infrastructure and transportation routes (N2 highway and railroads). • Accommodates a diversity of economic activities, from agriculture related to industrial related.	• Situated approximately 30km from Durban International seaport, increasing the travel distance for cargo to be shipped.
OPPORTUNITIES	**THREATS**
• Surrounded by a diversity of mineral resources, increasing favourability of industrial related industries to locate within the zone. • Proximity to an international seaport, strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country. • Room for expansion.	• Limited electricity and water resources

Source: Own compilation

From a spatial planning perspective, Dube SEZ is excellently located as it is connected with the N2 highway (a national corridor) and is also situated next to King Shaka International Airport, making it ideal for an international company to thrive within South Africa.

eThekwini Local Municipal Spatial Development Framework

The SDF considers Dube SEZ as a priority investment area and a mixed-use business node (see Figure 7-5), due to its locality next to King Shaka International Airport (eThekwini Local Municipality, 2022).

The SDF earmarked the Dube SEZ for the purpose of an Aerotropolis, in order to provide both King Shaka International Airport and the Dube Trade Port region top priority for development (eThekwini Local Municipality, 2022). An Aerotropolis is a hub specifically designed to be developed around an airport, offering local industries with easy accessibility to its suppliers, clients, and business partners on a regional and global scale (eThekwini Local Municipality, 2022). The SDF recognises and reacts to the region's potential advantages and threats to establish positive conditions for investors through integrated and coordinated spatial planning, integrated multi-modal transport networks, infrastructure and engineering services, and ecological responsibility (eThekwini Local Municipality, 2022).

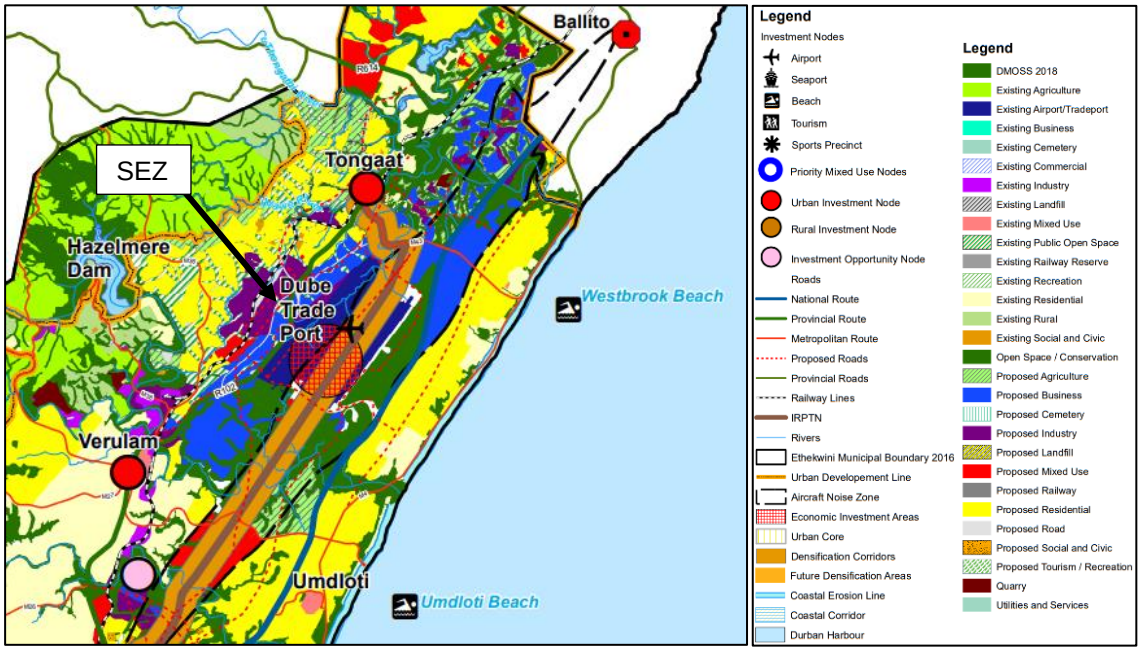

Figure 7-5: eThekwini Local Municipal Spatial Development Framework

Source: eThekwini Local Municipality 2(022)

7.3.1.3 East London SEZ (Eastern Cape)

The East London Special Economic Zone (ELSEZ), one of the most specialised industrial parks in the country is situated in the municipal region of Buffalo City (ELIDZ, 2018). It is an excellent option for the location of export-led manufacturing and processing, giving investors access to significant markets both domestically and globally (ELIDZ, 2018). Two kilometres from the ELSEZ, the city's airport handles domestic flights to all of South Africa's main cities (ELIDZ, 2018). A cargo freight carrier from Johannesburg provides daily service to the airport. International air freight may be easily accommodated by travelling through Johannesburg's OR Tambo International Airport or, alternatively, Cape Town International Airport, South Africa's largest airport (ELIDZ, 2018).

Additionally, King Shaka International Airport and the Dube SEZ are destinations for freight (ELIDZ, 2018). The only river port in the country, the city's harbour, located 6 kilometres from the ELSEZ (ELIDZ, 2018). Through regular exports to Australia, Africa, Asia, and Europe, Buffalo City can serve markets with marine freight to the East and West thanks to its advantageous location on Africa's southernmost coastline (ELIDZ, 2018). The 160-year-old port is one of the most effective in the nation and provides services on par with a worldwide port that follows best practises (ELIDZ, 2018). The only port in South Africa with a modern motor vehicle terminal, a container terminal, a bulk terminal (grain elevator), and a dry dock is East London (ELIDZ, 2018).

The automobile terminal can process up to 100,000 cars annually depending on turnover, which means that the port can handle one vehicle every 30 seconds (ELIDZ, 2018). The zone's sectors include agriculture, aquatics, cloud technologies, manufacturing and exports, as well as pharmaceutical companies (ELIDZ, 2018). A science and technology park that offers training and services for company incubation is also located in the area (ELIDZ, 2018). Figure 7-6 below illustrates a clear picture of the locality of the ELSEZ. The ELSEZ is favourably located close to the harbour of East London, the only South African commercial river port. The ELSEZ is also located close to the East London airport, a cargo and passenger handling facility for domestic products, making it ideal for an international company to thrive.

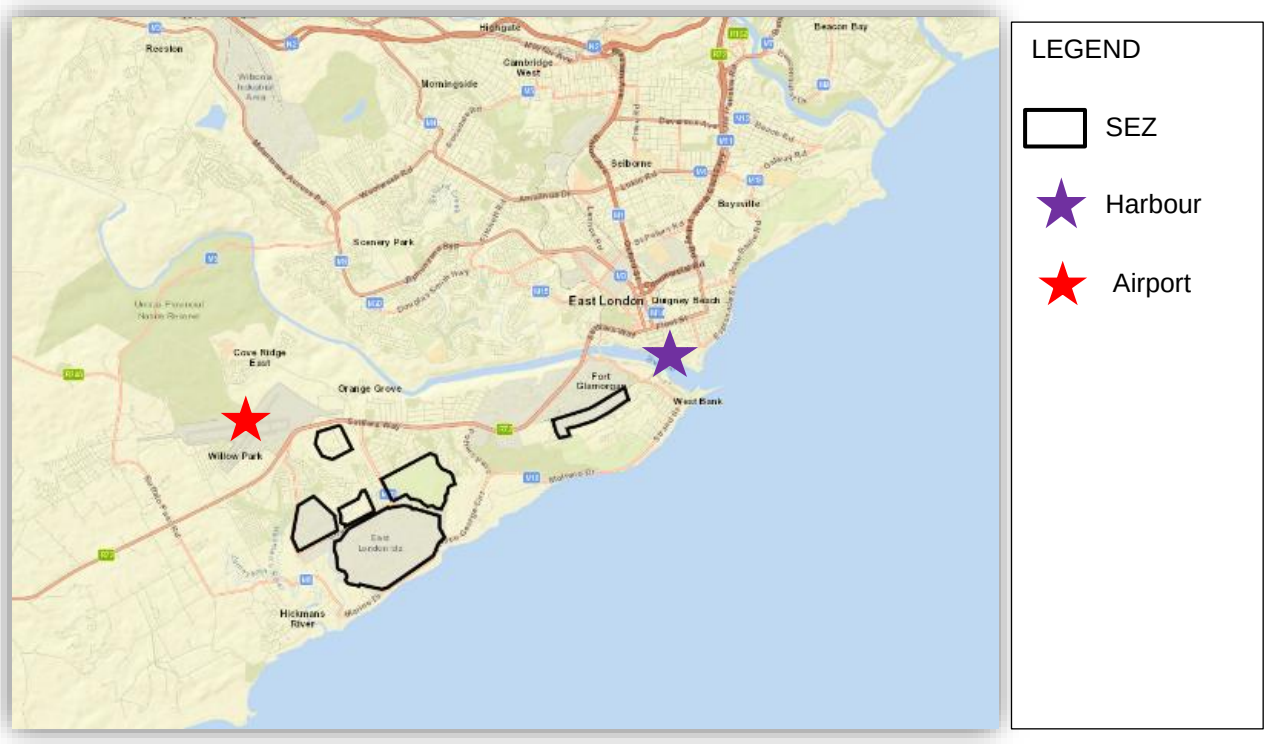

Figure 7-6: ELSEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

The ELSEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. In terms of locality, the ELSEZ is excellently located. The only negative aspect is that the ELSEZ is situated on different portions of land which is not closely located to form an enclosed industrial park, suggesting that management of the zone will be fragmented and agglomeration of similar industries within the zone will be lost.

Table 7-3: SWOT analysis of ELSEZ

STRENGTHS	**WEAKNESSES**
• <100km from East London International harbour. • <100km from East London National airport. • Access to good infrastructure and transportation routes. • Accommodates a diversity of economic activities, from Agriculture related to Industrial related.	• The land within the zone is fragmented and cannot be managed as an enclosed industrial park. Coherence among the businesses will lack and will eventually create small zones within the ELSEZ, operating as individual entities.
OPPORTUNITIES	**THREATS**
• Surrounded by a diversity of mineral resources, increasing favourability of industrial related industries to locate within the zone. • Proximity to an international seaport strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country. • Ample land close to the SEZ for future expansion.	• Limited electricity and water resources.

Source: Own compilation

From a spatial planning perspective, ELSEZ is very well located as it is connected with major highways and is also surrounded by an international harbour and national airport, making it ideal for an international company to thrive within South Africa.

Buffalo City Metropolitan Municipal Spatial Development Framework

The SDF is centred around the ELSEZ, one of the key spatial development proposals of the SDF includes the facilitation of economic growth and development by the creation of a West Bank Logistics and Manufacturing Hub centred on the ELSEZ (Buffalo City Metropolitan Municipal Spatial Development Framework, 2018).

The SDF suggests that East London's urban form be consolidated as a result of the growing economic momentum surrounding the Mercedes Benz plant and the ELSEZ development of the West Bank area for a variety of mixed land uses (Buffalo City Metropolitan Municipal Spatial Development Framework, 2018). This would make the city more effective and will give its residents a better Live-Work-Play coherence (Buffalo City Metropolitan Municipal Spatial Development Framework, 2018). From figure 7-7 below it is clear that the SDF identifies the harbour, airport and ELSEZ as critical linkages for industrial assets and suggests that the linkages to each other need to be strengthened (Buffalo City Metropolitan Municipal Spatial Development Framework, 2018).

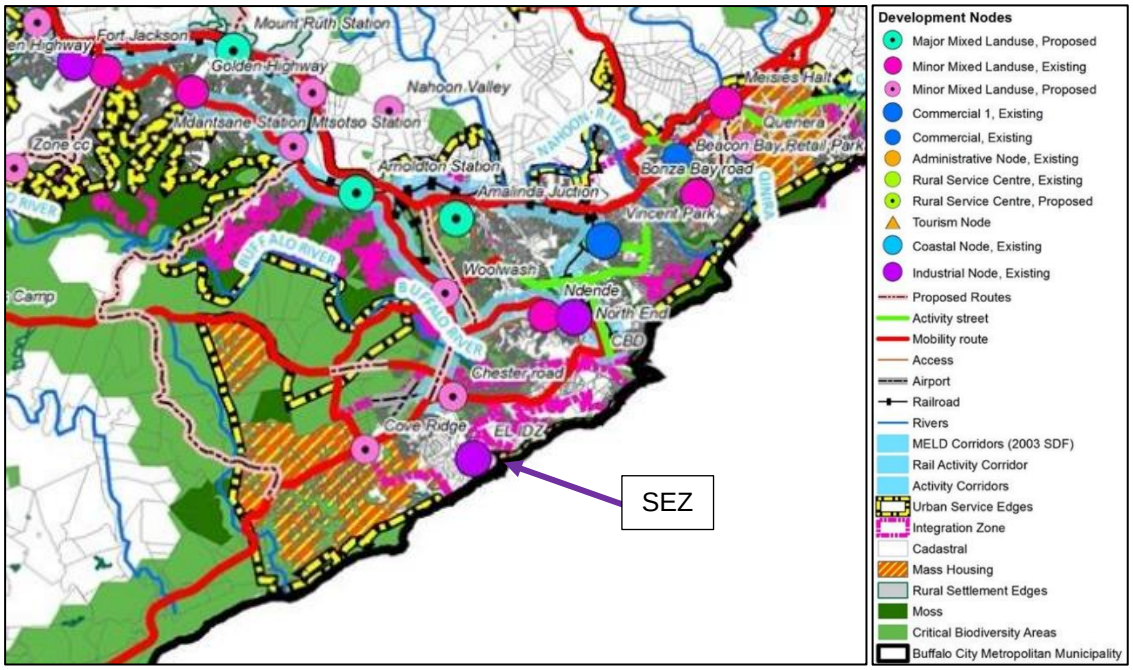

Figure 7-7: Buffalo City Metropolitan Municipal Spatial Development Framework

Source: (Buffalo City Metropolitan Municipality, 2018)

7.3.1.4 Coega SEZ (Eastern Cape)

The contemporary deep-water port of Ngqura, a transhipment centre that facilitates commerce with the rest of Africa and gives access to the global market, lies next to the 1999-established Coega SEZ (CDC, 2018). For both domestic and foreign businesses, the 9 003 hectares of property separated into 14 zones offers the ideal investment climate (CDC, 2018). Agriculture, automotive, aquatics, production of energy and metals, logistics, and manufacturing are among the industries that have drawn investment to the SEZ (CDC, 2018). The Coega SEZ and the deep-water Port of Ngqura will continue to be driving forces behind foreign investment and regional growth (CDC, 2018). Figure 7-8 below illustrates a clear picture of the locality of the Coega SEZ.

The Coega SEZ is favourably located next to the international port of Ngqura, a large South African cargo handling harbour. The Coega SEZ is also located close to the Port Elizabeth International Airport and situated next to the N2 corridor, linking Coega SEZ with East London to the east and George to the west.

Figure 7-8: Coega SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

The Coega SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. In terms of locality, the Coega SEZ is excellently located. The Coega SEZ is situated on one portion of land, operated as an enclosed industrial park. The zone will promote agglomeration among industries, increasing positive spill-overs within the province and ultimately for South Africa. From a spatial planning perspective, Coega SEZ is very well located as it is connected with major highways and is also situated next to an international harbour and close to an international airport, making it ideal for an international company to thrive in South Africa.

Table 7-4: SWOT analysis of Coega SEZ

STRENGTHS	WEAKNESSES
• Next to an international harbour. • <100km from Port Elizabeth International Airport. • Access to good infrastructure and transportation routes. • Accommodate a diversity of economic activities, from Agriculture related to Industrial related.	• Limited land area. No room for expansion.
OPPORTUNITIES	**THREATS**
• Surrounded by a diversity of mineral resources, increasing favourability of industrial related industries to locate within the zone. • Proximity to an international seaport, strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources.

Source: Own compilation

Nelson Mandela Bay Metropolitan Municipal Spatial Development Framework

The SDF recognizes the Coega SEZ as a major industrial zone in order to encourage industrialisation within the municipality (Nelson Mandela Bay Metropolitan Municipality, 2015). The SDF earmarked the area surrounding the Coega SEZ as a restructuring zone (see Figure 7-9), relocating persons with lower income households to places with significant economic opportunity (Nelson Mandela Bay Metropolitan Municipality, 2015). The Coega SEZ's growth is restricted by the lack of water and sanitation, which implies that high water consumers cannot invest in the SEZ until infrastructure needs are met (Nelson Mandela Bay Metropolitan Municipality, 2015).

Figure 7-9: Nelson Mandela Bay Metropolitan Municipal Spatial Development Framework

Source: Nelson Mandela Bay Metropolitan Municipal Spatial Development Framework (2015)

7.3.1.5 Atlantis Greentech SEZ (Western Cape)

The Atlantis Special Economic Zone Company (ASEZ) exists to assist green technology manufacturers to become globally competitive through integrating into a broader industrial ecosystem, comprising resource efficient and industrial symbiosis principles (AGSEZ, 2018). The ASEZ provides efficient management and a range of support services to investors seeking sophisticated industrial property, purpose-built for green technology manufacturing (AGSEZ, 2018). The ASEZ capitalises on the province's already flourishing renewable energy and green technology industry and is located on South Africa's West Coast, 40 kilometres from Cape Town. In particular, it aids independent power producers participating in the government's Renewable Energy Independent Power Producers Programme in becoming suppliers and component manufacturers for the renewable energy industry (AGSEZ, 2018).

The availability of the immediate road infrastructure, both internal and external, provides superb access to two seaports, Saldanha Bay (100km) and Cape Town (40km) (AGSEZ, 2018). This ease of access allows for cost effective and rapid import of sub-components and cost effective and rapid export of manufactured/assembled products (AGSEZ, 2018). Green technologies are referred to as "greentech" when they lessen or eliminate human effect on the environment (AGSEZ, 2018). These consist of recycling materials, eco-friendly construction materials, and renewable energy technology including wind turbines, solar panels, insulation, biofuels, electric cars, and green fuels (AGSEZ, 2018).

The ASEZ consists of an extent of 125 ha, with 94 ha of greenfield land, located adjacent to an existing industrial area, benefiting from existing utility infrastructure, such as water, electricity and fibre connectivity to the boundary of the site. Figure 7-10 below illustrates a clear picture of the locality of the ASEZ. The ASEZ is near to the Cape Town International Airport and harbour. Situated just outside of Cape Town, it is also located 100 kilometres from Saldanha Harbour. ASEZ is situated close to the N7 corridor, linking ASEZ with the west coast to the north and Cape Town to the south. In terms of locality, the ASEZ is well located. The only negative aspect is the ASEZ is situated on different portions of land which is not closely located to form an enclosed industrial park, suggesting that management of the zone will be fragmented and agglomeration of similar industries within the zone will be lost.

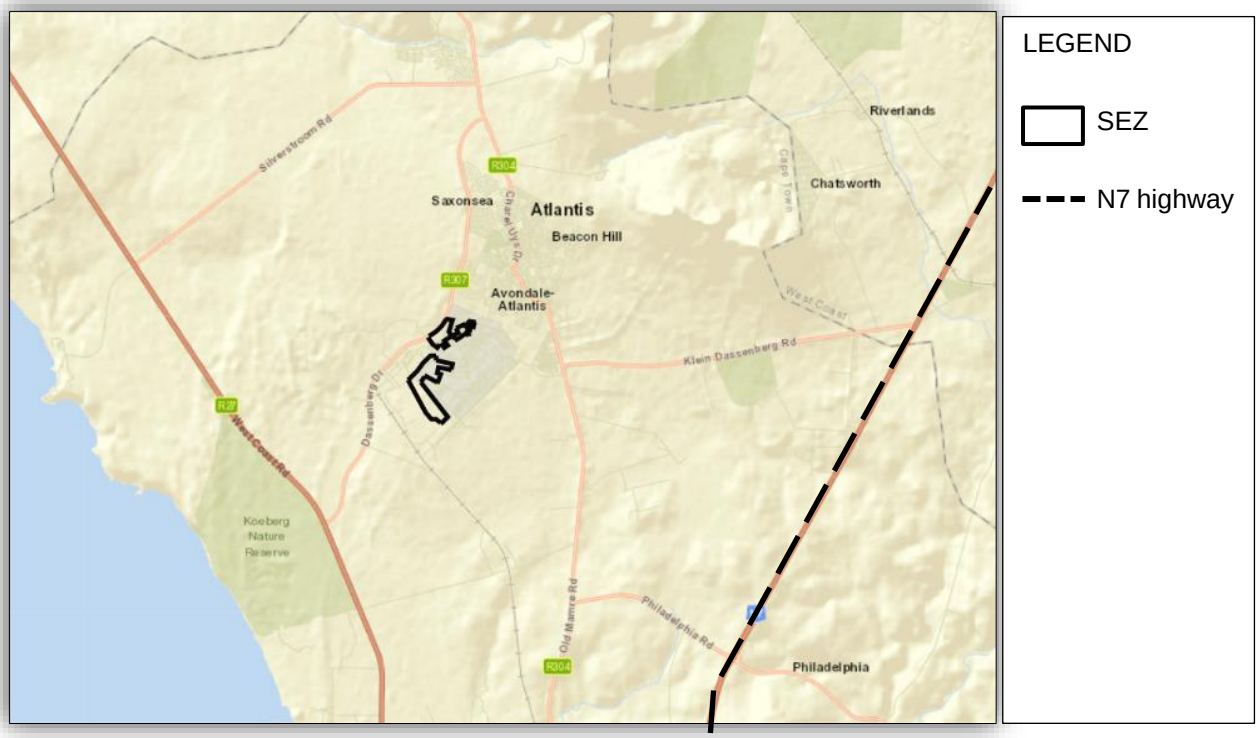

Figure 7-10: Atlantis SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

The Atlantis SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. From a spatial planning perspective, Atlantis SEZ is well located as it is connected with major highways and is also situated close to two international seaports and one international airport, making it ideal for an international company to thrive within South Africa.

Table 7-5: SWOT analysis of Atlantis SEZ

STRENGTHS	WEAKNESSES
• <100km from Cape Town and Saldanah International harbours. • <100km from Cape Town International airport. • Access to good infrastructure and transportation routes.	• Limited land area. No room for expansion. • The land within the zone is fragmented and cannot be managed as an enclosed industrial park. Coherence among the businesses will lack and will eventually create small zones within the ELSEZ, operating as individual entities.
OPPORTUNITIES	**THREATS**
• Proximity to an international harbour and airport strengthens ties with other countries, which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources • Does not accommodate a diversity of economic activities, only specialises in green energy-related industries.

Source: Own compilation

City of Cape Town Spatial Development Framework

The SDF acknowledges ASEZ as a big priority for spatial transformation (see figure 7-11) in order to attract investment opportunities, which in turn will encourage economic growth and development within the surrounding area (City of Cape Town Spatial Development Framework, 2022). The SDF encourages development of land within the ASEZ for green technologies in favour of the equitable use of renewable resources for economic growth, as well as to spur innovation in the field of green technology (City of Cape Town Spatial Development Framework, 2022). The SDF sees the expansion of existing transport links (including the railway) to Cape Town via Atlantis as a means to functionally integrate with the city (City of Cape Town Spatial Development Framework, 2022).

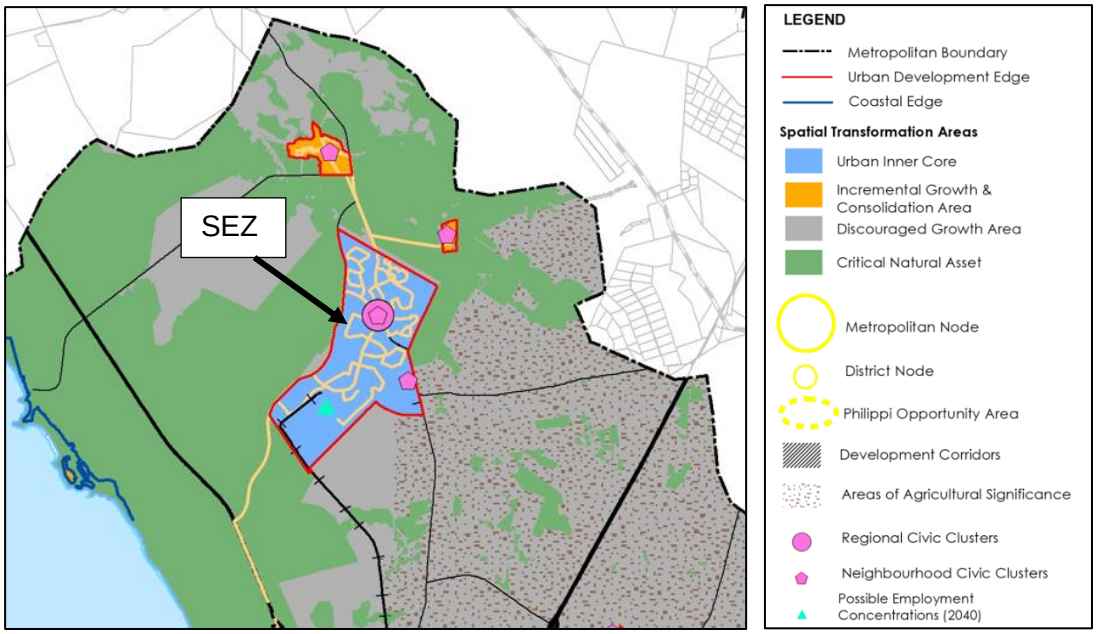

Figure 7-11: City of Cape Town Municipal Spatial Development Framework

Source: City of Cape Town Municipal Spatial Development Framework (2022)

7.3.1.6 Musina-Makhado SEZ (Limpopo)

The Limpopo province's Vhembe District is home to the Musina-Makhado SEZ (MMSEZ), it is adjacent to the Beitbridge Border Gate, which is a gateway to other African countries and South Africa's second-largest port of entry. The zone is located in the low-precipitation and dry Sand River watershed and the primary water source, including the groundwater, has already been overused in this populated region (DBEC, 2021). The Environmental Impact Assessment warns that the enormous amounts of water required for the MMSEZ would put more strain on already scarce local resources (DBEC, 2021). Groundwater will be used during the building process of the southern portion of the zone however, it will thereafter have to rely on dams, water pumping facilities, and pipelines. (DBEC, 2021). Two options exist: either construct a dam in Musina or import water from Zimbabwe, ecologists advocate for neither (DBEC, 2021). A SADC agreement on sharing water resources would be breached by the continuation of the project and would need lengthy negotiations with the impacted nations, including Zimbabwe (DBEC, 2021). According to Delta Built Environmental Consultants (2021), 109 034 trees will need to be cut down in total before work can start on the MMSEZ. Of these, 51,3 percent will be marula trees, 41,9 percent shepherd trees, 5,2 percent baobab trees, and 1,65 percent leadwood trees – all indigenous and endangered species (DBEC, 2021). The production and processing of metals, chemicals, and energy will take place in the southern portion of the SEZ. According to the MMSEZ's master operating plan, the majority of the coal generated at the massive coal plant for mineral extraction and processing is headed for China, which is the centre of the MMSEZ (DBEC, 2021).

That would result in significant carbon emissions and water demand, placing stress on the ecosystems and populations in the province of Limpopo that are already susceptible to climate change and impeding South Africa's attempts to meet its climate targets (DBEC, 2021). The MMSEZ will be the first South African zone to be run by a foreign entity, an unprecedented level of foreign control (DBEC, 2021). Figure 7-12 below illustrates a clear picture of the locality of the Musina-Makahdo SEZ. The MMSEZ is favourably located close to the Beit Bridge Border Post (Border between South Africa and Zimbabwe), one of the largest freight handling border posts in South Africa. The MMSEZ is also located close to Polokwane (capital of Limpopo) and is situated next to the N1 corridor, linking Musina-Makahdo SEZ with Polokwane to the south and Bulawayo (capital of Zimbabwe) to the north.

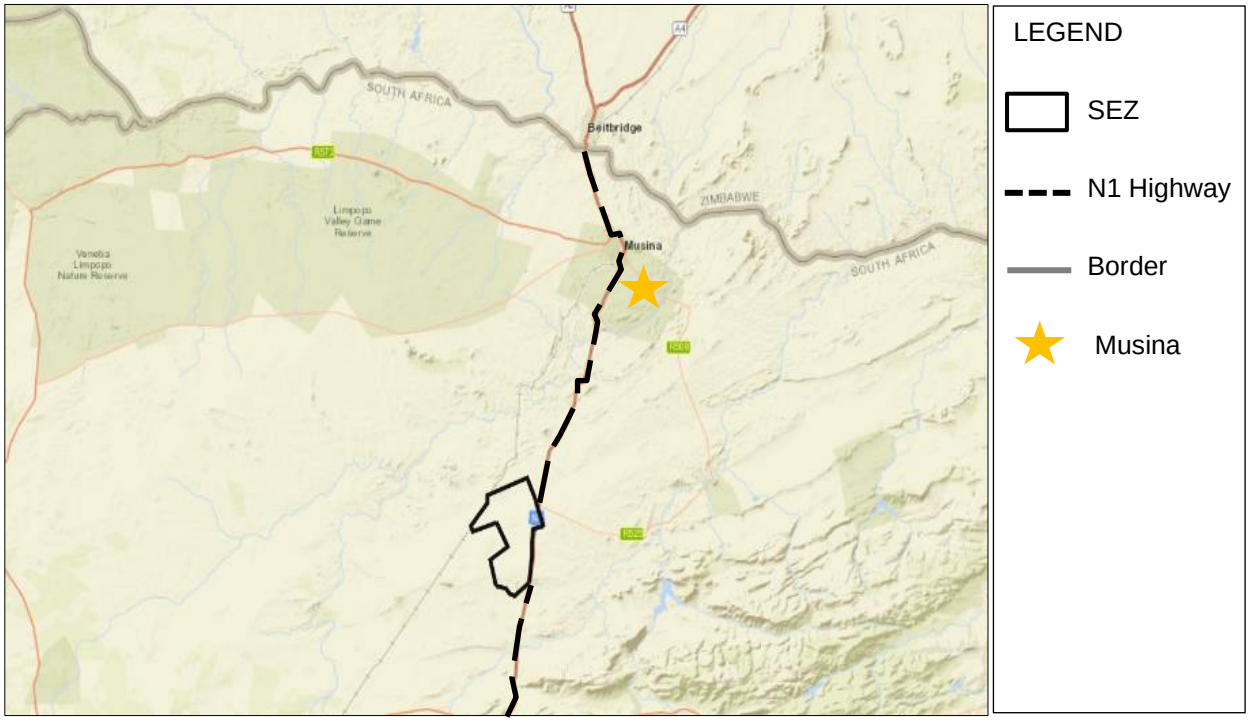

Figure 7-12: Musina-Makahdo SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

The MMSEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. In terms of locality, the MMSEZ is fairly well located, but is situated in a drought-stricken area, where water is limited which will also result in limiting development within the zone. The MMSEZ is situated on one portion of land, operated as an enclosed industrial park. The zone will require great investment for it to be functional and operational.

Table 7-6: SWOT analysis of Musina-Makahdo SEZ

STRENGTHS	WEAKNESSES
• <100km from Beit Bridge Border Post. • >100km from Polokwane. • Access to good infrastructure and transportation routes (Next to the N1 highway)	• Limited land area. • Situated within a natural protected area, with endangered fauna and flora species.
OPPORTUNITIES	**THREATS**
• Proximity to Beit Bridge border post, strengthens ties with Zimbabwe and other countries to the north, which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources. • The zone is situated in a drought-stricken area, limiting the development potential of the zone. • Does not accommodate a diversity of economic activities, only specialises in mineral extraction related industries.

Source: Own compilation

From a spatial planning perspective Musina-Makahdo SEZ is well located as it is connected with major highways and is also situated close to Beit Bridge Border Post, strengthening ties with Zimbabwe and other countries in the north.

Musina Spatial Development Framework

Musina has been given the opportunity of a SEZ due to the municipality's location as a gateway to other African states in order to promote and accelerate economic growth within the region through industrial development, agro-processing, and manufacturing (Musina Local Municipality, 2022). The SEZ is part of the Trans Limpopo SDI, making Musina the main trade route between South Africa, Mozambique, Zimbabwe and Botswana (see Figure 7-13) (Musina Local Municipality, 2022). The development will ensure expansion of manufacturing, mineral beneficiation and creation of job opportunities in the region which has high levels of poverty, unemployment and underdevelopment (Musina Local Municipality, 2022). This SEZ programme will have a positive impact on Mopane (rural village) and it will support the growth of Musina town (Musina Local Municipality, 2022). The economy of Musina town will then grow as it is the point of entry from the SADC countries (Musina Local Municipality, 2022).

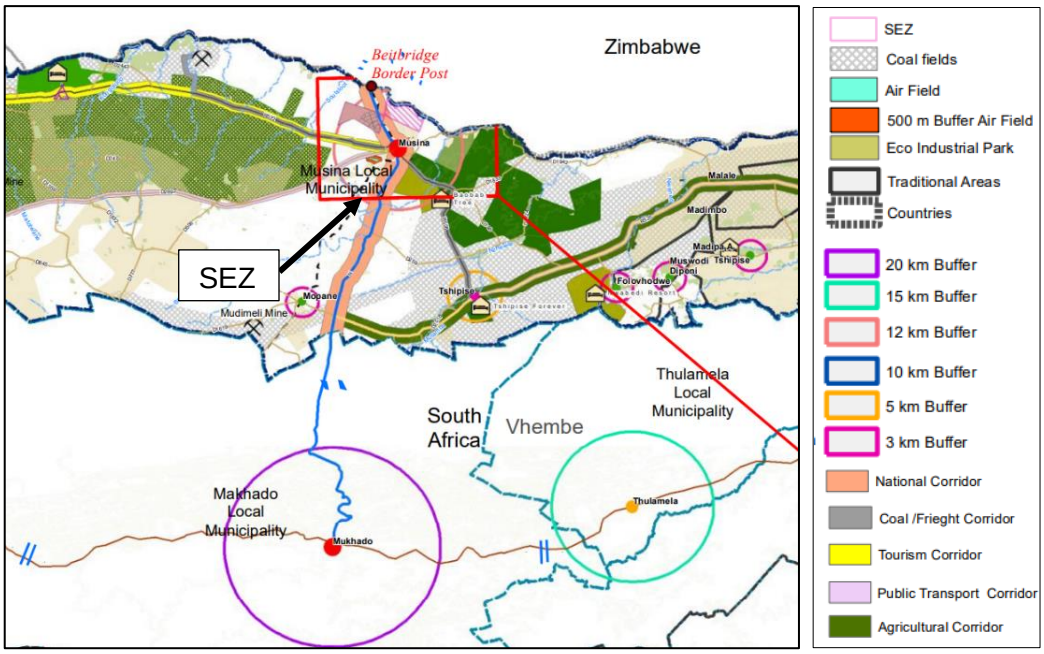

Figure 7-13: Musina Local Municipal Spatial Development Framework

Source: Musina Local Municipality (2022)

7.3.1.7 OR Tambo SEZ (Gauteng)

Five zones make up the OR Tambo SEZ. Zones A through D are located inside the grounds of the OR Tambo International Airport, while Zone E is situated in the Springs Precinct, some 40 kilometres away from Zones A through D (OR Tambo SEZ, 2018). Once operational, the SEZ will support the manufacturing and export of low-volume, high-value items, with a concentration on industries including fuel cells, jewellery, food processing, and diamond beneficiation (OR Tambo SEZ, 2018). There is expansion potential near the airport for more agricultural processing, aerospace/aviation, electronics, and pharmaceutical production (OR Tambo SEZ, 2018).

Excellent infrastructure may be found in OR Tambo SEZ. It is a strategically located logistics and distribution centre for regional and international aviation freight (OR Tambo SEZ, 2018). The largest air cargo airport in Africa, OR Tambo SEZ, has the ability to handle 400 000 tons of cargo annually and 82 percent of the freight in South Africa passes via OR Tambo (OR Tambo SEZ, 2018). A substantial skills base, including elite abilities in food processing and packaging as well as aerospace manufacturing, is accessible from the OR Tambo SEZ's location (OR Tambo SEZ, 2018). The SEZ was created to encourage industrial growth in the province of Gauteng, with a concentration on Ekurhuleni's export-oriented, value-added sector (OR Tambo SEZ, 2018).

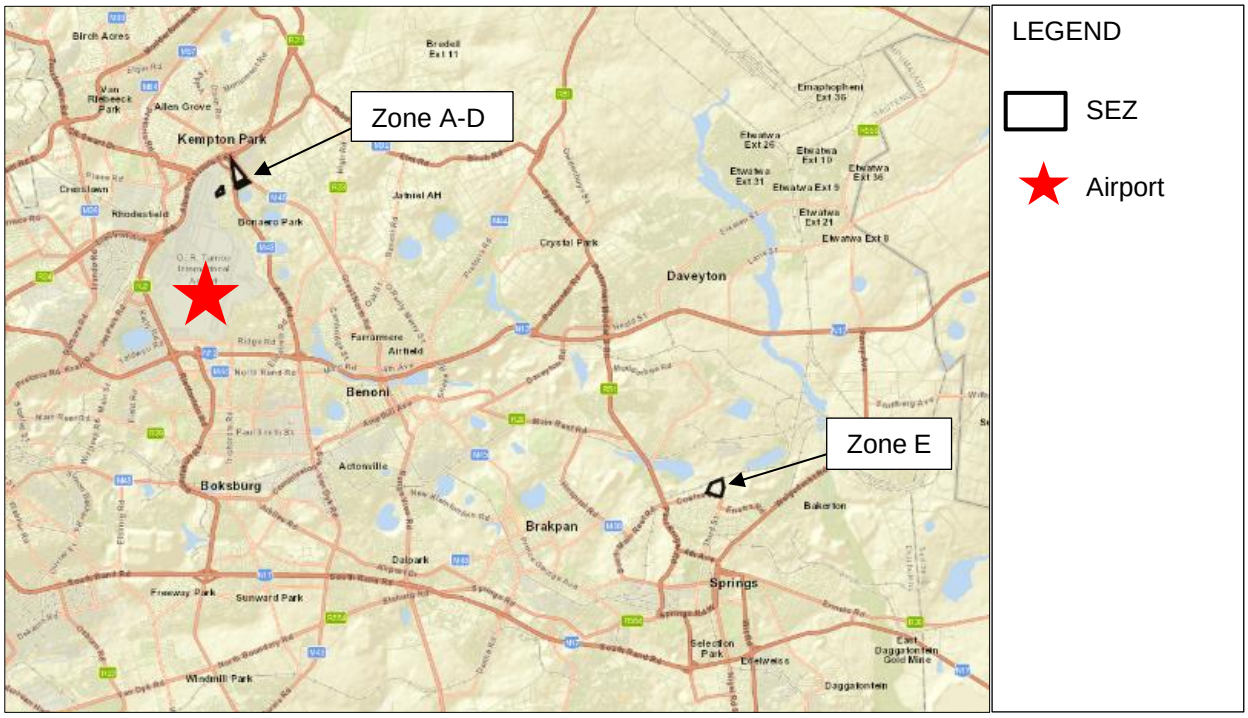

Figure 7-14: OR Tambo SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-14 above illustrates a clear picture of the locality of the OR Tambo SEZ. The OR Tambo SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The OR Tambo SEZ is favourably located next to OR Tambo airport, the biggest and busiest airport in Southern Africa. In terms of locality, the OR Tambo SEZ is excellently located. The only negative aspect is that the OR Tambo SEZ is situated on different portions of land which is not closely located to each other to form an enclosed industrial park, suggesting that management of the zone will be fragmented and agglomeration of similar industries within the zone will be lost.

Table 7-7: SWOT analysis of OR Tambo SEZ

STRENGTHS	WEAKNESSES
• Next to OR Tambo international airport. • Access to good infrastructure and transportation routes (Located along major highways). • Accommodate a diversity of specialised economic activities.	• Limited land area. No room for expansion. • The land within the zone is fragmented and cannot be managed as an enclosed industrial park. Coherence among the businesses will lack and will eventually create small zones within the SEZ, operating as individual entities.

OPPORTUNITIES	THREATS
• Situated within an urban area, increasing accessibility and connectivity within the zone. • Located close to Kempton Park industrial area, encouraging agglomeration of industries close to OR Tambo airport	• Limited electricity and water resources.

Source: Own compilation

From a spatial planning perspective, OR Tambo SEZ is very well located as it is connected with major highways and is also next to an international airport, making it ideal for an international company to thrive in South Africa.

The City of Ekurhuleni Spatial Development Framework

The SDF is old and was never updated during the course of the adoption of the OR Tambo SEZ. The SDF therefore does not solemnly address the SEZ as part of its spatial planning proposal but refers to the area surrounding OR Tambo International Airport as an Aerotropolis (City of Ekurhuleni Municipality, 2012). The SEZ will ultimately form part of the bigger aerotropolis concept (see figure 7-15). The aerotropolis concept will serve as the foundation for the economic growth of the whole Gauteng for the benefit of redistribution of financial resources throughout the city (City of Ekurhuleni Municipality, 2012). The land uses preferred within the aerotropolis, especially the surroundings of OR Tambo Airport, is of an industrial nature in order to strengthen the manufacturing sector (City of Ekurhuleni Municipality, 2012). This will ultimately support the operation of the SEZ.

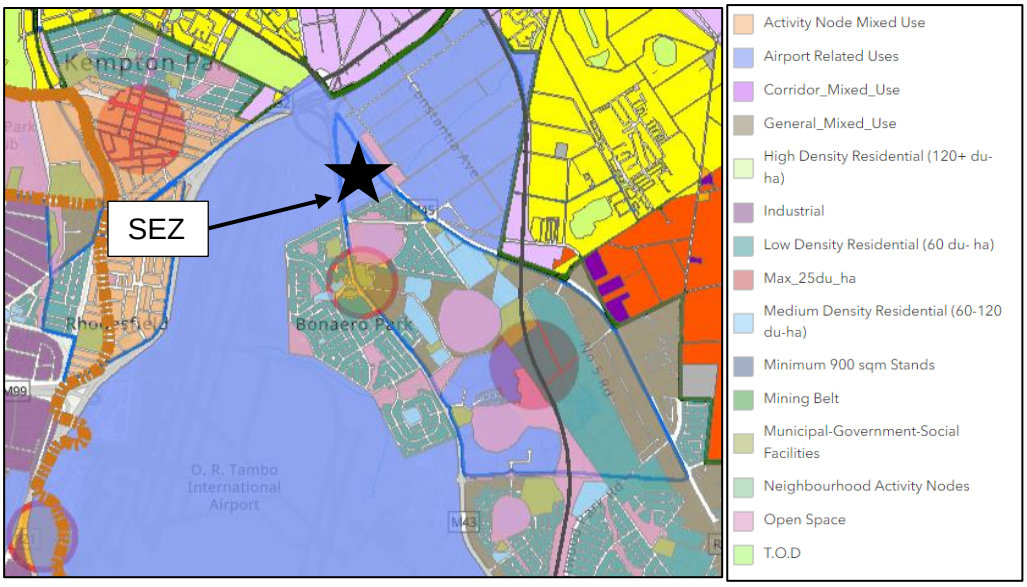

Figure 7-15: City of Ekurhuleni Municipal Spatial Development Framework

Source: City of Ekurhuleni Municipality (2012)

7.3.1.8 Maluti-a-Phofung SEZ (Free State)

The critical Durban-Johannesburg logistics line passes through Maluti-a-Phofung SEZ in Harrismith, Free State. Exporters can use the Maluti-a-Phofung SEZ as a gateway for their logistics that makes it easier to reach the Durban harbour as well as multimodal transportation options for moving cargo between rail and road modes (Maluti-a-Phofung SEZ, 2019). The zone provides a practical manufacturing basis for light and medium production and is suitable and allowed for common manufacturing (Maluti-a-Phofung SEZ, 2019). Due to its excellent logistical linkages by road or rail to South Africa's industrial core, the Port of Durban, and the southern Bloemfontein-Cape Town route, the SEZ is an obvious option for businesses searching for a low cost site to serve local and international markets (Maluti-a-Phofung SEZ, 2019). Additionally, the SEZ plans to capitalize on its current advantages to draw agricultural producing companies to a place with easy accessibility to the Free State's abundant agricultural output (Maluti-a-Phofung SEZ, 2019). It has plans to serve as a hub for the agglomeration, storage, and logistics of agricultural products (Maluti-a-Phofung SEZ, 2019). The Maluti-a-Phofung SEZ's major goals are to draw in international and direct investment, boost the local economy, and offer significant employment possibilities to residents of the Free State as a whole, particularly in the Maluti-a-Phofung area (Maluti-a-Phofung SEZ, 2019).

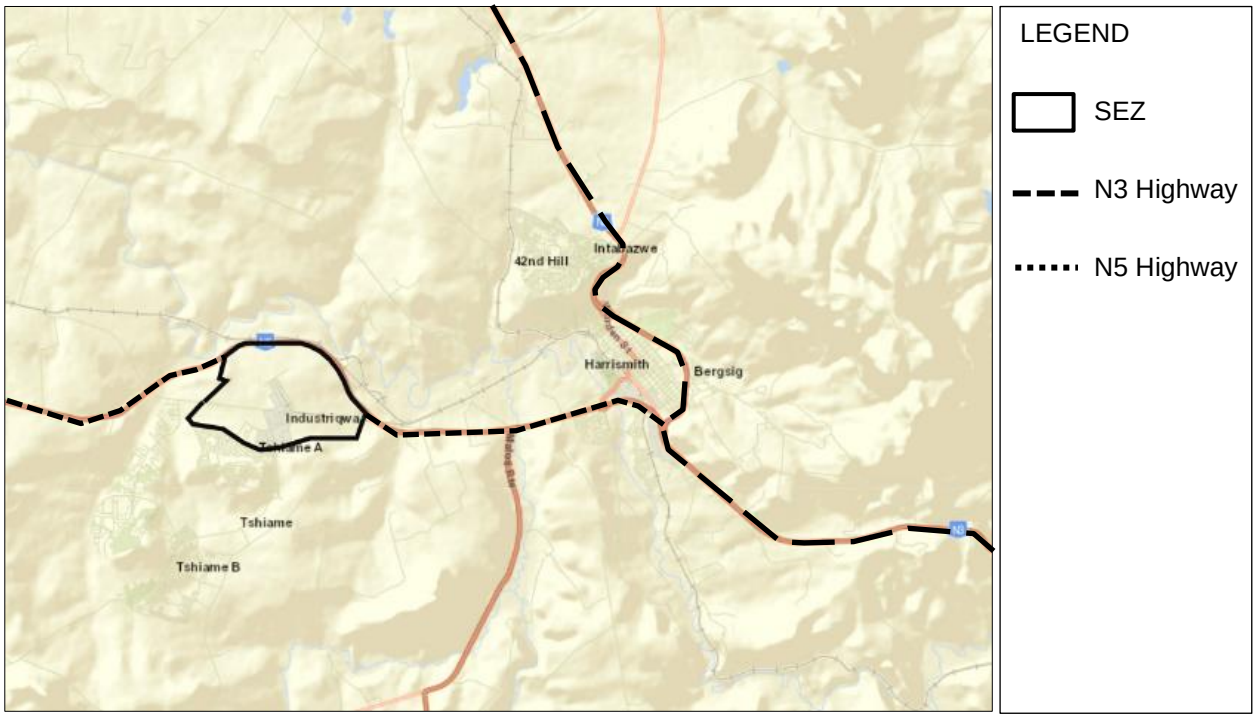

Figure 7-16: Maluti-a-Phofung SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-16 above illustrates a clear picture of the locality of the Maluti-a-Phofung SEZ. Near Harrismith, which is halfway between Johannesburg and Durban, lies the Maluti-a-Phofung SEZ. The Maluti-a-Phofung SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The N3 corridor and the N5, which connect Maluti-a-Phofung SEZ to Johannesburg to the north and Durban to the south, are nearby. In terms of locality, the Maluti-a-Phofung SEZ is well located. The Maluti-a-Phofung SEZ is situated on one portion of land, therefore operated as an enclosed industrial park. The zone will promote agglomeration among industries, increasing positive spill-overs within the province and ultimately for South Africa.

Table 7-8: SWOT analysis of Maluti-a-Phofung SEZ

STRENGTHS	**WEAKNESSES**
• Access to good infrastructure and transportation routes (Next to the N5 highway and close to the N3 highway).	• >100km from Durban International Harbour. • >100km from OR Tambo International airport. • Far from major city centres (Durban/Johannesburg), depended on road transport services.
OPPORTUNITIES	**THREATS**
• Proximity to Durban international harbour and King Shaka and OR Tambo international airports, strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources.

Source: Own compilation

From a spatial planning perspective, Maluti-a-Phofung SEZ is well located as it is connected with major highways and is also situated close to an international harbour and airport, making it ideal for an international company to thrive within South Africa.

Maluti-a-Phofung Spatial Development Framework

The Maluti-a-Phofung Local Municipality does not currently consist of any SDF and the annual IDP is of poor quality. Thus, a thorough analysis of the Maluti-a-Phofung Spatial Development Framework cannot be done due to a lack of proper resources.

7.3.1.9 Saldanha SEZ (Western Cape)

The Saldanha Bay Special Economic Zone (SEZ) is located about two hours' drive north of Cape Town and functions as a freeport, enabling any foreign commodities destined for re-export to enter duty- and VAT-free (Saldanha SEZ, 2020). The only sector-specific SEZ in South Africa is Saldanha Bay SEZ, that concentrates on the marine, oil and gas, fabrication and repair, and related support services (Saldanha SEZ, 2020). Saldanha Bay SEZ is located in the biggest and deepest natural harbour in the southern hemisphere and is strategically positioned to handle East and West African marine trade, acting as a link between the African and global markets (Saldanha SEZ, 2020).

Figure 7-17: Saldanha SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-17 above illustrates a clear picture of the locality of the Saldanha Bay SEZ. The Saldanha Bay SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The Saldanha Bay SEZ is located within Saldanha Bay harbour and is situated approximately 150 kilometres from Cape Town. The harbour is strategically located to serve East and West African marine traffic and act as a hub for trade between Africa and other continents.

It is ideally situated to house and service a variety of boats. In terms of locality, the Saldanha Bay SEZ is well located. It is situated on one portion of land, operated as an enclosed industrial park. The zone will promote agglomeration among industries, increasing positive spill-overs within the province and ultimately for South Africa.

Table 7-9: SWOT analysis of Saldanha SEZ

STRENGTHS	**WEAKNESSES**
• Located within Saldanha Bay harbour • >100km to Cape Town International Harbour and Airport. • Access to good infrastructure and transportation routes (Major highways and railroads).	• Limited land area. No room for expansion. • Does not accommodate a diversity of economic activities, only specialises in oil and gas, maritime fabrication and repair related industries.
OPPORTUNITIES	**THREATS**
• Proximity to an international harbour and airport, strengthens ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources.

Source: Own compilation

From a spatial planning perspective, Saldanha Bay SEZ is well located as it is connected with major highways and is also situated within an international harbour and close to an international airport, making it ideal for an international company to thrive within South Africa.

Saldanha Bay Local Municipal Spatial Development Framework

Over the next 10 to 20 years, Saldanha Bay SEZ will be the single most significant development in the Saldanha Bay municipal region (Saldanha Bay Municipality, 2022). The SDF identified high potential for economic growth especially focused around the port area, which is complemented by the existing industrial industries and the Saldanha Bay SEZ (Saldanha Bay Municipality, 2019). The SDF proposes infill development in order to provide housing stock in response to a possible influx of people due to the development of the SEZ (see figure 7-18) (Saldanha Bay Municipality, 2019). The Municipality's ability to meet its economic goals within the next ten years and ensure the general welfare of the residents of the greater Saldanha and West Coast region will depend heavily on the SEZ's successful development (Saldanha Bay Municipality, 2022).

The construction of the IDZ at Saldanha Bay is anticipated to increase local manufacturing's revenue, which might lead to connections between the municipality and the Swartland and Bergrivier industrial sectors (Saldanha Bay Municipality, 2022).

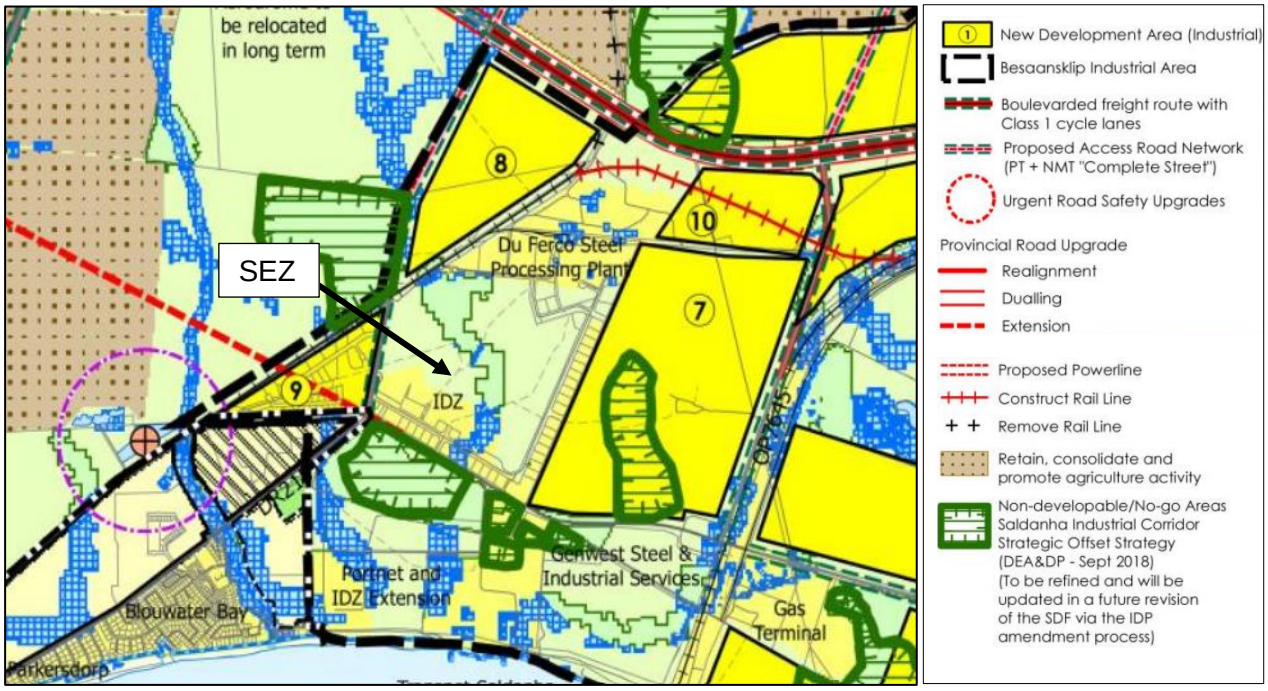

Figure 7-18: Saldanha Bay Local Municipal Spatial Development Framework

Source: Saldanha Bay Local Municipality (2019)

7.3.1.10 Nkomazi SEZ (Mpumalanga)

The Nkomazi SEZ is situated in the Nkomazi Local Municipality and is approximately 65 kilometres from Mbombela's commercial hub (Nkomazi SEZ, 2016). The SEZ is conveniently positioned between southwest Mozambique and northern Swaziland. It is connected to Swaziland by the N4 national highway and Mozambique by a railroad, which is known as the Maputo Corridor (Nkomazi SEZ, 2016). The Nkomazi SEZ is envisioned as an agricultural production hub that will be backed by a variety of agricultural related activities, including logistics and warehousing (Nkomazi SEZ, 2016). In the Nkomazi SEZ, agricultural goods will be processed using both fully and partially automated manufacturing techniques as well as high technological equipment and will be utilising renewable energy sources. Warehousing and logistics facilities will be included in the supporting services, and they will encourage the use of renewable energy sources (Nkomazi SEZ, 2016).

Among the value chains that the proposed Nkomazi SEZ is aiming to support are citrus and subtropical fruits, aromatic plants and herbs, ground and tree nuts, sugarcane, nutraceuticals, meat processing, leather goods, and agri-inputs like fertiliser which are all processed in the secondary and tertiary phases. The Nkomazi area will become a "high-tech agri-hub" and an economic "SEZ," changing its previous position as a rural corridor and increasing the region's productivity (Nkomazi SEZ, 2016).

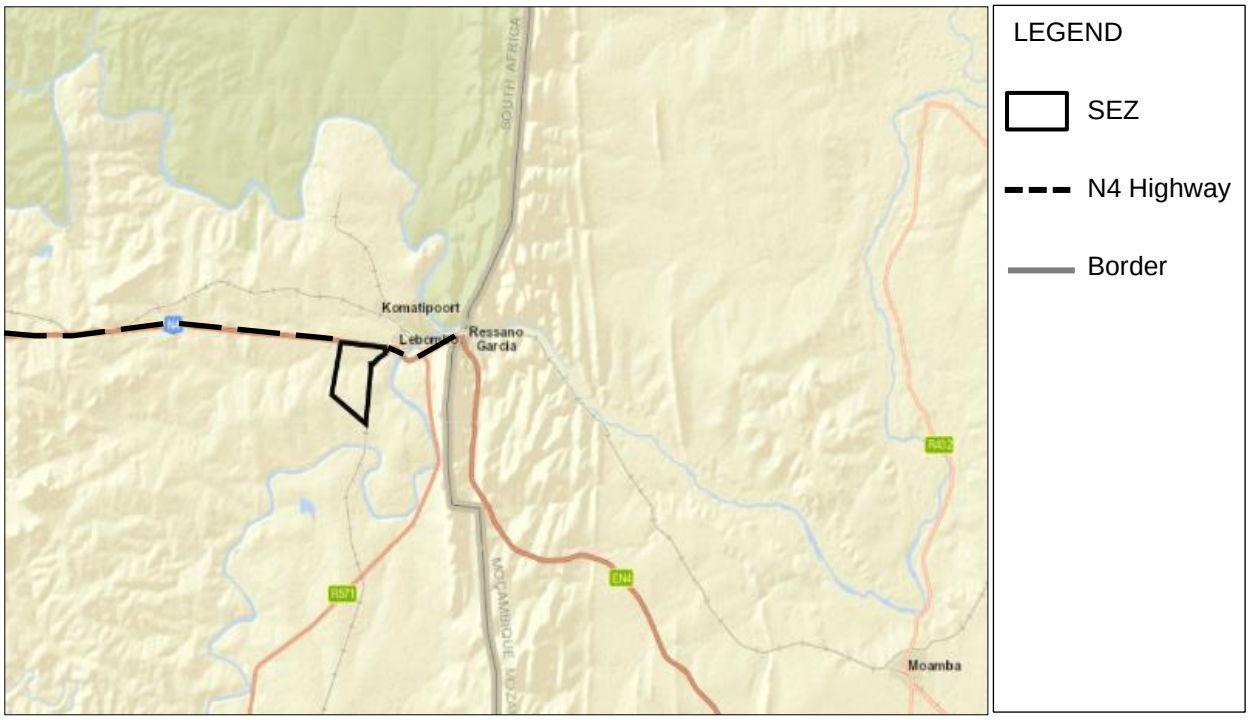

Figure 7-19: Nkomazi SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-19 above illustrates a clear picture of the locality of the Nkomazi SEZ. The Nkomazi SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The Nkomazi SEZ is favourably located close to the Lebombo Border Post (Border between Mozambique and South Africa), one of the largest tourism border posts in South Africa. The Nkomazi SEZ is also located approximately 60 kilometres from the Managa Border Post (Border between South Africa and northern Swaziland), one of the eleven Swaziland border posts, and the Komatipoort-Durban railway line is also crossing here. The Nkomazi SEZ is also located close to Mbombela (capital of Mpumalanga), and is situated next to the N4 highway (Maputo corridor), linking Nkomazi SEZ with Mbombela to the west and Maputo (capital of Mozambique) to the southeast.

In terms of locality, the Nkomazi SEZ is excellently located in terms of accessibility, close to two border posts and situated next a national corridor. The Nkomazi SEZ is situated on one portion of land, operated as an enclosed industrial park. The zone will promote agglomeration among industries, increasing positive spill-overs within the province and ultimately for South Africa.

Table 7-10: SWOT analysis of Nkomazi SEZ

STRENGTHS	**WEAKNESSES**
• <100km to Lebombo and Managa Border Posts. • >100km to Mbombela and Maputo. • Access to good infrastructure and transportation routes (Next to the N4 highway).	• Limited land area. No room expansion.
OPPORTUNITIES	**THREATS**
• Proximity to Lebombo and Managa Border Posts, strengthens ties with Mozambique and Swaziland and other African countries, which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources. • Does not accommodate a diversity of economic activities, only specialises in agriculture related industries.

Source: Own compilation

From a spatial planning perspective, Nkomazi SEZ is well located as it is connected with major highways and is also situated close to Lebombo and Managa Border Posts, strengthening ties with Mozambique and Swaziland.

Nkomazi Local Municipal Spatial Development Framework

The development vision of the Municipality is to promote Nkomazi SEZ as an investment hub (Nkomazi Local Municipality, 2020). The SEZ's function as an industrial powerhouse with a healthy appetite for agricultural goods will have a large multiplier effect on the agriculture value chain (Nkomazi Local Municipality, 2020). Its effect on agricultural redevelopment in the province is indicated by the sizeable number of sustainable value chain employment and primary agricultural GDP production thus produced (Nkomazi Local Municipality, 2020). The Nkomazi Municipality does not consist currently of an updated SDF and the IDP does not analyse the SEZ in detail, maybe due to the SEZ being a new concept and no development of the zone has taken place.

7.3.1.11 Tshwane Automotive SEZ (Gauteng)

The first automotive zone in Africa is called the Tshwane Automotive SEZ (TASEZ), and it is situated in the Gauteng Province (Tshwane SEZ, 2020). It is a desirable global automotive metropolis and the ideal investment location for the continent of Africa's automotive sector (Tshwane SEZ, 2020). The TASEZ is powered by suppliers of different car parts and auto production (Tshwane SEZ, 2020).

The TASEZ intends to collaborate with Transnet in creating a rail-to-port corridor for the export of vehicles and componentry (Tshwane SEZ, 2020). By 2025, the corridor, which will run from Silverton in Tshwane to Gqeberha in the Eastern Cape, is expected to be completed (Tshwane SEZ, 2020).

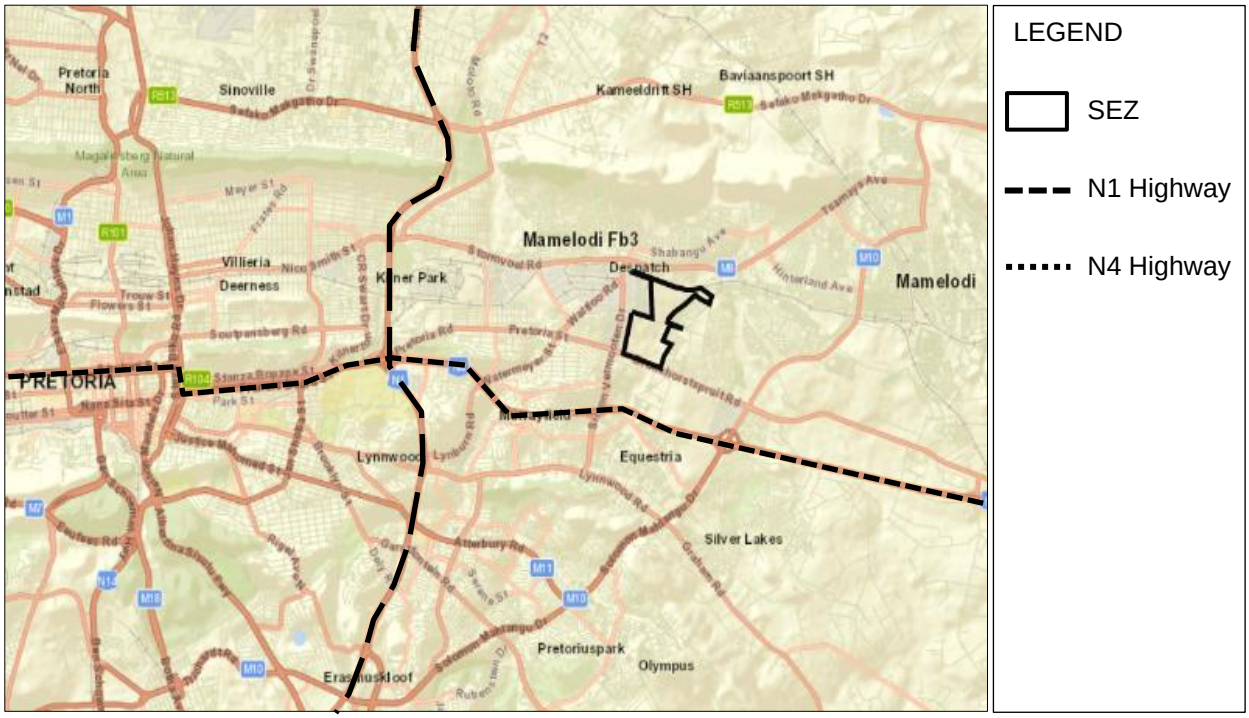

Figure 7-20: TASEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-20 above illustrates a clear picture of the locality of TASEZ. The TASEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The TASEZ is favourably located close to OR Tambo International Airport, one of the biggest passenger and freight airports in South Africa. The TASEZ is also located close to the N4 and N1 corridors, indicating that TASEZ is centrally located within South Africa in terms of north-south and east-west linkages.

The proposed railway line from Silverton to Gqeberha will increase connectivity of the zone and make international trade more lucrative in the automotive sector of South Africa. In terms of locality, the TASEZ is excellently located. The TASEZ is situated on one portion of land, and operated as an enclosed industrial park. The zone will promote agglomeration among automotive industries, increasing positive spill-overs within the province and ultimately for South Africa.

Table 7-11: SWOT analysis of TASEZ

STRENGTHS	**WEAKNESSES**
• <100km to OR Tambo International airport. • Access to good infrastructure and transportation routes (N4 & N1 highways and proposed Silverton-Gqeberha railroad).	• Limited land area. No room for expansion. • Does not accommodate a diversity of economic activities, only specialises in automotive related industries.
OPPORTUNITIES	**THREATS**
• Centrally located due to great accessibility of transportation routes. • Connectivity with East Londen SEZ (an automotive manufacturing hub), strengthens trade ties with other countries which will eventually promote globalization, offsetting economic and employment growth within the country.	• Limited electricity and water resources.

Source: Own compilation

From a spatial planning perspective, TASEZ is very well located as it is connected with the N1 and N4 highways (national corridors), will be connected with East London SEZ via a railroad and is also situated close to OR Tambo International Airport, making it ideal for an international company to thrive in South Africa.

The City of Tshwane Spatial Development Framework

TASEZ is a relatively new SEZ (only came into place in 2019), and the SDF does not particularly refer to it because it was last updated in 2018. The SDF earmarked the area for the SEZ for mixed land uses (see figure 7-21), therefore the SEZ will fit in perfectly with the vision of the SDF. The Tshwane Automotive SEZ is an extension of OR Tambo SEZ and its objectives include encouraging investment in the City of Tshwane, fostering the economic growth of neighbouring municipalities, and eventually developing into a premier centre for the production of automobiles (City of Tshwane, 2021).

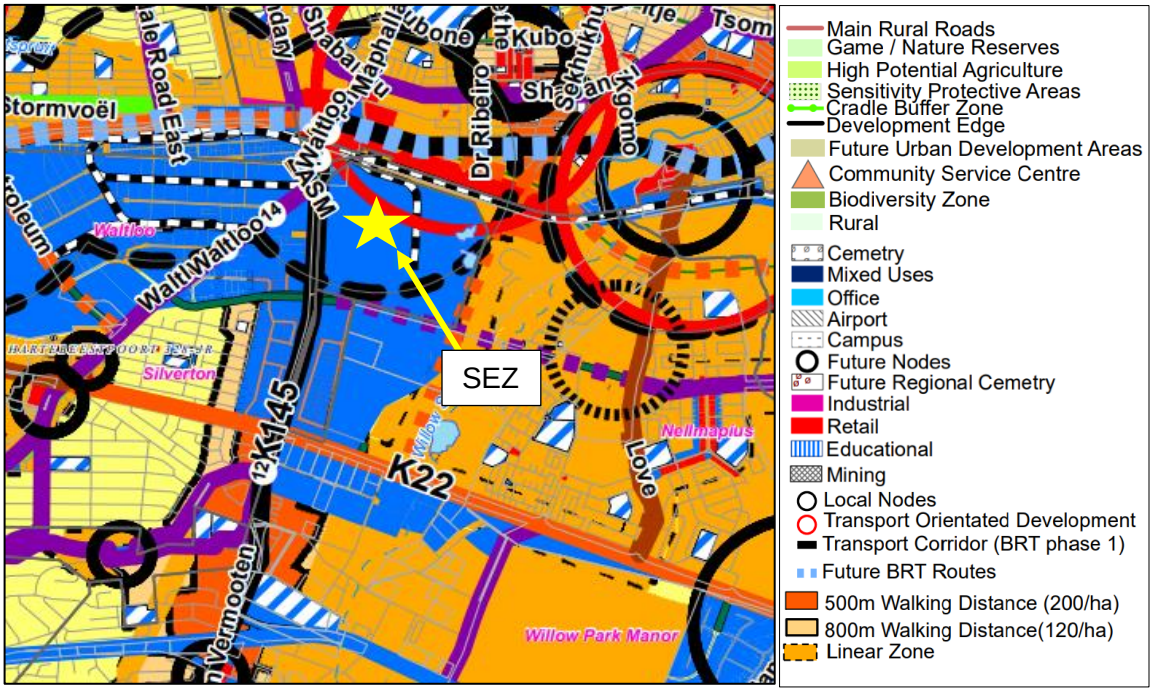

Figure 7-21: City of Tshwane Spatial Development Framework

Source: (City of Tshwane Municipality, 2018)

7.3.2 Designated but non-operational SEZ

7.3.2.1 Bojanala SEZ (North-West)

Bojanala SEZ is focused on the platinum group metals, which include platinum (Pt), palladium (Pd), rhodium (Rh), osmium (Os), ruthenium (Ru), and iridium (Ir) (Bojanala SEZ, 2020). The SEZ is a component of three other corridors: the Western Corridor, which will support a North-South initiative from SADC through Botswana; the Treasure Corridor, which will support developments from along the N12 from Johannesburg to Potchefstroom; and the Platinum Corridor, which was originally intended to connect Maputo and Walvis Bay with Nelspruit, Tshwane, Rustenburg, Lobatse (Bojanala SEZ, 2020). The SEZ's primary focus is on the industries that beneficiate Platinum Group Metals, and there are significant opportunities in the fields of catalysts (automotive catalytic converters), electrical and electronic components, biomedical and pharmaceutical products (cancer treatment and micro implants), high-performance alloys (labware, optical equipment, and turbine blades), fuel cells, and jewellery (Bojanala SEZ, 2020). In order to attract investment, stimulate economic growth, promote skill development, and create employment opportunities, the SEZ will make use of the region's well-established mining sector, solid infrastructure, and huge labour pool. It is ideally situated to take advantage of the primary air and sea routes into Africa, luring investment and boosting the competitiveness of export-driven companies in the region (Bojanala SEZ, 2020).

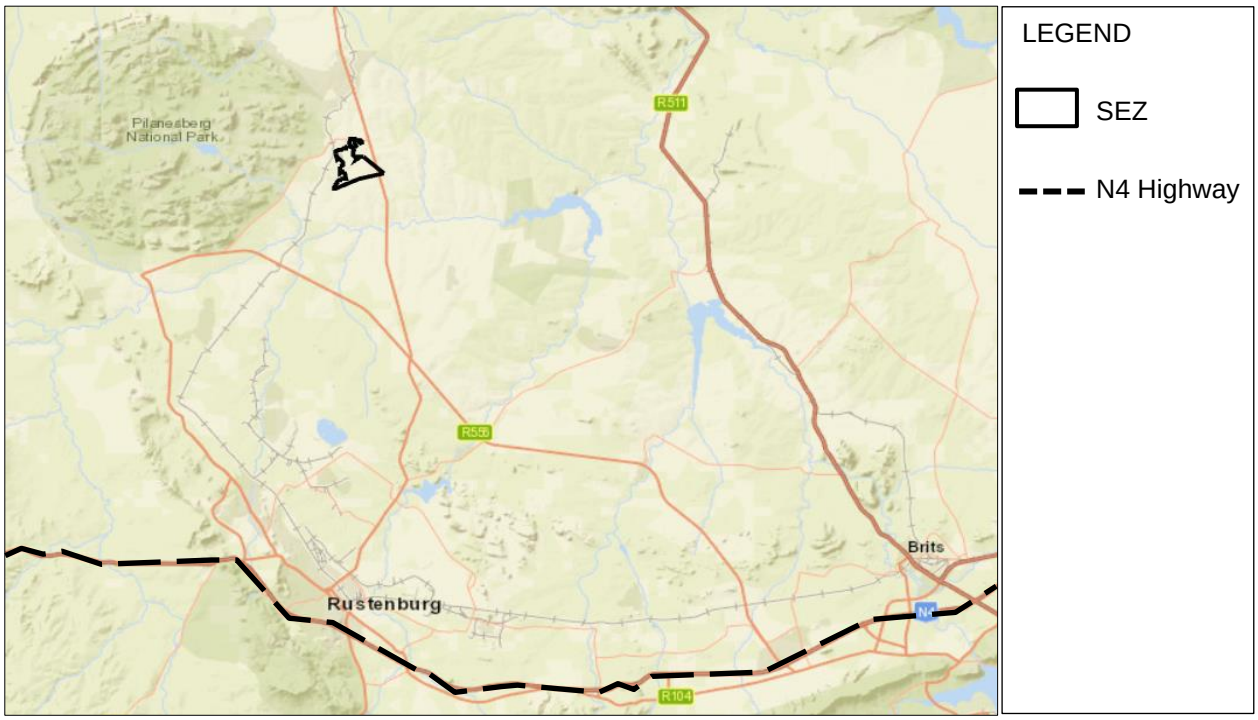

Figure 7-22: Bojanala SEZ locality map

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 7-22 above illustrates a clear picture of the locality of Bojanala SEZ. The Bojanala SEZ were evaluated using a SWOT analysis in order to identify its strengths/opportunities and weaknesses/threats and various conclusions were made. The Bojanala SEZ is favourably located close to Rustenburg, the capital of the North-West Province. The Bojanala SEZ is also located close to the N4 corridor and next to the biggest railway line (Platinum and Treasure corridors) in South Africa, connecting with countries such as Maputo and Namibia.

The proposed railway line will increase connectivity of the zone and make international trade more lucrative in the mineral sector, especially Platinum, of South Africa. In terms of locality, the Bojanala SEZ is excellently located. The Bojanala SEZ is situated on one portion of land, operated as an enclosed industrial park. The zone will promote agglomeration among automotive industries, increasing positive spill-overs within the province, and ultimately for South Africa.

Table 7-12: SWOT analysis of Bojanala SEZ

STRENGTHS	WEAKNESSES
• <100km from Rustenburg. • Access to good infrastructure and transportation routes (N4 highway and Platinum & Treasure railroads).	• Not close to any airport or harbour, relies only on railroad and roads as means of transportation.
OPPORTUNITIES	**THREATS**
• Well located due to accessibility of transportation routes. • Surrounded by a diversity of mineral resources, increasing favourability of mineral related industries to locate within the zone.	• Limited electricity and water resources. • Does not accommodate a diversity of economic activities, only specialises in mineral extraction related industries.

Source: Own compilation

From a spatial planning perspective, Bojanala SEZ is very well located as it is connected with the N4 highway (national corridor) and the Platinum and Treasure railway corridors, making it ideal for an international minerals company to thrive in South Africa.

Rustenburg Local Municipal Spatial Development Framework

The SDF of the municipality is outdated and does not mention any development of the SEZ. The IDP of the municipality, however, is up to date and acknowledges the SEZ as a strategic priority area for industrial development to take place (see figure 7-23) (Rustenburg Local Municipality, 2021). The Integrated Master Plan for the municipality acknowledges the SEZ as a favourable economic policy which will attract industrialists to set up their manufacturing facilities in Rustenburg.

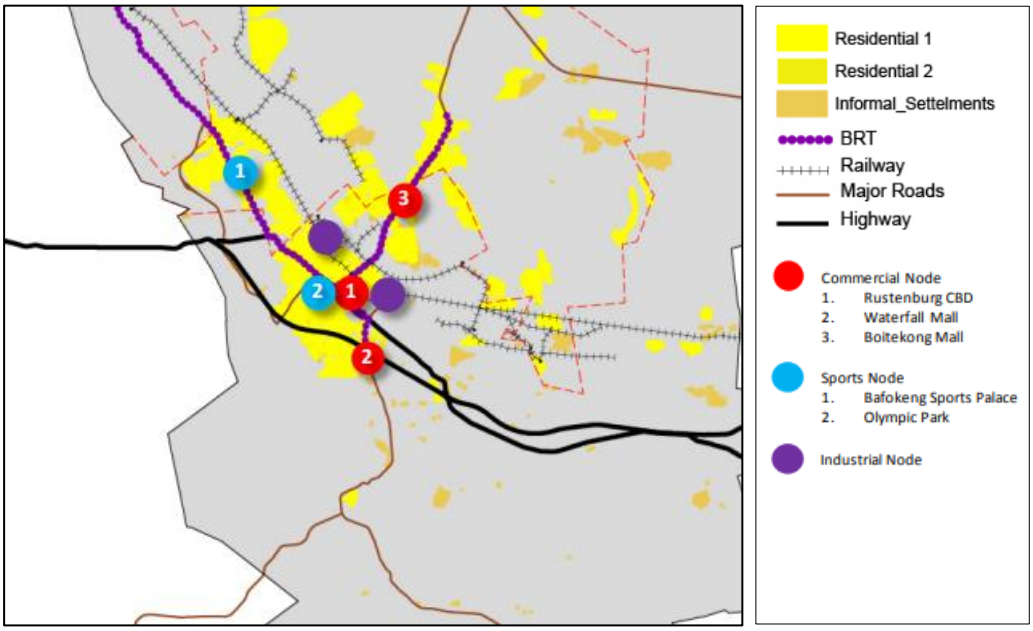

Figure 7-23: Integrated Development Plan 2021

Source: Rustenburg Local Municipality (2021)

7.4 Findings

South Africa is too ambitious when implementing and identifying SEZs, it is rather better to start small and focus on developing one to three zones than developing 12 zones at once. From Chapter 6 above, it is clear that a “China” approach is better to follow than a “Nigerian” approach. Focus must be placed on the development of two to three SEZs in order to ensure successful operation of such zones. In terms of spatial planning, the SEZs of South Africa does not fail completely and there are quite a few that excel. Table 7-13 below, summarizes the strengths and weaknesses of each zone collectively. From the table, it is clear that a combination of transportation routes, airports and harbours are the best recipe in terms of spatial planning for a successful SEZ.

South Africa’s national corridors is of good quality and need to maintain the same quality in order for the SEZs to succeed in terms of the transportation of goods across South Africa and other countries. The possibility of expansion within a SEZ and managing a SEZ as an enclosed industrial park (on one portion of land) are important in order to attract more international companies and investment, by increasing agglomeration within the zone. Some of the zones fail in this category and can have an adverse effect in the future of operating such zone. The common threat among each zone is what the South African government is failing to manage and maintain across the country; the provision of electricity and water. If the South African government can succeed in the sustainable provision of water and electricity to each zone, the South African SEZs will thrive and attract greater investment opportunities.

Table 7-13: Collective SWOT analysis

SEZ	National road	Railroad	Harbour	Airport	Border post	One portion of land	Diversity of industries	Water & Elec. resources
Richards Bay								
Dube								
East London								
Coega								
Atlantis								
Saldanha								

Source: Own compilation

Access	
Good / Next to	
Average / Close to (< 100km)	
None / Far from (> 100km)	

SEZ	National road	Railroad	Harbour	Airport	Border post	One portion of land	Diversity of industries	Water & Elec. resources
Musina-Makhado								
Maluti-a-Phofung								
OR Tambo								
Tshwane Automotive								
Nkomazi								
Bojanala								

Source: Own compilation

Access	
Good / Next to	
Average / Close to (< 100km)	
None / Far from (> 100km)	

7.5 Conclusion

From the analysis above, it is clear that Dube SEZ and Coega SEZ performs the best regarding the SWOT analysis. This indicates that SEZs would perform better if they are placed centrally between areas of growth, in order to serve a wider area (as discussed in Chapter 3 of the literature study). Developing SEZs next to international airports and harbours are also favourable in order to achieve growth in the future. The development of SEZs on one portion of land increases the management of the zone and will also attract similar industries – increasing agglomeration within the zone. From the worst performing SEZs it is clear that the development of a zone, if not accommodating a diversity of economic activities/industries, will have negative consequences in the future. That particular zones will only attract one kind of industry, making it difficult to attract investment and managing growth within the zone. The next chapter will discuss recommendations for South African SEZs to be developed successfully in terms of spatial planning initiatives. Recommendations for existing policy and legislation initiatives will also be addressed.

CHAPTER 8: SYNTHESIS AND RECOMMENDATIONS

8.1 Introduction

This chapter will summarise the main issues addressed as well as provide recommendations in terms of the implementation of SEZs in South Africa. This chapter will attempt to highlight potential growth poles within South Africa, which may be advantageous in the future, and also aim to identify growth poles which may be disadvantageous within the South African context. This chapter will also attempt to provide proposals for policy initiatives in order to address issues identified throughout the study. This chapter will align itself with Objective 4 as indicated in Section 1.3 of this study.

8.2 Synthesis

From Sections 3.2 and 3.3, the following locality factors in terms of spatial planning determine the success of a growth pole/SEZ:

- Distance from markets (Transportation costs)

A successful SEZ is situated centrally between the market areas to lower transportation costs, creating an ideal economic environment for businesses to flourish. Access to market areas also indicate whether the SEZ is situated close to a variety of ports of entry, e.g., airports and seaports.

- Size of market area

The size of a market area determines the economic feasibility for a business to operate from such a zone. A good market area will consist of a large variety of economic activities, good infrastructure and good access to a diverse range of ports and transportation routes.

- Incentives

Incentives within a SEZ is necessary in order to attract major companies, making it favourable for a company to operate from such a zone due to lower costs or accessible import and export markets. Industries which are closely located to each other, enjoy healthy competition and benefit in sharing ideas.

- Land heterogeneity

Land heterogeneity is important in terms of size and location. Various sizes of land need to be provided in order to cater for small and large companies. A good location can also be characterised by heterogeneity of infrastructure within the area – access to various transport

routes is more favourable for a company to situate itself due to the great variety of transportation of its product, e.g., by train, motor vehicle, aeroplane, ship, etc.

The South African SEZ's from Chapter 7 can be compared with the SEZ Development Ladder discussed in Section 5.2.1. South Africa can be categorised as a middle-income economy due to its active participation within the Global Value Chain market as an exporter as well as an importer. The objectives of each South African SEZ differ, and therefore each zone place its focus on business sectors that are present within the area in order to be successful. The following SEZs share the same idea, to focus on specialised sectors in order to promote its global value chain operations. These SEZs economies can be classified as middle income, according to the SEZ development ladder as discussed in Chapter 5:

- Tshwane SEZ
- Coega SEZ
- OR Tambo SEZ
- Dube SEZ
- Maluti-a-Phofung SEZ
- East London SEZ
- Atlantis SEZ

The other SEZs' economies consist of a low-income economy, focusing on resource-based sectors and mainly the manufacturing sector. These are:

- Richards Bay SEZ
- Musina Makhado SEZ
- Nkomazi SEZ
- Bojanala SEZ

This feature indicates that the geographical location and development of these SEZs was never conducted from a spatial planning perspective in order to create cohesiveness among the zones. SEZs with similar objectives will thrive within the global value chain operations, especially within Africa. The African Continental Free Trade Area (refer to Section 5.2.3) makes it possible for African countries to trade among each other due to "open borders". This indicates that if each zone consists of the same type of economy, trade routes within Africa will strengthen ties among the countries.

There are gaps among the national policy and legislation discussed in Chapter 5 of this study. Some of the policies is in contradiction with one another. Industrial policies seem to promote the agglomerations within central places, while spatial policies seem to support lagging and outlying areas. Efficiency and productivity are both impacted by this misalignment. All of the national policy and legislation refer to SEZs in some, manner but do not give clear guidelines on the implementation of such zones in terms of spatial planning. The literature study from Chapters 3 and 4 point out the importance of the role of spatial planning in the implementation and operation of SEZs. Spatial planning guides policymakers in order to identify the best location for the operation of such zones; many factors must be taken in account as mentioned in the first part of this section. A new policy needs to be implemented which act as a guide for policy makers and policy implementors on the implementation of SEZs from a spatial planning perspective.

From the analysis of the international case studies (refer to Chapter 6) it is clear that implementing a maximum of four zones at once, such as China, is effective, and any externalities evolving from it can be controlled. If a country implements more than five zones at once, some of the zones will be left behind and will not be operated effectively. This analysis also pointed out that foreign capital can assist developing countries in implementing and developing SEZs, such as Cambodia, where most of the zones were developed by China. This feature is beneficial for both countries, boosting Cambodia's economy and giving China a place where labour and resources are abundant.

8.3 Recommendations

This study addressed various literature, policies and case studies regarding SEZs, and particular attention was given to SEZs' roles within South Africa from a spatial planning perspective. Recommendations will be made in the subsections below in order to address certain issues identified within this study with more practical approaches.

8.3.1 Policy approach

An effective SEZ strategy that is applied equally can produce the intended outcomes, such as an increase of employment, foreign investment, and exports (Godlewska, 2016:206). Programmes for the zones that are inadequately carried out may have negative effects that are unstable and poorly related to the economic and social environment of the zone (Godlewska, 2016:206). It stems from the SEZs' potential to polarise regions in both good and bad ways (Godlewska, 2016:206). There are consequently lessons to be learnt from the experience of SEZs internationally which can enhance the design and management of South Africa's SEZs.

SEZs take time to establish and to develop momentum. This requires government support which is both sustained and consistent over the long-term, as well as being pragmatic and flexible to accommodate dynamic change. The growth and viability of SEZs depend heavily on spatial planning (UNHabitat, 2017). Effective land use and spatial growth require policies for spatial planning that specify the locations for residential, commercial, and industrial development (UNHabitat, 2017). Urban patterns may be used into spatial design strategies to improve connectedness and accessibility for locals while lowering environmental stress, travel times, and congestion (UNHabitat, 2017).

Objective 2 of the study was addressed in Chapter 5 and several policy gaps were identified when implementing SEZs in South Africa. The National Policy overall does not consider SEZs as a spatial implementation tool, but rather as an instrument to stimulate economic growth in that specific area. SEZs do not function as an entity, but rather as an interconnected network of cells stimulating economic growth overall and not within a specific region, thus, eliminating unequal economic growth and development within a region. Policy makers and implementers need to be guided from a spatial planning perspective in order to ensure the success of the SEZs. All of the policies related to SEZs are aimed at quick problem solving and implementation of its objectives. The best policy approach for implementing SEZs in South Africa is to implement and develop one SEZ at a time, to ensure its success in the future. A new policy needs to be implemented which act as a guide for policy makers and policy implementors on the implementation of SEZs from a spatial planning perspective. It is suggested that a spatial approach to policy must be implemented, one that emphasises specific spatial targeting with the goal of maximising the productivity gains of agglomeration and minimising the costs of urbanization.

8.3.2 Availability of infrastructure

A SEZs success is determined by the availability of infrastructure; the fundamental network of South Africa's national infrastructure is comparatively strong. In order to support economic growth, it is challenging for the government to maintain and upgrade the infrastructure for energy, water, transportation, and communications. A major trend within South Africa is going green in terms of infrastructure. Encouraging SEZs to make use of renewable infrastructure will lighten the load on the government to provide such adequate services. If SEZs make use of renewable infrastructure it will not only reduce the load on the developer, but will also assist in alleviating the impact on the environment. The majority of the SEZs require significant water and wastewater infrastructure that will not only service the zone itself but also the adjacent towns. It may thus have a significant financial impact and typically remains one of the most important factors for collaboration between the zones and local authorities.

The establishment of water treatment plants for each SEZ is critical in order to ensure continued water for the industries within the SEZs, which will also assist with water conservation, as the grey water is recycled and reused by the industries. The integration of transportation planning is necessary for the efficient movement of people (and goods) between the SEZ and residential (and port/industrial) areas. Even though it frequently involves collaboration at multiple levels (including local, provincial, and national), transportation planning is typically the easiest aspect of the coordination process between SEZs and municipal authorities. The establishment of strong relationships between the local authorities and SEZs is compulsory in order to ensure effective transportation systems between the residential areas and the SEZs. SEZs need to take responsibility for the maintenance of the transportation routes surrounding the zones, and the local government must take responsibility for the upkeep of the other local streets and major transportation routes linking the SEZs within one another and the major port of entry.

8.3.3 Location

SEZs may profit greatly from well-designed spatial planning, which helps to ensure its success (UN-Habitat, 2016). On the other hand, SEZs exacerbate some of the negative features of urbanisation, such as the growth of urban slums on its periphery and traffic congestion around the zones, if they are not incorporated in well-designed and long-term urban development plans (UN-Habitat, 2016). Additionally, it usually leads to the haphazard and even uncontrollable growth of zones when the extension of SEZs is not taken into account and integrated in greater urban planning (UN-Habitat, 2016). From the literature study in Chapter 3 above it is evident that the location of a growth pole is crucial in order to function and reap positive spill-overs. Thus, the first factor to consider when implementing SEZs is location. A SEZ thrives near port of entries (harbours, airports, etc.) and highly travelled routes or development corridors. Another factor to consider in terms of location is the availability of resources and infrastructure. This is a major factor to consider in South Africa, a large number of areas across the country lack basic infrastructure and services. From the SWOT analysis above, SEZs that are situated on the coastline with access to a harbour, airport and national road is more favourable to excel than a SEZ that is inland without any port of entry. It is therefore recommended that a SEZ's location first needs to be identified from a spatial planning perspective in order to ensure the success of such a zone.

8.4 The ideal Special Economic Zone in South Africa

The ideal concept of a SEZ will consist of the following characteristics:

- Situated close to major transportation routes and development corridors;
- Situated close to large nodes and central places;
- Situated close to various ports of entry (harbours, airports and border posts);
- Sustainable in terms of engineering services (renewable infrastructure); and
- Ability to expand and to accommodate various economic activities.

Figure 8-1: Map of South Africa

Source: Own interpretation from the Chief Surveyor General website (Spatial Cadastral Data)

Figure 8-1 above indicates the ideal location for a SEZ to thrive within South Africa from a spatial planning perspective, Bloemfontein (the capital city of Free State Province). It is evident form this map that the identified SEZ consist of the characteristics described above. Bloemfontein is the midpoint between Gauteng and the Western- and Eastern Cape, due to the N1 highway (longest corridor in South Africa) which run through this city. Bloemfontein also consist of a national airport and is also connect with various harbours (Durban, East London, Port Elizabeth and Cape Town).

This proposed location for a SEZ is ideal for the following reasons: highly accessible and connected between other SEZs (TASEZ, Dube SEZ, RBSEZ, Atlantis SEZ); situated within a large node which is connected with other large nodes (Tshwane, Johannesburg, cape Town, Durban) within the country; is located relatively close to various harbours (Durban, Richards Bay, Cape Town, Port Elizabeth, Coega); is located close to the Lesotho border and have immediate access to an airport. It has the potential to be sustainable and to accommodate various economic activities due to its good connectivity to other SEZs and large nodes within the country.

8.5 Limitations

In order for research to continue, the limits of the research must be recognised. This will allow future researchers to build on this study with confidence in their comprehension of its validity and reliability (Machtans & Thogmartin, 2014:1). The limitations of the study are summarised below:

- Ample international case studies regarding SEZs exist. This study only made use of five countries' SEZ case studies. It might be necessary to do more research to confirm if the results of this study are applicable to other situations.
- The study only focuses on SEZs role from a spatial planning perspective, yet there are multiple ways to analyse South Africa's SEZs. Additional studies will be needed to comprehensively analyse SEZs from another discipline.

8.6 Conclusion

This study aimed to evaluate the role of SEZs in South Africa from a spatial planning perspective. Evidence shows that only half of South Africa's SEZs are fit to operate effectively from a locational aspect, the other half lack factors such as location advantage, specialised services and infrastructure. Various recommendations are made in order to counteract such problems: a new policy approach, acting as a guide to implement SEZs from a spatial planning perspective; proper and good infrastructure development within the surrounding area of each SEZ and between each SEZ; the best location, which will include close proximity to harbours, airports and major travelled routes.

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