KWAZULU-NATAL PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (PSDF)

FIRST DRAFT SPATIAL DEVELOPMENT FRAMEWORK (2022-2027)

cogta

Department:
Cooperative Governance and Traditional Affairs
PROVINCE OF KWAZULU-NATAL

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POLICY REVIEW AND VISION DIRECTIVES

SPATIAL CHALLENGES AND OPPORTUNITIES

SPATIAL PROPOSALS

PROJECT NAME: KZN Provincial Spatial Development Framework

PROJECT PHASE: FIRST DRAFT PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

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ABBREVIATIONS

APAP	Agricultural Policy Action Plan
AU	African Union
AWG	Action Work Group
BEPP	Built Environment Performance Plan
BNG	Breaking New Ground
CARA	Conservation of Agricultural Resources Act
CBA	Critical Biodiversity Area
COGTA	Department of Cooperative Governance and Traditional Affairs
CPAs	Communal Property Associations
CPFP	(The) Capital Projects Feasibility Programme
CSIR	Council for Scientific and Industrial Research
DALRRD	Department of Agriculture, Land Reform and Rural Development
DARD	(KZN) Department of Agriculture and Rural Development
DBSA	Development Bank of South Africa
DEFF	National Protected Areas Expansion Plan
DHS	Department of Human Settlements
DME	Department of Minerals and Energy
DMR	Department of Mineral Resources
DoL	(The) Department of Labour
(The) dti	The Department of Trade and Industry
DWS	Department of Water and Sanitation
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EIAs	Environmental Impact Assessment
EMP	Environmental Management Plan
ESA	Ecological Support Area
FEPA	Freshwater Ecosystem Priority Areas
FPSUs	Farming Production Support Units
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GVA	Gross Value Added / Addition
ha	hectares
HRD	Human Resource Development
I&APs	Interested and Affected Parties
ICMA	Integrated Coastal Management Act
ICT	Information and Communication Technologies
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IDZs	Industrial Development Zones
IGRFA	Intergovernmental Relations Framework Act
IPAP	Industrial Policy Action Plan
ITB	Ingonyama Trust Board
IWMP	Integrated Waste Management Plan
Km	kilometre
KPI	Key Performance Indicator
KZN	KwaZulu-Natal
KSIA	King Shaka International Airport
LM	Local Municipality

MPA	Marine Protected Area
MTSF	Medium Term Strategic Framework
NATMAP	National Transport Master Plan
NBSAP	National Biodiversity Strategy and Action Plan
NDP	(The) National Development Plan
NFEPA	National Freshwater Ecosystem Priority Areas
NMPP	New Multi-Products Pipeline
NPAES	National Protected Area Expansion Strategy
NPC	National Planning Commission
NPC	National Planning Commission
NSAA	National Spatial Action Areas
NSBA	National Spatial Biodiversity Assessment
NSDF	National Spatial Development Framework
NSSD	National Strategy for Sustainable Development
NUSP	National Upgrading Support Programme
NWC/WDMS	National Water Conservation and Water Demand Strategy
NWRS2	National Water Resource Strategy
NWSMP	National Water and Sanitation Master Plan
PA	Protected Area
PEMP	Poverty Eradication Master Plan
PGDP	KZN Provincial Growth and Development Plan
PGDS	KZN Provincial Growth and Development Strategy
PHHSDA	Priority Housing and Human Settlements Development Areas
PRASA	Passenger Rail Agency of South Africa
PSDF	Provincial Spatial Development Framework
PSDS	Provincial Spatial Development Strategy
PSEDS	Provincial Spatial Economic Development Strategy
RASET	Radical Agrarian Socio-economic Transformation
RBCT	Richards Bay Coal Terminal
RBIDZ	Richards Bay IDZ
SACN	South African Cities Network
SADC	(The) Southern African Development Community
SALGA	South African Local Government Association
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SANRAL	South African National Roads Agency SOC Ltd
SDF	Spatial Development Framework
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEDA	Small Enterprise Development Agency
SETA	Skills Education Training Authority
SEZ	Special Economic Zones
SIP	Strategic Infrastructure Project
SPLUMA	(The) Spatial Planning and Land Use Management Act
StatsSA	Statistics South Africa
STRS	Small Town Revitalisation Strategy
SWSA	Strategic Water Source Area
TFCA	Transfrontier Conservation Area
TIZKN	Trade Investment KwaZulu-Natal

TKZN	Tourism KwaZulu-Natal
UISP	Upgrading of Informal Settlement Program
VENE	Vryheid-Emadlangeni-Newcastle-Ermelo
WMA	Water Management Area
YEP	Youth Enterprise Parks

1 INTRODUCTION

1.1 PURPOSE

This document presents a first draft Provincial Spatial Development Framework (PSDF) for the KwaZulu-Natal province. The document includes an overview of the policy and legislative directives, and a summary of the spatial challenges and opportunities of the province. It further presents the spatial proposals and includes the refinement of a long-term spatial development vision indicating the desired spatial pattern in line with the development vision contained in the Provincial Growth and Development Strategy (PGDS).

1.2 SPATIAL PLANNING PRACTICE IN SOUTH AFRICA

The Spatial Planning and Land Use Management Act (SPLUMA), Act No. 16 of 2013 introduced a new spatial planning system in South Africa. It replaced a myriad of discrete apartheid era legislation and the associated disjointed planning system with a single framework legislation that provides for a uniform national approach to spatial planning. As set out in Section 4 of the SPLUMA, the new spatial planning system consists of the following:

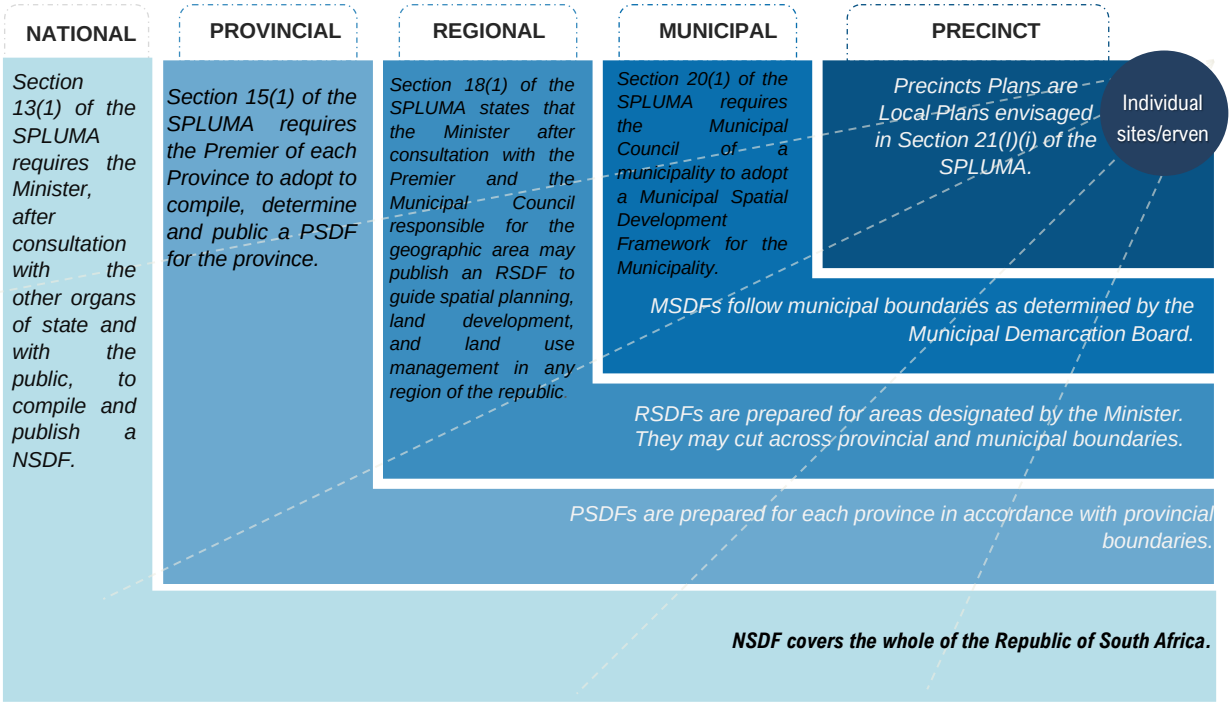
- Spatial Development Frameworks (SDFs) to be prepared at national, provincial, regional, and municipal scales.
- A set of development principles, norms and standards that will guide spatial planning, land use management and land development.
- Land use schemes which are essentially a mechanism for facilitating development and regulating land use in each local municipality.
- Procedures and processes for the submission and consideration of land use applications.

The new approach places spatial planning at the centre of cooperative government and intergovernmental relations. Chapter 3 of the SPLUMA is dedicated to this issue, and in addition to Schedule 4 and 5 of the Constitution, mandates both national and provincial spheres of government to implement measures to support and monitor spatial planning within their areas of jurisdiction. It entrusts the national government with the responsibility to support and strengthen both provinces and municipalities in undertaking effective spatial planning; and allocates a duty to capacitate and enable municipalities to perform their spatial planning duties and functions competently and successfully to the provincial government.

Section 12 of the SPLUMA outlines the general provisions applicable to all scales of SDFs including a PSDF. This document does not regurgitate these provisions suffice to mention that they require SDFs to express the desired long-term spatial pattern; guide both public and private sector decision making relating to spatial planning and land use management; address historical spatial imbalances; take cognisance of environmental management instruments; and give effect to the applicable legislation and policies. The attainment of this ideal necessitates a strong horizontal and vertical alignment of SDFs where higher scale SDFs provide a framework and are informed by the lower level SDFs. This

makes SDFs a mechanism for spatial sectoral integration and coordination among the three spheres of government.

FIGURE 1: SPATIAL PLANNING HIERARCHY



The SPLUMA introduces five development principles to guide spatial planning and inform decision making. These principles are spatial justice, spatial sustainability, spatial resilience, efficiency, and good governance. The principles serve as a transformation lever and describes the desired outcomes/impact of the various spatial planning measures including the SDFs. They translate the spatial transformation issues that need to be addressed in the South African context into a legislated guideline that is intended to shape the content and outcomes of spatial planning (SACN, March 2015:30). The SDFs are therefore a mechanism through which the transformation principles contained in SPLUMA find expression in a specific spatial context. If the relevant aspects of spatial transformation are not appropriately considered and applied at this level of planning, the transformation drive through SPLUMA may fail in its entirety (Ibid, p. 33).

Furthermore, Section 8 of SPLUMA makes provision for the Minister to prescribe norms and standards for land use management and land development. Section 8 includes both normative and more detailed process related aspects that must be addressed in the norms and standards.

1.3 MANDATE FOR PROVINCIAL SPATIAL PLANNING

Schedule 5 Part B of the Constitution of the Republic of South Africa identifies 'provincial planning" as one of the functional areas of exclusive provincial legislative competence. Provincial planning has three components. Firstly, the Constitution empowers provinces to formulate and implement legislation to regulate development planning and land use management within their areas of

jurisdiction. Secondly, strategic planning provides for the formulation of a cohesive strategy and its implementation plan for the integration and effective implementation of government development and service delivery programmes across the province. The preparation of a PSDF in terms of the SPLUMA falls under this category of provincial planning. Lastly, provincial planning entails the setting up of systems and procedures for support and monitoring of planning at a municipal level. This includes both integrated development planning and land use management.

1.4 SPATIAL INTEGRATION

The PGDS is currently under review and is aligning to the Medium-Term Strategic Framework (MTSF) 2019 – 2024. The challenges and problem analysis that gave rise to the KZN Goal of Spatial Equity in the PGDS, is similar to the problem statement highlighted in the current MTSF 2019-2024, and the reason for a MTSF Priority of Spatial Integration.

The National Development Plan (NDP) points to a clear, distinct, and direct link between inherited colonial and Apartheid spatial patterns and the stubborn persistence of poverty, inequality and economic inefficiency. To address this historical spatially-grounded injustice, the NDP calls for the urgent, well-planned and systematic pursuit of spatial transformation, which takes account of the unique needs and potentials of different rural and urban areas. However, challenges remain with addressing and overcoming the persistent spatial integration and equity problems. The MTSF points to key reasons for this as "The country's spatial planning systems remain fragmented and disjointed in implementation, and we have no effective system or method for measuring, monitoring, reporting and decisively executing consequence management. As a result, apartheid spatial patterns persist, and spatial disparities and injustices continue to exacerbate socio-economic challenges.".

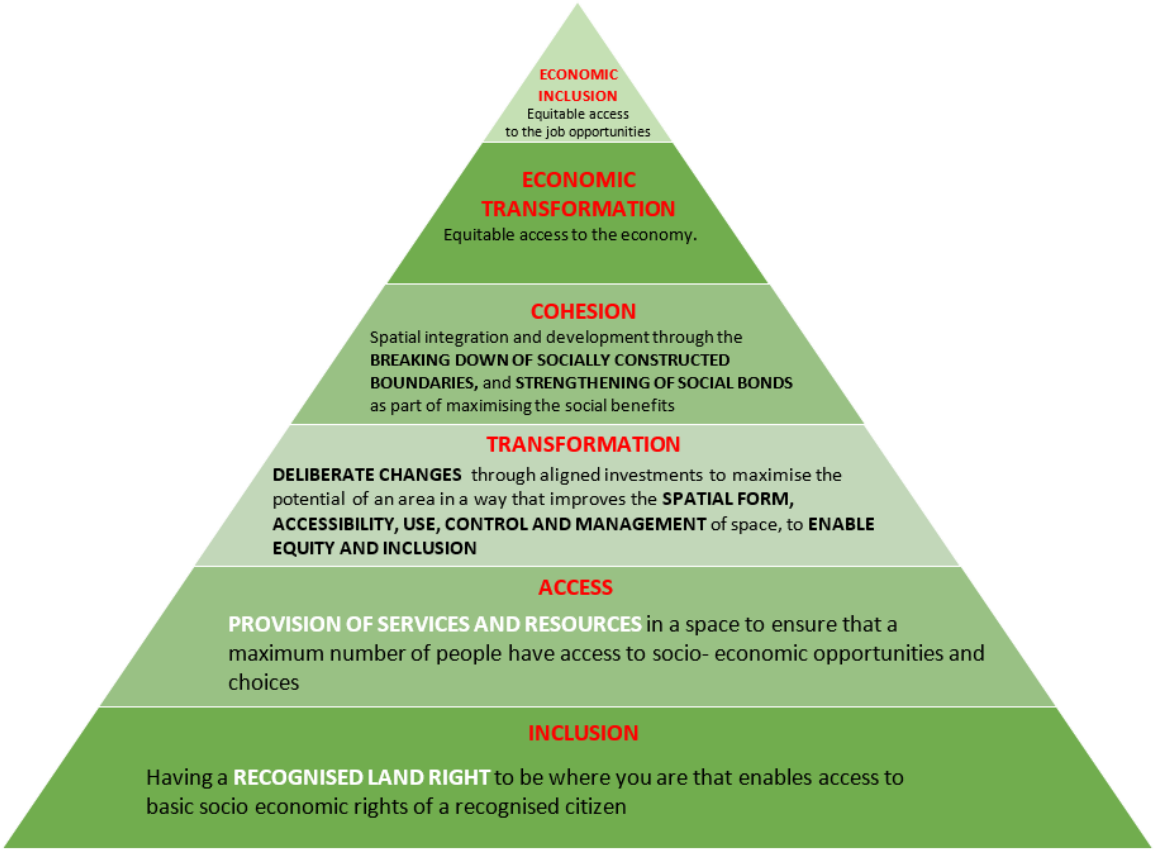
Despite government's best intentions to reverse systemic marginalisation that was brought about through the Colonial and Apartheid systems, most of the residents in KwaZulu- Natal still live in a state of inequity and marginalisation, with poor integration and inclusion into the socio-economic core.

The NDP proposes the development of Spatial Development Frameworks (SDF) to provide spatial guidance to the NDP. These SDF's are required for each sphere of government – National, Provincial and Municipal/ local – in terms of the Spatial Planning and Land Use Management Act (SPLUMA). The main focus of these SDFs is to support integrated spatial planning and development across all scales (precinct level and up).

The concept of spatial integration proposes an approach to defining and understanding Spatial Integration to ensure improved co-ordination in planning and monitoring of spatial integration interventions in the province. The proposed definition for Spatial Integration is as follows:

"Spatial Integration involves breaking down spatially- constructed barriers through enabling and deliberately transforming spatial forms in settlements, that improve access, inclusion, cohesion and equity in socio- economic opportunities." (COGTA: Draft Position Paper on Spatial Integration Within the Province of Kwazulu- Natal).

FIGURE 2: DEFINING SPATIAL INTEGRATION



Source: COGTA: Draft Position Paper on Spatial Integration Within the Province of Kwazulu- Natal

Spatial integration can be further disaggregated into the following outcomes and indicators:

- Social inclusion: secure tenure for all.
- Access: equitable and sustainable access to a minimum level of goods and services.
- Transformation: integrated and equitable human settlements.
- Cohesion: equitable access to public social and recreational facilities and services.
- Economic transformation: equitable access to the economy.
- Economic inclusion: equitable access to job opportunities.

1.5 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORKS

Further to the above-outlined spatial planning system, Part C of the SPLUMA provides details regarding the preparation, content, and legal effect of PSDFs. Section 16 states that a PSDF must:

- provide a spatial representation of the land development policies strategies and objectives of the province particularly the province's growth and development strategy;
- represent the desired spatial and land use pattern;
- coordinate and integrate the spatial expression of the sectoral plans of provincial government departments;
- provide a framework for coordinating contiguous municipal spatial development frameworks; and

- incorporate any spatial aspects of relevant national development strategies and programmes as they apply in each province.

A PSDF is therefore a tool for spatial transformation and development at a provincial level. It should paint a picture and outline a strategy for the attainment of the desired future within the existing policy framework and based on an in-depth understanding of spatial challenges and opportunities that characterise the province. It is a territorially based mechanism for spatial governance and coordination and/or integration of the spatial dimension of sectoral policies. It addresses the tensions and contradictions among sectoral policies (i.e., conflicts among economic development, environmental management, and social cohesion policies). It creates a rational territorial organization of land uses and strengthen the linkages between them, to balance demands for development with the need to protect the environment and to achieve social and economic development objectives.

A PSDF is formulated and may not be inconsistent with the NSDF. It must provide a framework for the preparation of regional and municipal SDFs to achieve consistency, alignment, and continuity.

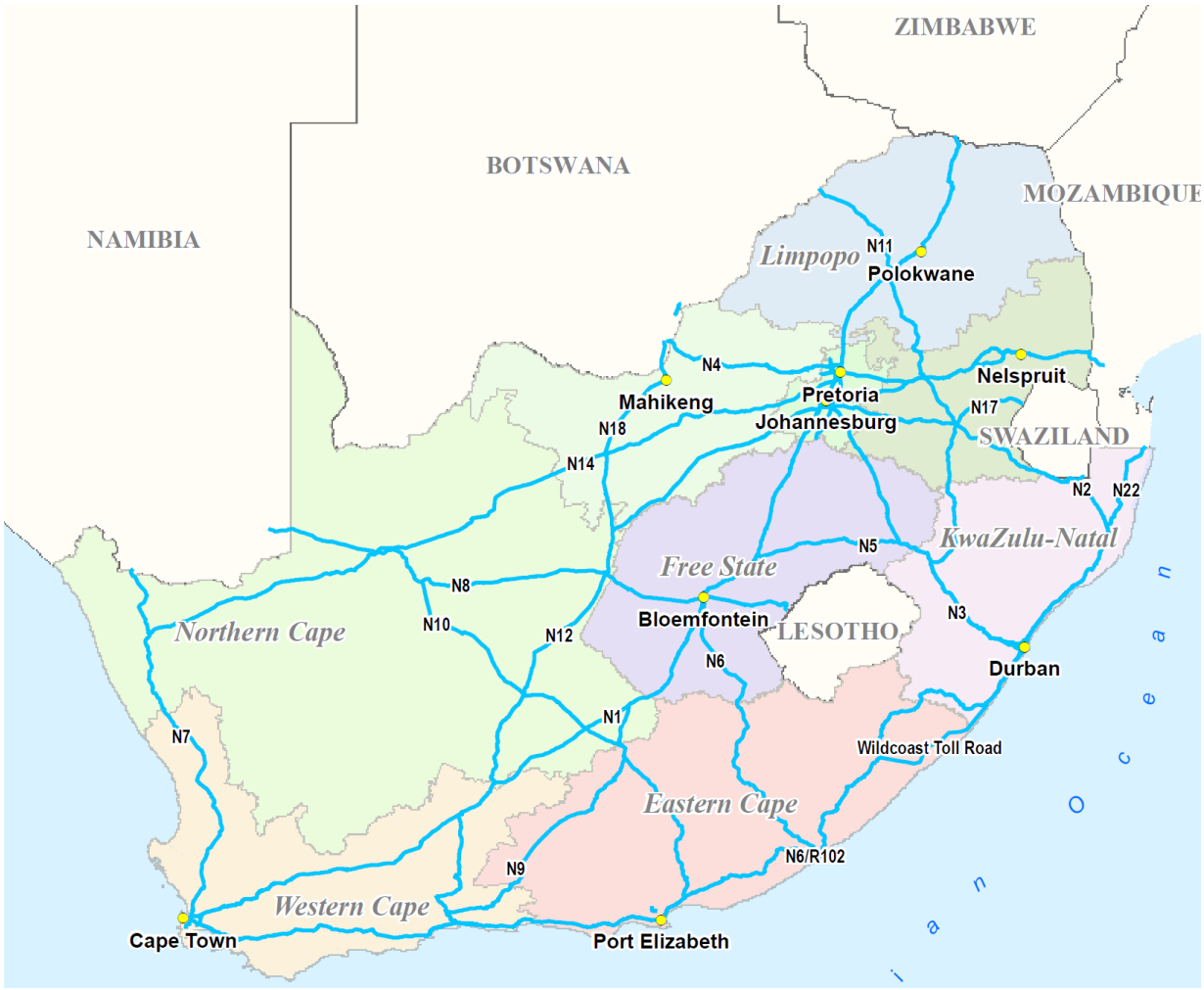
1.6 KwaZulu-Natal Province

Further to Section 15 of the SPLUMA, the Premier of KwaZulu-Natal, through the MEC for Cooperative Government and Traditional Affairs (COGTA), has initiated a process towards a comprehensive review of the PSDF. This will satisfy the requirements of the SPLUMA; enable the province to deal effectively with the besetting spatial challenges; and reposition KwaZulu-Natal to seize opportunities that the national and international environment presents.

KwaZulu-Natal (KZN) is one of the nine (9) provinces in the Republic of South Africa (RSA). It is the third smallest province (in geographic size) and covers approximately 94361 km^2 or 7.7% of South Africa's land mass. The province has the second largest population in the country with about 10 267 300 persons or 19.8% of the total population of South Africa (StatsSA, Census 2011). The population is spread unevenly among 10 District Municipalities (43 Local Municipalities KZN) and one metropolitan municipality (eThekwini Metropolitan Municipality). eThekwini accounts for 34% of the provincial population. 52.5% of the population resides in rural areas mostly in settlements under traditional leadership. Massive poverty, poor access to basic services and public facilities, lack of economic opportunities and general underdevelopment characterise most of these areas.

KZN is situated along the east-coast of South Africa and shares a border with Mozambique and Eswatini to the north, and Lesotho to the southwest. Mpumalanga Province lies along the north-eastern boundary while the Free State and the Eastern Cape provinces are along the western and southern boundaries respectively (refer to figure 3). Access to the province occurs through the N2 north-south corridor that links KZN with the Eastern Cape Province to the South and Mpumalanga Province to the north; and the N3 east-west corridor which links the province with Free State Province and Gauteng Province to the west. The N11 branches of the N3 near Ladysmith linking KZN with Mpumalanga Province to the north-west. A wide network of provincial and regional roads links the province with the surrounding areas including Lesotho, Eswatini and Mozambique.

FIGURE 3: KWAZULU-NATAL PROVINCE WITHIN SOUTH AFRICA



The King Shaka International Airport (KSIA), Richards Bay Coal Terminal (RBCT) and the Port of Durban (commonly known as Durban Harbour) also serve as primary entry and exit points from the province for both passengers and goods. The province also benefits, in terms of access and connectivity, from an extensive national railway network.

Settlement and land use pattern in the province reflect a combined impact of the successive political regimes from Mfecane, colonialism and apartheid, to the current democratic dispensation; natural features such as terrain, river catchments and other ecological corridors; physical infrastructure such as road network; and climate change. Settlements range from low density sparsely populated rural settlement and relatively dense expansive rural settlements under traditional leadership through dislocated settlements of varying levels of population density in the commercial farming regions, to towns and cities. Each of these settlement types has its own dynamics and complexities that equally reflect the impact of the above-mentioned factors. In the urban centres, these include land use fragmentation, land use separation, and location of the poor in peripheral areas.

FIGURE 4: THE KZN PROVINCE

KZN has two world heritage sites, that is the Okhahlamba Drakensburg Park and Isimangaliso Wetland Park. It has a rich heritage and has some of the prime tourist destinations in the country. These include beaches along the coast, heritage sites, game reserves and various scenic routes.

Although the provincial government has made significant progress in reshaping the provincial spatial structure, stubborn spatial imprints of the apartheid past remains one of the key challenges facing the province. These manifests themselves in the form of differences in the level of development; lack of spatial planning in the rural areas; concentration of the economy in eThekwini; and poor functional integration between areas previously separated by apartheid. Other spatial challenges facing the province include urbanisation, declining small towns, densifying rural settlements, impact of climate

change, spatial marginalisation, overharvesting (depletion) of natural resource and economic decline in some regions.

1.7 SPATIAL PLANNING IN THE KWAZULU-NATAL PROVINCE

The KwaZulu-Natal province has not developed a comprehensive Provincial Spatial Development Framework. However, the province dealt with spatial issues within the Provincial Growth and Development Strategy (PGDS)-2011. This document identifies 'spatial equity' as one of the seven development goals and presents a Spatial Development Framework to guide strategic spatial interventions. Most municipalities in the province have developed SDFs as sector plans of their Integrated Development Plans (IDPs). These vary significantly in quality, detail, and compliance with the SPLUMA. Municipalities have also adopted by-laws for an effective implementation of the SPLUMA.

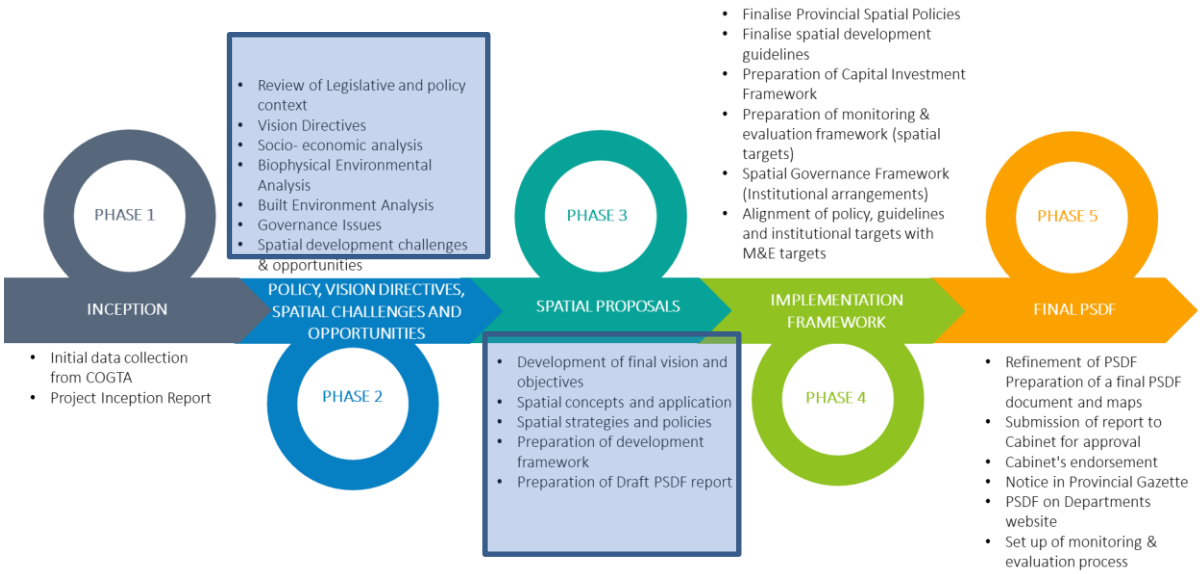
The enactment of the SPLUMA in 2016 has necessitated a comprehensive review of the PSDF to comply with the Act and set a framework for the preparation of Municipal Spatial Development Frameworks. Furthermore, KZN has made remarkable progress with the formulation of a Provincial Spatial Planning and land Use Management legislation as provided for in the SPLUMA.

2 APPROACH AND METHODOLOGY

2.1 PLANNING PROCESS

The planning process towards the review of the KZN Provincial Spatial Development Framework has five phases as depicted in the figure below. Each phase marks the completion of a milestone and is linked to specific deliverables.

FIGURE 5: PLANNING PROCESS



2.2 STRATEGIC LOG FRAME

The strategic log frame for the preparation of the Spatial development framework is indicated in the figure below. It identifies the provincial spatial vision, the related outcomes, and strategic goals. The next step answers the question of "how" and identifies the different objectives identified per outcome.

FIGURE 6: PSDF STRATEGIC LOG FRAME

	SPATIAL VISION DIRECTIVES					
WHY?	VISION	*Equitable utilisation of physical and environmental resources toward greater spatial integration and sustainability in development.*				
	SPATIAL DEVELOPMENT OUTCOMES	Spatially Integrated and Inclusive Province	Sustainable Province	Resilient Province	Productive and Efficient Province	Well-managed Province
	STRATEGIC GOAL	INTEGRATED AND INCLUSIVE LAND DEVELOPMENT	SUSTAINABLE USE OF RESOURCES	ESTABLISHING A RESILIENT PROVINCE	PRODUCTIVE AND EFFICIENT DEVELOPMENT OF THE SPATIAL ECONOMY	WELL-MANAGED SPATIAL & LAND DEVELOPMENT PROCESSES
HOW?	STRATEGIC OBJECTIVES					
	STRATEGIES					
WHERE?	LOCALITIES					
WHAT? WHO? WHEN?	ACTIONS					

Strategies on how to achieve the objectives are identified as part of this frame. The spatial component of where the outcomes and strategies should focus follows the strategies and is defined as different sub-frames.

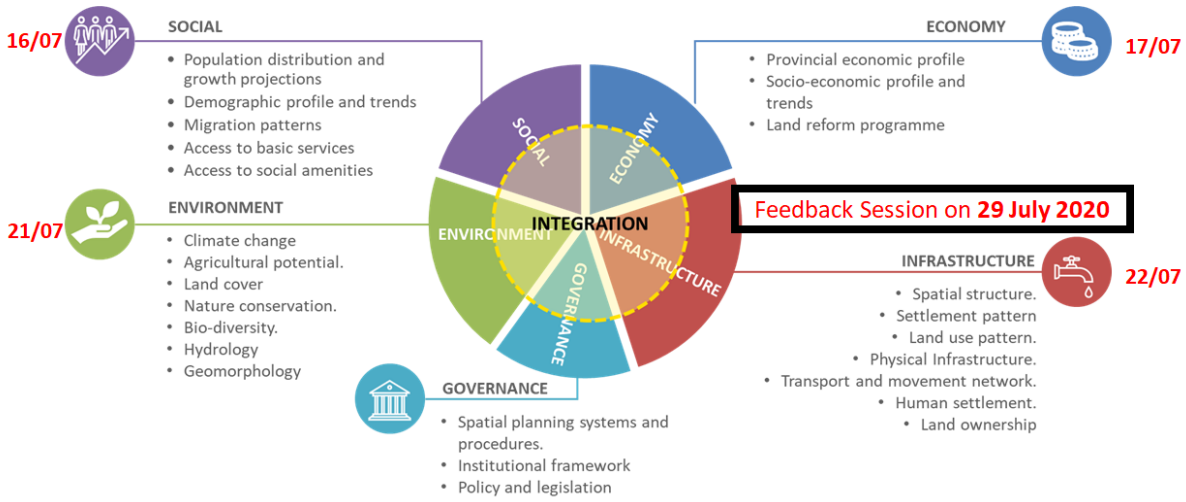
2.3 STAKEHOLDER CONSULTATION

2.3.1 STAKEHOLDER WEBINARS

One of the critical requirements for the development and review process of the PSDF is the active and effective participation of stakeholders in the planning process. The formulation of the spatial vision thus hinges strongly on public participation and stakeholder engagement to identify issues and coordinate consensus around the spatial vision, spatial priorities, and impact statements. Due to COVID-19, the envisaged stakeholder workshops for the visioning process were substituted with online webinars. Six (6) themed webinars including a feedback session were held to share information and solicit input from stakeholders. Figure 7 below indicates the strategic focus and date for each webinar.

The webinars provided and confirmed several issues facing the province, which have been consolidated and grouped per sector. The spatial vision will be refined during the project and finalised through further consultation with stakeholders.

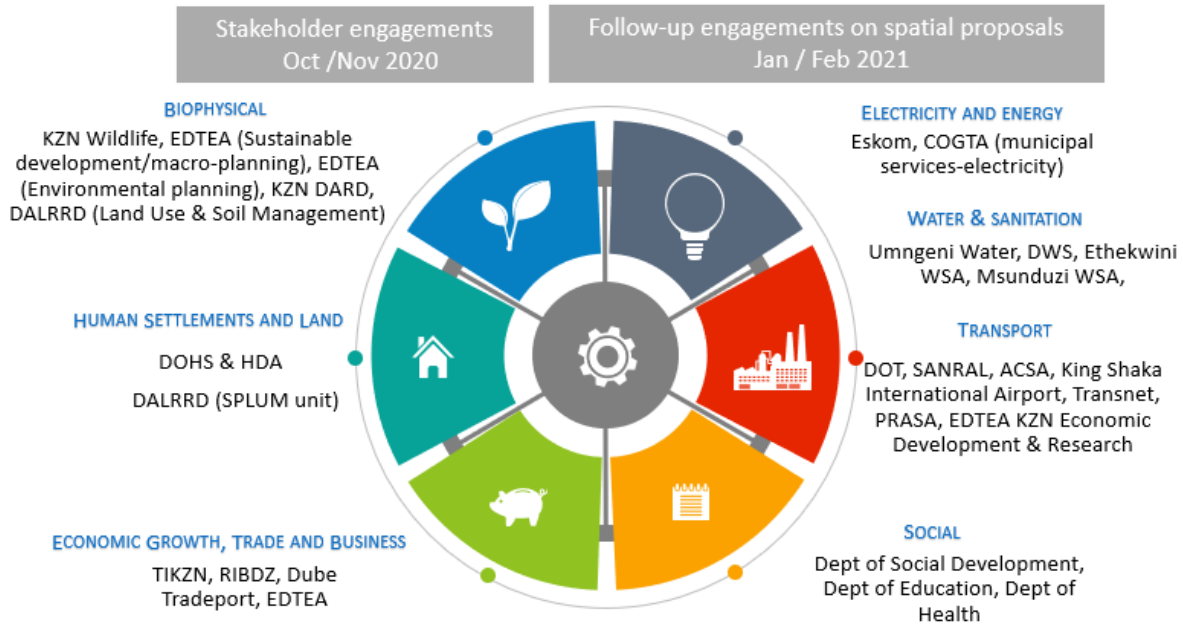
FIGURE 7: STAKEHOLDER WEBINARS



2.3.2 FOCUSSED SESSIONS / BILATERAL MEETINGS

Planned discussions were held with different stakeholder groups to obtain information and opinions. They were grouped according to a themed approach and included representatives from various government departments. The first set of engagements took place during October and November 2020, with follow-up sessions that took place during January and February 2021. The different stakeholder groupings are reflected in the figure below.

FIGURE 8: STAKEHOLDERS CONSULTED AND ENGAGED



2.4 STRUCTURE OF THE REPORT

CHAPTER 1
INTRODUCTION & BACKGROUND
The first section introduces the project, aims and objectives, scope of work and a brief contextual analysis of the study area.

CHAPTER 2
APPROACH AND METHODOLOGY
Section 2 provides an overview of the planning approach and consultation processes undertaken.

CHAPTER 3
POLICY DIRECTIVES
Section 2 provides an overview of the policy and legislative directives, emanating from the analysis of various policies with implications for the development of the PSDF.

CHAPTER 4
SPATIAL CHALLENGES AND OPPORTUNITIES
Section 3 focus on spatial challenges and opportunities in the Province and provides an overview of the socio-economic environment; the biophysical environment; the built environment and governance issues.

CHAPTER 5
THE SPATIAL VISION
Section 4 presents the draft spatial vision for the Province and identifies the proposed outcomes linked to the vision.

CHAPTER 6
SPATIAL DEVELOPMENT STRATEGIES
Section 6 reflects on the proposed spatial strategies as it relates to each of the spatial outcomes and the spatial objectives.

CHAPTER 7
SPATIAL DEVELOPMENT FRAMEWORK
The final section unpacks the spatial development framework for the Province in different sub-frames. Each sub-frame are linked to the spatial concepts and strategies.

3 POLICY DIRECTIVES

The PSDF serves as a compilation document of various policies and strategies towards a provincial level spatial co-ordination of the intentions and target areas identified. It therefor is aimed the achievement of the underlaying directives envisaged by various international protocols as well as national and provincial development policies. It further informs further review of national policies and horizontal alignment of the spatial implications of provincial development policies and programmes. It provides a framework for spatial planning within and across municipalities and responds to issues arising from these planning processes. Figure 9 below lists some of the key policies which influences the PSDF foundation.

FIGURE 9: POLICY REVIEW

3.1.1 INTERNATIONAL POLICY DIRECTIVES

South Africa is a signatory to several international protocols. These deal with a range of issues and have serious implications for planning and development across the spheres of government. Of particular significance to spatial planning are the following:

- Sustainable Development Goals (SDGs) otherwise known as Agenda 2030;
- The New Urban Agenda (NUA);
- Agenda 2063 (AU63); and
- Regional Indicative Strategic Development Plan (RISDP) -2005 to 2020

In addition, the South African Development Community (SADC) is implementing various trans-national development initiatives with serious implications for spatial planning in South Africa, and KwaZulu-Natal. Although these policy directives and development initiatives have already been integrated in the National Development Plan (NDP) and various government development programmes, the PSDF provides an opportunity to localise and provide for practical implementation at a provincial and local level.

The major directives from these international polices calls for regional and urban planning and development which firstly considers the rapid urbanisation anticipated and then highlights the need for a sustainable balance between urban development and natural resources required for environmental health and resilience, food production, economic development, and service delivery. There is also a constant theme within international policies to ensure that spatial planning and development is people orientated with an aim to provide urban environments for the prosperity of communities.

3.1.2 National Policy Directives

At a national level, the National Development Plan (NDP) is the overarching comprehensive plan that guides development in South Africa. It adopts a long-term perspective and is implemented in terms of the Medium-Term Strategic Framework aligned to the administrations' terms of office and various government policies and programmes. Key national policies and strategies considered as fundamental to the PSDF includes:

- National Development Plan
- Integrated Urban Development Framework
- Comprehensive Plan for the Development of Sustainable Human Settlements
- National Transport Master Plan, 2050
- National Infrastructure Plan 2012
- National Framework for Sustainable Development, 2015-2025
- National Coastal Management Programme
- National Water Resource Strategy
- National Framework for Air Quality Management, 2017
- The New Growth Path
- Industrial Policy Action Plan
- National Local Economic Development Framework, 2018
- National Land Reform Programme
- Comprehensive Rural Development Programme, and
- Agriculture Integrated Growth and Development Plan

These provide thematic directives for spatial planning including economic development, rural development, urban development, environmental management, human settlement, infrastructure development, and transportation. Key cross-cutting themes within these national policies, strategies and programmes include: the positioning of the country within the global and African economies, the call for key linkages between urban and rural communities and economies, protection of the national natural resources and the sustainable development of infrastructure.

3.1.3 Provincial Policy Directives

The provincial policy directives for development are captured in the KwaZulu-Natal Provincial Growth and Development Strategy and, similar to the National Development Plan, represents the culmination

of various supportive policies and strategies. There are however a range of integrated policies in place to guide spatial planning and development within the province, including:

- Provincial Growth and Development Strategy
- Provincial Human Settlement Master Spatial Plan 2016
- Provincial Spatial Economic Development Strategy, 2017
- KwaZulu-Natal Tourism Master Plan
- Draft KZN Agriculture and Agro-Processing Master Plan
- KwaZulu-Natal Integrated Infrastructure Master Plan
- KZN Environmental Implementation Plan, 2016
- KZN Biodiversity Plan, and
- KZN Coastal Management Programme, 2019.

From the various provincial polices, strategies and programmes it is evident that there is a move towards long term development, a balanced focus on both the urban economic engines and the perpetuating poverty within rural areas and a key focus on the institutional aspects of spatial transformation and land use management. The provincial policy directives are further supported by a variety of ongoing focussed studies and programmes such as the Small-Town Rehabilitation Programme, Corridor Development Programme and the establishment and support for Community Service Centres within various local municipalities.

3.1.4 Emerging Vision Directives

A set of vision directives were identified for the PSDF from the various International, National and Provincial policies considered. These directives are listed in the table below. It is further evident form the table that these directives are also shared between the various tiers of policies and therefore form a suitable based for the formulation of the PSDF.

Table 1: Emerging PSDF Vision Directives

Emerging Vision Directives for Provincial Spatial Planning	International Policies	National Policies	Provincial Policies
1. Position KZN to integrate and benefit from globalisation.		●	●
2. Strengthen national and regional spatial integration and competitiveness.	●	●	●
3. Develop a functional and efficient spatial structure.		●	
4. Focus Development in strategic areas with high growth potential – spatial targeting.	●	●	●
5. Improve settlement planning towards sustainable communities.	●	●	●
6. Develop spatial structure that bolsters climate change resilience.	●		●
7. Create balance between development and conservation – sustainability.	●		●
8. Develop and inclusive rural economy – agrarian reform.		●	●
9. Strengthen functional rural-urban linkages.	●		●
10. Protect high value agricultural land.		●	●

Emerging Vision Directives for Provincial Spatial Planning	International Policies	National Policies	Provincial Policies
11. Protect natural water resources.	●	●	●
12. Revitalise small towns – urban renewal.		●	●
13. Promote urban compaction.	●		
14. Protect core bio-diversity assets.	●	●	●
15. Plan for a growing urban population.	●	●	●
16. Promote clustering of public / social facilities.	●		●

3.1.5 Municipal Spatial Planning Policy Directives

Although the vision directives for the PSDF, identified above, do create a framework for the development of the PSDF which will in turn guide and inform spatial planning and land use management at local municipal level, there are a few municipal policy directives which also need to be considered as part of PSDF formulation and will serve as the instruments to further implement the PSDF at a local municipal level. These include:

- **Municipal Integrated Development** Plans and **Spatial Development Frameworks** as the overarching statutory development policies within both District and Local Municipalities. The ability of the PSDF to guide the municipal IDPs and SDFs is important for vertical alignment and practical implementation.
- **District Growth and Development Plans,** which serve as a district translation and an implementation framework for the Provincial Growth and Development Plan at district level inclusive of targets and assigned responsibilities. These plans should therefore be able to incorporate key spatial targets to measure implementation of the PSDF.
- The New **District Service Delivery Model** aims to address service delivery and development challenges through the synchronisation of planning initiatives and implementation processes across all spheres of government. It brings together local, provincial, and national governments and uses district boundaries for planning and coordination purposes. It is therefore anticipated that this district coordination model will have a significant role in the implementation of the PSDF directives.

From the above international, national, and provincial policy directives, the PSDF actively seeks ways of addressing the vision directives not only in the provincial level planning, but also in the operational planning and land use management within various implementing departments and within local municipalities.

4 SPATIAL CHALLENGES AND OPPORTUNITIES

4.1 SOCIO-ECONOMIC TRENDS AND PATTERNS

4.1.1 DEMOGRAPHIC PROFILE

Population Size and Distribution

The KZN province has the second largest population size in South Africa after Gauteng, making up about 19.2% (11 531 628) of the estimated 59 622 350 South Africa's population. The province's percentage share of the national population changed decreased by 6% between 2001 and 2016 suggesting a much slower growth rate.

KwaZulu Natal population is unevenly distributed across the districts, with the main population concentrated within the eThekwini Metropolitan Municipal area where the city of Durban is located, followed by uMgungundlovu District Municipality where Pietermaritzburg town is located and King Cetshwayo District Municipality where Richards Bay town is located. These make up about 34%, 10% and 8.8% respectively of the province's total population. The Msunduzi LM is the most populated local municipal area, followed by uMhlathuze, Newcastle, Alfred Duma and Ray Nkonyeni LMs.

MAP 1: POPULATION DISTRIBUTION WITHIN KZN

All districts recorded some increases in population from 2011 to 2016. Districts with higher growth rates than the provincial average are eThekwini, Amajuba and Umkhanyakude. While in the local municipal areas Maphumulo, Impendle, Nkandla, Ndwedwe, Umzumbe and uMlalazi LMs recorded negative population growth rates over 2011 to 2016.

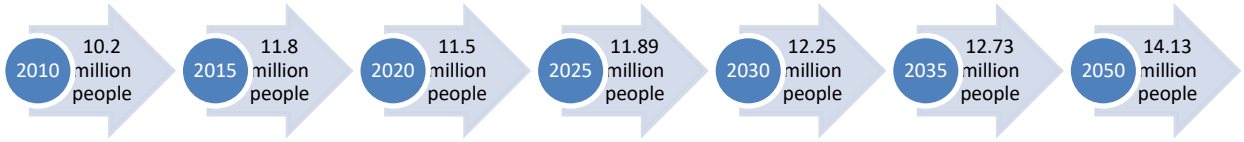
52% of the KZN population lives in rural areas while 48% live in urban centres. Understood within the context of the national average 66:33 urban rural split, KwaZulu-Natal has a fairly large rural community. eThekwini has the highest urban population at 84% while uMkhanyakude DM is almost entirely rural with 94.5% of its population residing in rural areas.

Population Growth Projections

The population of KZN has been growing at a compound annual growth rate (CAGR) of about 1.27% per annum over the past 20 years, thus increasing from 10 271 887 in 2011 to 11 049 271 persons in 2016. Projections based on different assumptions about various factors in the latest StatsSA midyear population estimates places KZN population at 11 531 628 persons in 2020 and projects further growth

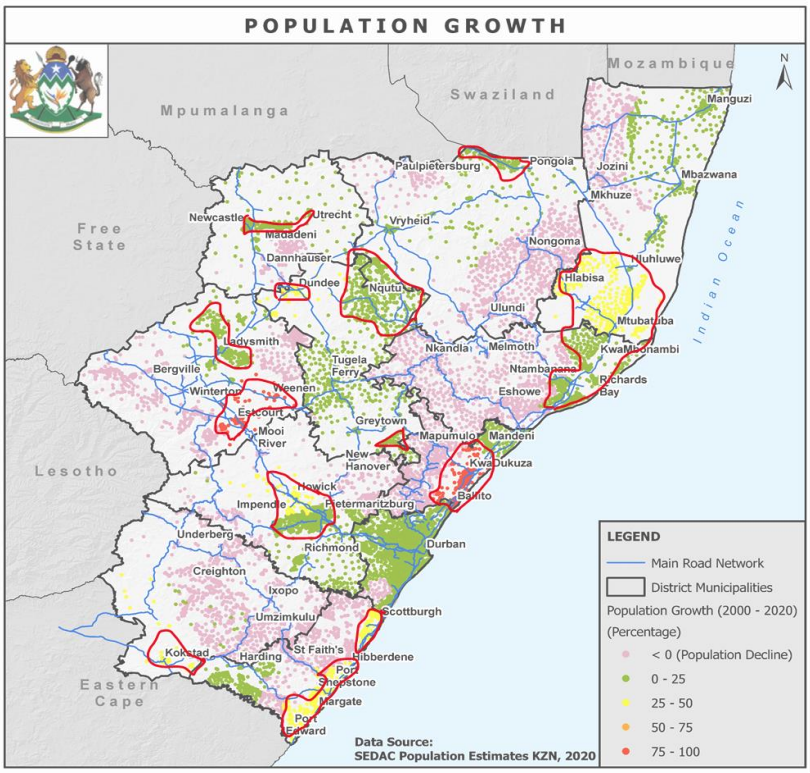
to 11 895 180 persons by 2025. The Socio-Economic Data and Applications Centre (SEDAC) estimates that KZN population will grow from 12 251 281 in 2030 to 14 134 295 by 2050.

FIGURE 10: POPULATION PROJECTIONS

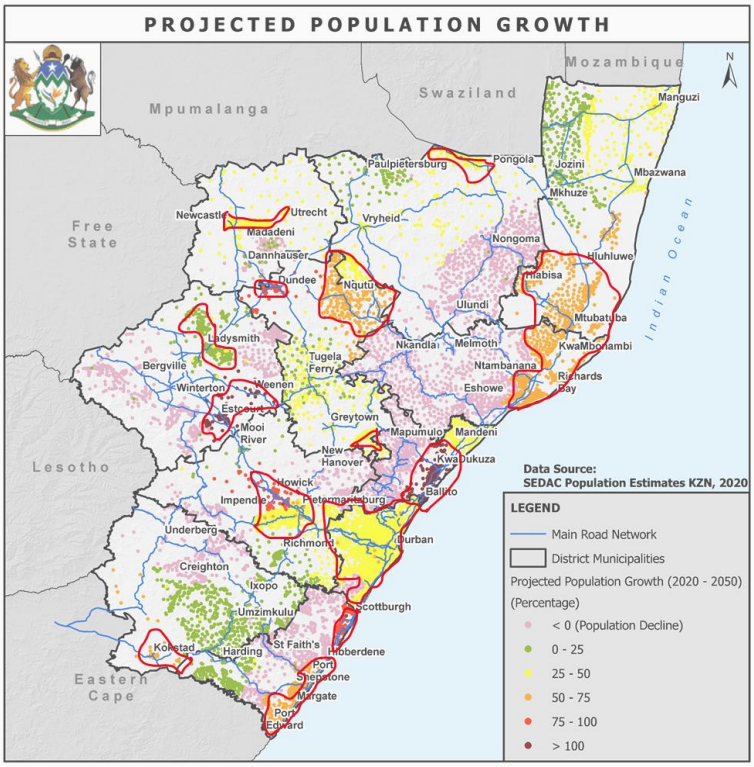


**estimates based on historical growth rates calculated over 20 years.*
Source: Based on StatsSA 2011 Census Data; 2016 CSIR Mesozone Data, StatsSA MidYear Population Estimates 2020, 2020 CSIR GreenBook, SEDAC 2020 Pop Estimates

All the district municipalities are projected to experience net population growth with uMgungundlovu projected to experience the fastest rate at 67% by 2050, an increase of 670 000 people from 2011. 47% of the province's total growth is projected to occur in the eThekwini Metropolitan area. Other cities and large regional centres (Pietermaritzburg, Richards Bay, Port Shepstone, and Newcastle) will receive 27% of the province's total growth. KZN local municipalities which are projected to have the fastest rates of population increase are Endumeni, Greater Kokstad, uMhlathuze, The Msunduzi, KwaDukuza and uMngeni LMs. Uthukela, Harry Gwala and Zululand are expected to have the least rate of increase.



OVERALL CHANGE IN POPULATION GROWTH TRENDS. It is evident that the data indicates broad areas where the population has declined between 2000 and 2020, as well as areas where population increased at various standardised levels. A noticeable trend is the decline in several rural localities over this period. These include large portions of Ugu, Harry Gwala Districts, Maphumulo, Eshowe, Ntambanana, Nkandla, Ulundi, Nongoma, Edumbe, Hlabisa, Jozini, Tugela Ferry, Okhahlamba, between Newcastle East and Dundee, areas along the border with Swaziland in Jozini and around Mbazwana and Manguzi.



PROJECTED POPULATION GROWTH TRENDS

Population growth of between 25-50% are evident in Mtubatuba and the western parts of Hlabisa; areas in Dundee, Howick, Mpophomeni and in Impendle, a few areas along the western border around Kokstad, as well as the coastal strip between Port Edward to Port Shepstone and Scottburgh.

However, there are also areas of noticeable growth (between 75-100%) evident along the coastal strip between Ballito, KwaDukuza, and Mandeni, as well as areas around Estcourt, Wembezi, Weenen and Winterton.

Population Migration Trends

KZN is currently experiencing net out flow of about -70 880 people between 2011 and 2016, and this will increase to -88 163 people between 2016 and 2021. The highest movement of persons being between KZN, and Gauteng province followed by Mpumalanga and Western Cape. These figures have not been adjusted to include the impact of Covid-19.

Migration trends within the province reveals a higher movement of people towards urban areas where access to social and economic opportunities are greater. These include eThekwini Metro, uMgungundlovu, iLembe, and King Cetshwayo district municipalities. Higher level of net internal migration in these areas confirms correlation between economic opportunity and movement of people.

4.1.2 PROVINCIAL SPACE ECONOMY

Size and Growth of the Provincial Economy

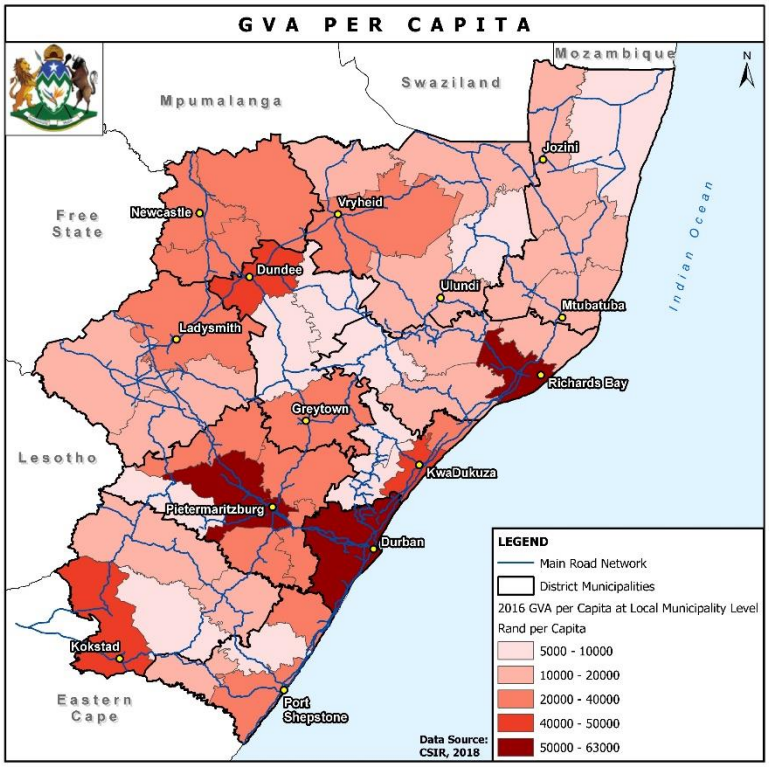
The KZN economy in terms of Gross Value Added (GVA) grew at a compound annual growth rate[1] of about 2.78% per annum over the past 20 years. The GVA of KZN increased from R 389.4 billion in 2011 to R 422.9 billion in 2016. In 2018, KZN generated a regional GVA amounting to R505.586 billion, which is equivalent to a 0.7% year-on-year growth. This suggests the fact that the provincial economy continued on the downside in 2018 when compared to 2017 where it recorded an average growth

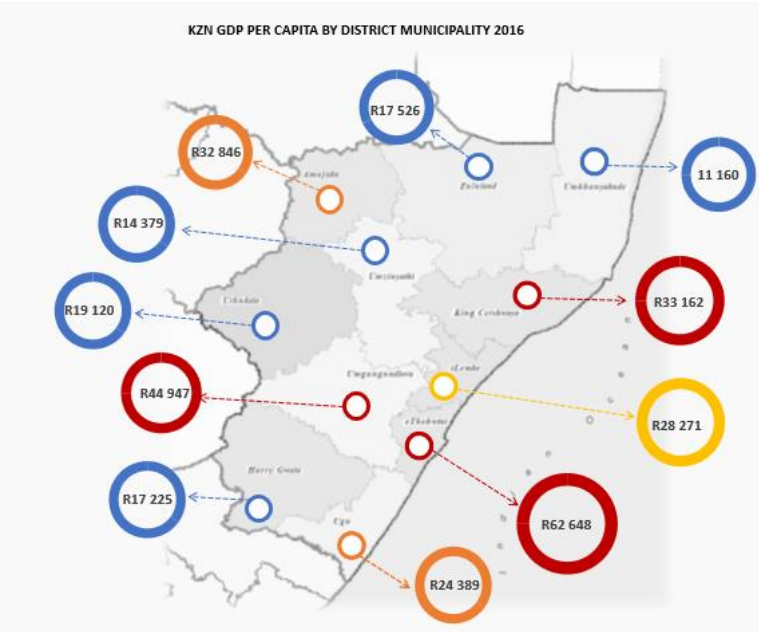
[1] CAGR: Compound Annual Growth Rate - a measure of average year on year change expressed as a percentage. A negative number indicates a retraction and a positive number indicating growth.
[1] CAGR is calculated for a 20 year period from 1996 – 2016

rate of 1.4%. Nevertheless, KZN remained the second economic hub with 16.1% contribution to the national GDP. The future growth of KZN's economy is dependent on several factors but at current growth rates, the GVA of KZN is estimated to reach about R billion 712.1 at current prices by 2035.

However, it is important to note the anticipated negative fallout from the impact of COVID-19 on the economy in KZN. The global and national as well as the provincial economy are expected to contract sharply in 2020 due the effect of the COVID-19 pandemic. Estimates by several analysts on the impact of COVID-19 on the national economy vary from a contraction of -2% to about -4% nationally.

Distribution of Economic Activity





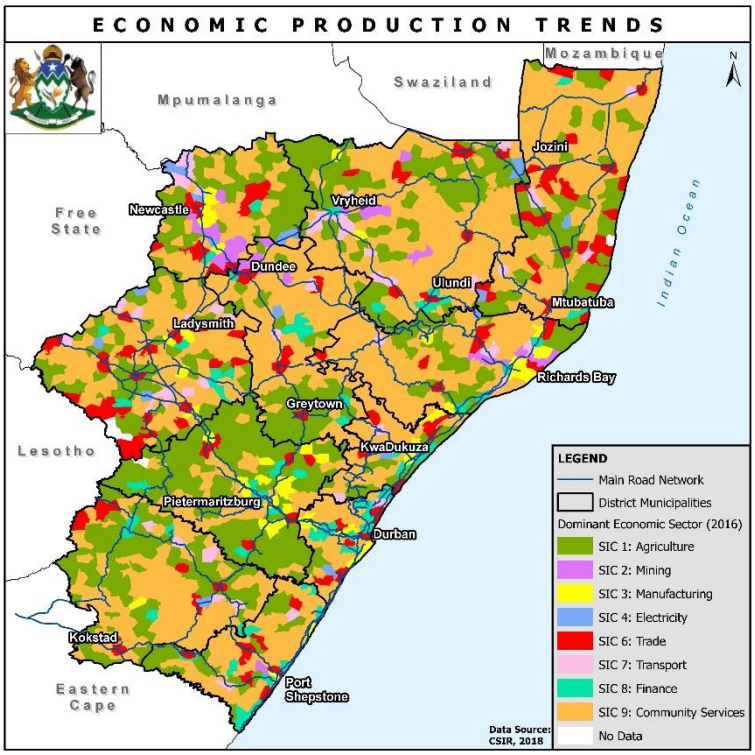
The KZN economy is dominated by eThekwini Metro, being the main economic hub for the province (55.6% of total provincial economic output). The next major contributor is Umgungundlovu DM at 11.7% of the KZN economy, followed by King Cetshwayo DM with 7.7% of KZN output. Impendle LM has the lowest contribution to KZN GVA together with Maphumulo, Msinga, Umzumbe and Nkandla LMs each with a 0.1% contribution. The Msunduzi and uMhlathuze lead the local municipalities contribution to KZN GVA with 8.2% and 5.5% respectively.

EThekwini has the highest per capita GDP adjusted to 2019 of all the municipal regions in KZN of R62 648. It is followed by uMgungundlovu and King Cetshwayo with R44 947 and R33 162 respectively. The lowest is Umkhanyakude DM with a GDP per capita of only R7 533. UMhlathuze LM has the highest GDP per capita of all the local municipalities with a GDP per capita of R58 824. Followed by uMngeni (R56 279), The Msunduzi (R52 132) and KwaDukuza (R45 082) LMs. The lowest GDP per capita is in Msinga LM at R5 483 followed by Maphumulo (R6 295), Umzumbe (R6 717) and Nqutu (R6 779).

Spatial Structure of the Provincial Economy

The leading sectors in the KZN economy are general government services at 23.4% of GVA, followed by finance, real estate, and business services 19.2% and the manufacturing sector which makes up 19% of KZN GVA. Another major sector in KZN is the wholesale and retail trade sector which makes up 16.7% of the province's economy. The smallest sector is the mining and quarrying sector which constitutes only 1.8% of the KZN economy.

Sector Analysis of the KZN Economy



Agriculture: contributes 4% of KZN GVA. KZN produces almost 30% of national agricultural output.
Mining: contributes less than 2% to KwaZulu-Natal's GVA
Transport: contributes 13% of total GVA
Manufacturing: KZN's manufacturing sector is the second largest in the country with almost 30% of South Africa's manufactured exports produced in the province
Tourism: contributes 16.7% of KZN GVA
Blue Economy: Emerging sector, underpinned by Operation Phakisa Oceans Economy, which aims to unlock the economic potential of the ocean.
Green Economy: need to shift focus to 'greener' economic strategies.
Knowledge Economy: African tertiary institution destination & smart cities.
Informal Economy: 34.6% of those employed are employed informally or are in informal employment.

The economic production trends in the province indicate the prevailing dominant economic activities in the province spatially. Though many of the economic production trends are captured spatially, the capacity of rural natural resources such as wildlife estates is often overlooked in terms of its economic production potential.
Further, not all spatial locations within KZN can support the same economic activities. The role of small towns has become an increasingly important aspect of policy consideration. The economic potential of former mining areas (Dannhauser, Glencoe, etc), towns in agricultural regions (Louwsburg, Ixopo, etc) and towns in rural settlements (Nongoma, Nquthu, Manguzi, etc) is an important point of consideration. Many small towns have entered a phase of long-term economic decline, disinvestment and the collapse of services which has sparked protests and unrest in KZN. This has been partly due to the concentration of skills and resources in larger towns and cities coupled with a lack of effective initiatives to support development in small towns that enable them to cope with economic and social change. However, small towns represent a significant existing investment and serve the needs of a significant proportion of the population.

Concentration of Economic Activity

SPECIAL ECONOMIC ZONES

- → Dube Trade Port: an industrial estate, linked to the international seaport of Richards Bay.
- → Richards Bay Industrial Development Zone (RBIDZ): includes an international airport, a cargo terminal, warehousing, offices, a retail sector, hotels, and an agricultural area.

TECHNO HUBS

- → Richards Bay: Techno Hub forms part of the Richards Bay Industrial Development Zone.
- → Port Shepstone (Ray Nkonyeni Municipality)
- → Newcastle Techno Hub will be built on a prominent site at the Newcastle airport.
- → Pietermaritzburg (Msunduzi Municipality): A prime location opposite the revamped regional airport in a city renowned for its engineering, tooling and component manufacture and top-class schools.

4.1.3 Socio-Economic Profile

Poverty

Poverty remains one of the most serious socio-economic problems in KZN. The province was ranked the second poorest province (after Eastern Cape) in both 2001 and 2011 according to the South African Multidimensional Poverty Index (SAMPI)[2].

The poorest districts in the province are Amajuba, Harry Gwala, Umkhanyakude and Uthukela. Within the local municipalities, Msinga, Jozini, Maphumulo, Mkhambathini, Impendle, Ubuhlebezwe and Umzimkhulu have the highest incidence of poverty. Msinga Municipality stands out as not only the poorest municipality in KwaZulu-Natal, but also as the poorest municipality in South Africa. Approximately 37,2% of all households in this municipality were measured as poor in 2011. The municipality containing the lowest proportion of poor households is uMhlathuze in KwaZulu-Natal at 4,1%.

Employment

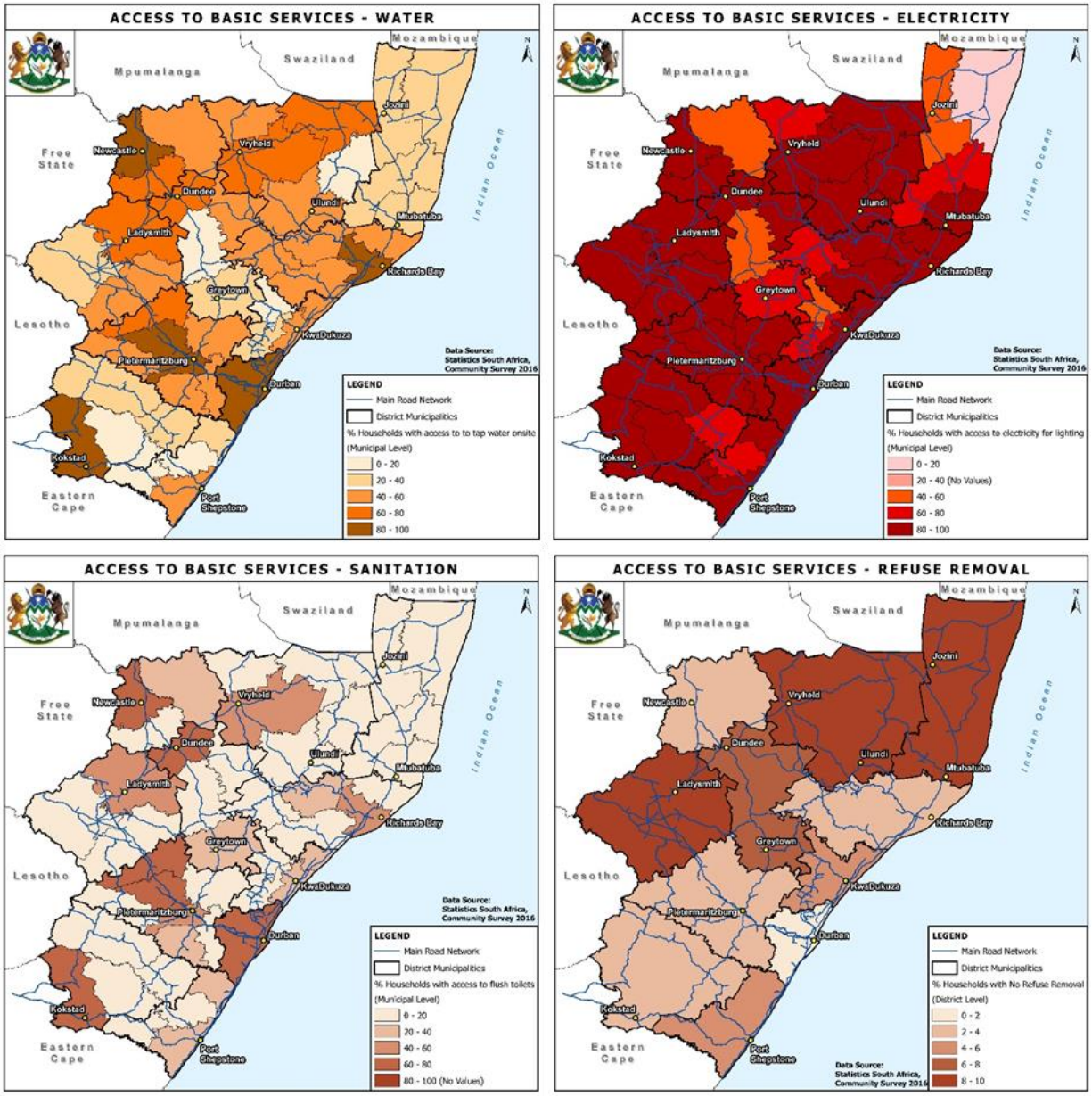
The unemployment rate in KZN is 26.9% as per Q1: 2020 (latest StatsSA Quarterly Labour Force Survey). This is however likely to rise in 2020 and going forward in the immediate future on the back of several job losses due to the impact of COVID-19 on the KZN economy.

The highest unemployment rates are in Umkhanyakude, Uthukela and Zululand DMs. The lowest are in eThekwini, Umgungundlovu and iLembe DMs. Within the local municipalities, the highest unemployment rates are in Maphumulo, Msinga and Nkandla (greater than 50% unemployment). The lowest are in KwaDukuza, uMngeni and Mpofana (less than 25% unemployment). Most districts that are semi and deeply rural tend to experience low levels of employment growth. The bulk of the employment in KZN is within the formal sector with 66.6% employment.

[2] The SAMPI is a tool that Stats SA`s uses to measure poverty and deprivation in the country. The SAMPI measure incorporates a range of indicators to capture the complexity of poverty, and thus provides a more robust tool to better inform programmes and policies designed to fight it.

Access to Basic Services

Access to basic services, including water, electricity, sanitation and refuse removal, are shown in the images below.



WATER: Approximately 85.4% of households in KZN have access to piped water; with 37.4% of households with access to piped water inside their dwellings and 28.8% with access to piped inside their yard, while 19.2% have an access point to water outside their yard. It is also noted that 81% of households have access to safe drinking water while about 19% do not have access to safe drinking water. Msinga, Umzumbe, Maphumulo, Nongoma and Umuziwabantu LMs have very low proportions of households accessing piped water less than 200m from their dwelling (between 12% - 14%). In these local municipalities about half of the households do not have access to tap water at all relying on other sources of water including municipal run water schemes as well as rivers and streams in the more rural areas.

ELECTRICITY: In 2016, 9 out of 10 households in KZN had access to electricity (89.3%). However, filtering down to the municipalities, results indicated that only 17 of the 44 municipalities in KwaZulu-Natal had 90% or more households with access to electricity. The distribution of households with access to electricity is shown above. eThekwini, uMgungundlovu, iLembe DM have the highest percentage of households with access to electricity, while uThukela DM and uMkhanyakude DM have the lowest percentage of households with access to electricity.

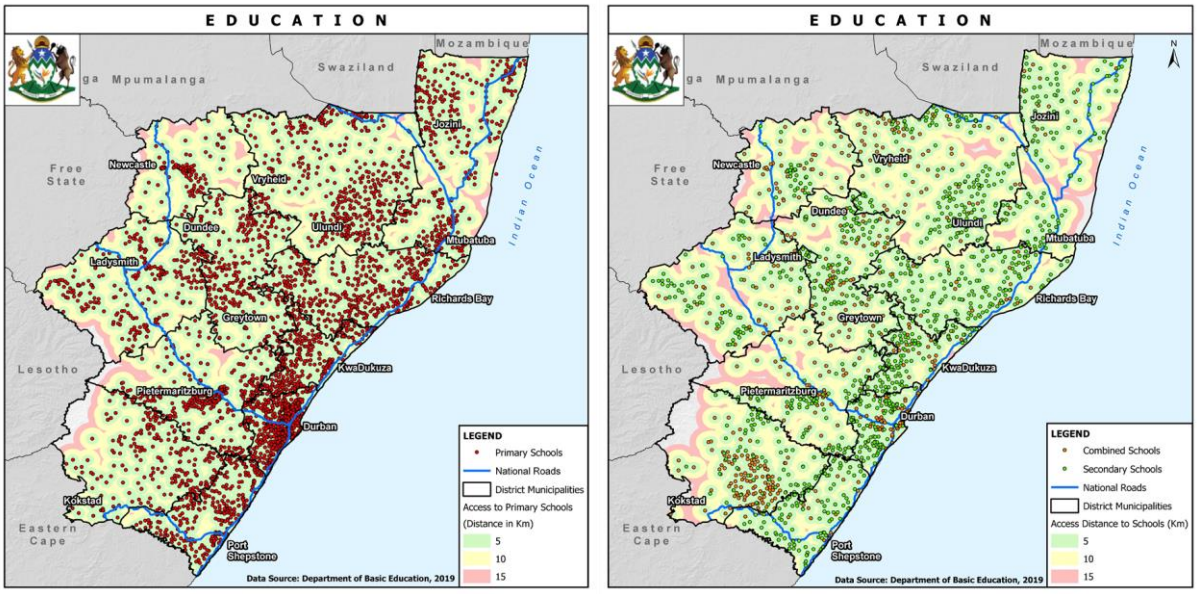
SANITATION: There is an increase in the proportion of households using pit toilets with ventilation and the decline among those using pit toilets without ventilation. Also, there is decline of households with no toilets. Finally, there is upward trend of households using chemical toilets. About 43.6% of households in KZN have access to flush toilets connected to a sewerage system or septic tank while about 45% have access to pit latrines in terms of access to good sanitation. Zululand and uMkhanyakude DMs have the lowest proportion of households with access to flush system toilet facilities.

WASTE MANAGEMENT: The distribution of households with access to refuse removal is shown in the diagram above. Districts where the largest proportion of households have no refuse removal are in uMkhanyakude, Zululand and uThukela.

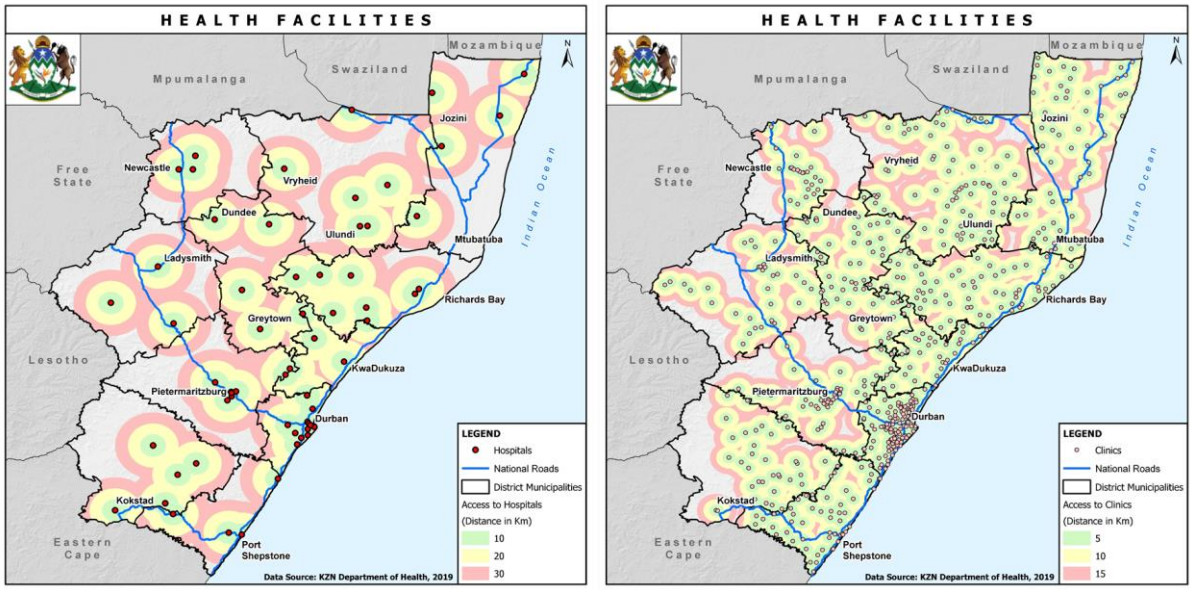
ACCESS TO INTERNET: Internet access is limited for a large portion of households in the province and when there is access, data costs are expensive. uMzinyathi and Harry Gwala DMs have the least access to internet followed closely by uMkhanyakude. There is a need therefore to provide internet/Wi-Fi especially in rural communities.

Access to Social Facilities

EDUCATION: The images below show the prevalence and distribution of education facilities across the province. The role of education remains the catalyst for economic growth and development since investing in human capital is crucial for growth, and hence improves productivity, technological progress which depends on the presence of highly skilled labour.



HEALTH FACILITIES: Public health services in are provided by 783 primary health care (PHC) facilities and 71 hospitals in different categories. In addition, there are about 30 group practices/hospitals, 6 private hospitals with 'A' status, 19 of 'B' status and one private rehabilitation hospital.

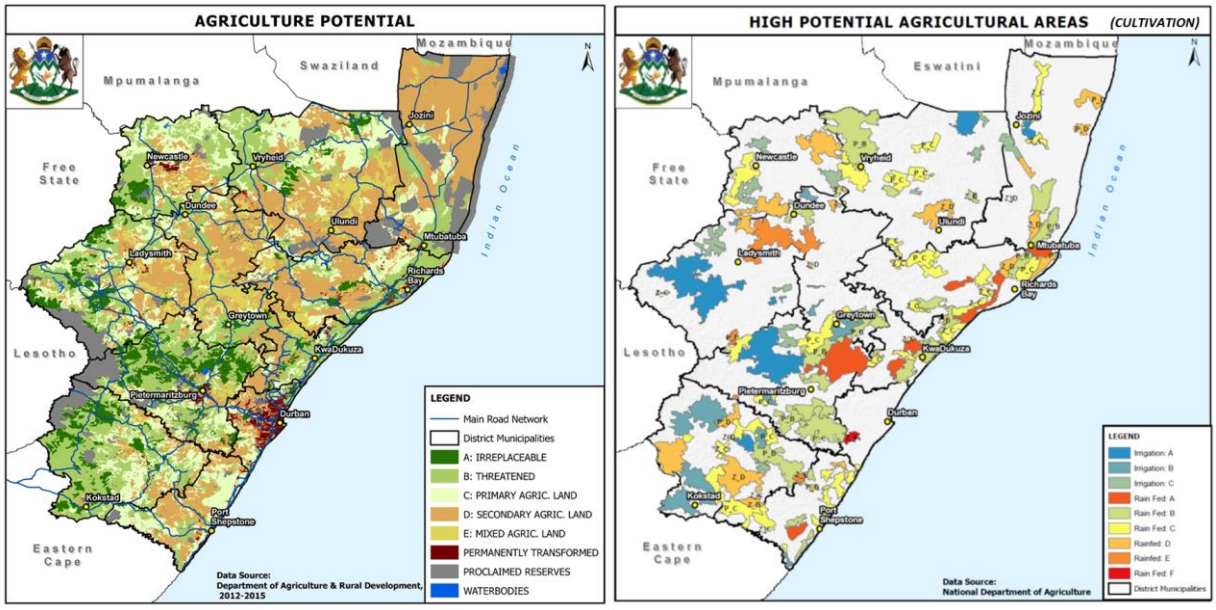


4.2 BIOPHYSICAL ENVIRONMENT

KZN has a generally productive and diverse landscape. The region is characterised by a rich diversity of landforms, water catchment areas, ecosystem types and biological production areas which in turn have an influence on the human settlement and production patterns of the province.

Land Capability and Agricultural Resources

The capability of land to produce food is largely determined by physical factors such as the terrain (altitude and slope), soils and climate. When these factors are combined at a broad scale as is shown below, it demonstrates the inherent potential for food production.



The agricultural authorities regard land with a high agricultural potential as a scarce non-renewable resource (i.e., a finite resource that does not renew itself at a sufficient rate for sustainable economic use in meaningful human timeframes) and accordingly applies a risk averse and cautious approach when development of such land for purposes other than agricultural production is proposed. To support this risk-averse approach as the basis for decision-making, land with high potential for agriculture is deemed irreplaceable and must thus be legally protected. The intention to formally declare high value agricultural land as 'protected land' may change the future landscape. The National Department of Agriculture, Land Reform and Rural Development (DALRRD) has therefore embarked on a process to identify and demarcate high value agricultural areas suitable for continued long-term agricultural production purposes. These demarcated areas will be called the Protected Agricultural Areas (PAAs) and will be gazetted as a Regulation under the Conservation of Agricultural Resources Act, 43 of 1983 (CARA), with supporting procedures and processes as well as permitted, conditional and non-permitted land uses for each of the PAAs. However, until such time that the gazetting process has been finalised these areas will be referred to as "High Potential Agricultural Areas" (refer to map on the right).

Land Sensitivity

The sensitivity of the province's landscape is influenced by a combination of factors including relatively permanent land characteristics such as slope gradient and length (i.e., basically the steepness of the land), soil erodibility, and rainfall erosivity; and relatively variable factors such as vegetation cover and management practices. While the mountainous character of KwaZulu-Natal underlines the vulnerability of the region to natural geomorphologic processes (erosion and sedimentation), it is also important to appreciate that the erosion hazard of a specific area will increase where human activities cause significant interference with the natural vegetation cover of the land. Aside from the loss of productive soils, the resource most at risk at the face of degradation is water resources.

Terrain

The mountainous character of KwaZulu-Natal provides for the presence of several steep slopes, which in turn give rise to the terrain being deeply incised by several large rivers (i.e., the Pongola, uMfolozi, uThukela, uMngeni, uMkhomazi and uMzimkhulu). The result of the terrain, elevation and slope influences settlement and production patterns. Rural areas are generally characterised by a scattered settlement pattern due to the undulating hills and settlements that tend to develop along ridgelines or near rivers. The elevation and slope also influence production patterns since biological production regions impacts especially on agriculture and the crops that could be cultivated within specific regions. Thus, the specific landscape influences the primary economic base for the various regions.

Other impacts that the altitudinal gradients have, includes a strong influence on biodiversity. The protection of these biodiversity areas in the form of protected areas and landscape corridors are thus also considered influential as spatial structuring elements. These include, amongst others, the two provincial World Heritage Sites, namely the Maloti-Drakensberg Park and the Isimangaliso Wetland Park. Landscape corridors further serves as connection and movement corridors between landscape

corridors and important biodiversity areas (including PAs, CBAs, stewardship sites), and between important biodiversity areas. As such, they form an inherent part of the natural structuring elements of the province.

Land Cover

The most apparent socio-economic use patterns in the landscape are associated with agriculture and the built environment. Although the alteration of the landscape from natural vegetation to any other use may yield both positive and negative outcomes, the causes and the effects of systematic land-cover changes need to be better understood to inform future planning. According to Jewitt et al (2015) [3], a massive 7.6% of the natural habitat of the province was lost to anthropogenic transformation of the landscape between 2005 and 2011. This translates into a net loss of 721 733 ha of natural vegetation in only 6 years. The key drivers of this transformation and their effect on the KZN landscape includes agriculture, built environment, timber plantations, dams, mines, and erosion.

The natural landscape in KZN has transformed at an average rate of 1.2% per annum since 1994. 73% of KZN was in a natural state in 1994. By 2011 this portion had decreased to 53%. The average rate of habitat loss was 1.2% per annum between 1994 and 2011. Assuming habitat transformation continues in the same manner, it is estimated that land in a natural state will decrease further to 45% by 2050. The average rate of habitat loss is not sustainable. The KwaZulu-Natal coast and adjacent interior have the highest rates of habitat loss between 1990 and 2014, with expanding croplands and human settlements being the key drivers.

An analysis of differences in the pattern, rates, and intensities of change across different land tenure systems (communal versus private and state-owned areas) reveals that the communal areas (Ingonyama Trust Land) of the province experienced a proportionately greater degree of landscape change and development than private and state-owned areas.

Climatic Conditions and Change

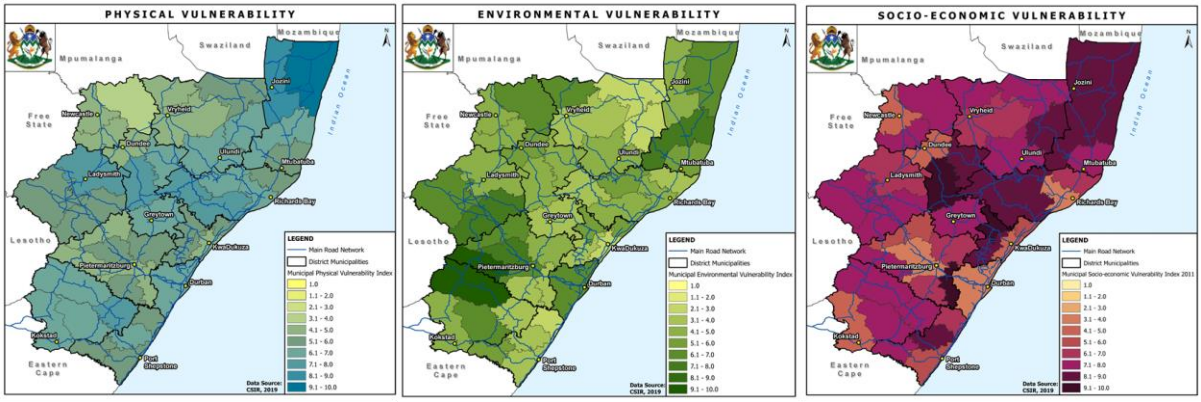
The province exhibits a high degree of natural climate variability (the short-term fluctuations of climate variables) and is prone to the occurrence of droughts and floods at regular intervals. Climate change projections for the region (Engelbrecht et al, 2018)[4] suggest that the province is likely to experience an increase in the frequency and the intensity of extreme rainfall days for the period 2021–2050. Such extreme events are mostly caused by intense thunderstorms, which are often also the cause of lightning, hail, damaging winds, and flash floods.

Regular extreme floods are likely to become more noticeable soon because of degradation of natural abatements systems such as floodplains, wetlands and forested valleys, and settlements that occur

[3] Jewitt D, Goodman PS, Erasmus BFN, O'Connor TG and Witkowski ETF (2015) Systematic land-cover change in KwaZulu-Natal, South Africa: Implications for biodiversity. S Afr J Sci. 2015;111(9/10), Art. #2015-0019, 9 pages. http://dx.doi.org/10.17159/sajs.2015/20150019 9pp

[4] Engelbrecht, F., Le Roux, A. & Arnold, K. 2018. *Green Book – Detailed projections of future climate change over South Africa*. https://pta-gis-2-web1.csir.co.za/portal/apps/GBCascade/index.html?appid=b161b2f892194ed5938374fe2192e537 Pretoria: CSIR

within flood risk areas. The cumulative environmental effects associated with climate change such as changes in vegetation and bio-climatic zones, water availability, and other environmental disturbances are less obvious.



VULNERABILITY: The images above indicates the vulnerability of the Province from a physical, environmental and socio-economic perspective. Vulnerability is defined as the conditions or processes that are driven by different economic, social, physical and environmental factors and that have the potential to increase a system's exposure to the impact brought on by a hazard.

Climate change will change the magnitude and intensity of hazards & changing physical and socio-economic characteristics will influences the sensitivity of settlements & households against these impacts (e.g unmanaged or poorly managed urbanisation and population growth, changes and pressures on terrestrial areas, poor land use planning and regulations, changing demographic structures, economic and institutional stability, public infrastructure maintenance and retrofitting, interconnectivity, natural resources dependency etc.).

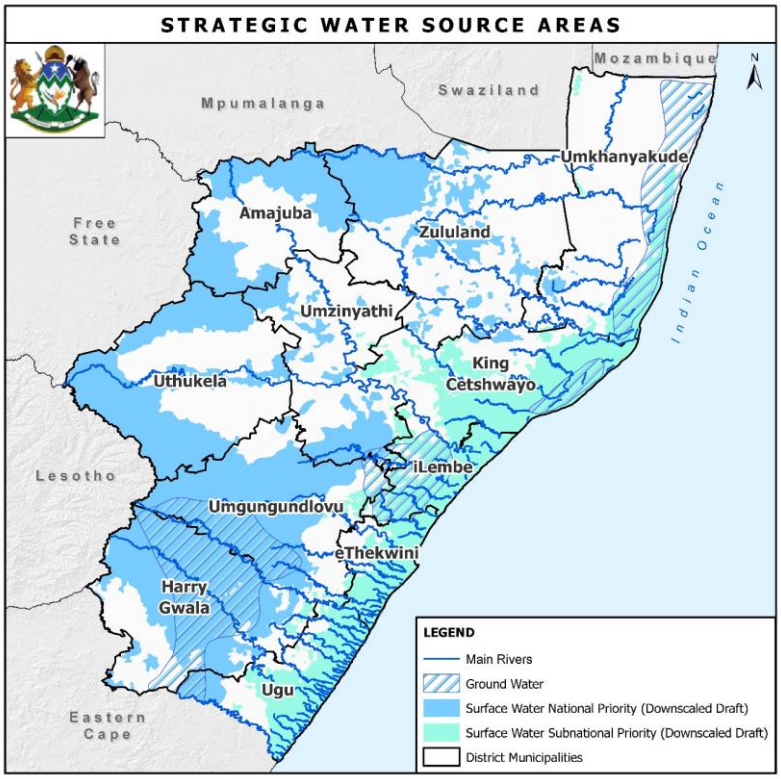
Source: Le Roux, A., van Huyssteen, E., Maditse, K., Mans, G., Ludick, C., & Arnold, K. 2019. Green Book -Profiling the vulnerability of South African settlements. Presentation, Pretoria: CSIR

Strategic Water Source Areas

When compared with other provinces in the country, KZN has very productive water catchments and a relative abundance of water. It shares this finite resource with Gauteng through transfer schemes and with neighbouring Mozambique through shared river courses. The latter includes the Usuthu and Pongola Rivers which are managed through specific protocols. The province of KZN is therefore an important role-player in national and international efforts to influence water security and to ensure that the societal and economic benefits of these water resources are sustained. This has implications in terms of how the province manages its water catchment areas.

The SWSAs therefore has implications for the province which includes, amongst others, the need for spatial planning to protect ecological infrastructure to improve the delivery of water-related ecosystem services, to ensure that development is appropriately located, and to facilitate sufficient (and efficient) infrastructure to manage waste.

Despite the apparent abundance of water, the province is facing significant water resource constraints. KZN falls within the Pongola-uMzimkhulu Water Management Area (WMA) and concerns about the water balance or 'budget' are negative in eleven of the sixteen catchments. The Mngeni and Mkomasi catchments are most severely affected.



SWSAs

KZN's productive water catchments or so-called 'water factories' are nationally recognised regions of strategic importance for water and economic security for South Africa. These important Strategic Water Source Areas (SWSAs) which are defined as 'areas in the landscape that supply a disproportionate amount of mean annual surface water runoff in relation to their size and/or have high groundwater recharge' are not formally protected but initiatives are under way to strengthen legal protection measures. Targeted investment in these areas to promote water sustainability are required.

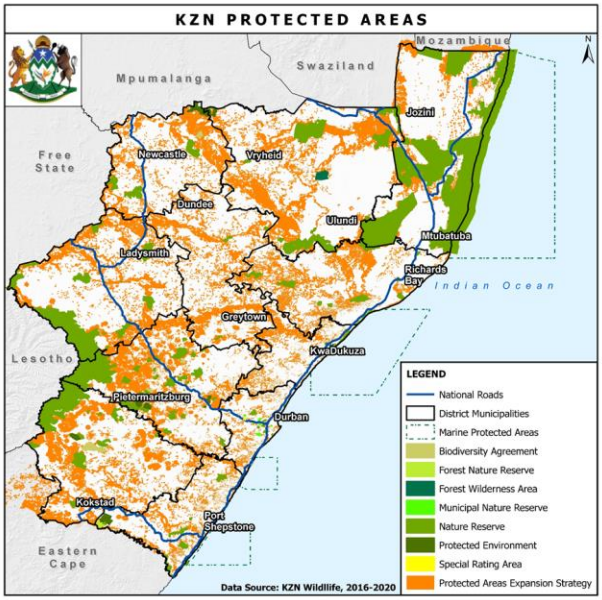
Protected Areas, Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)

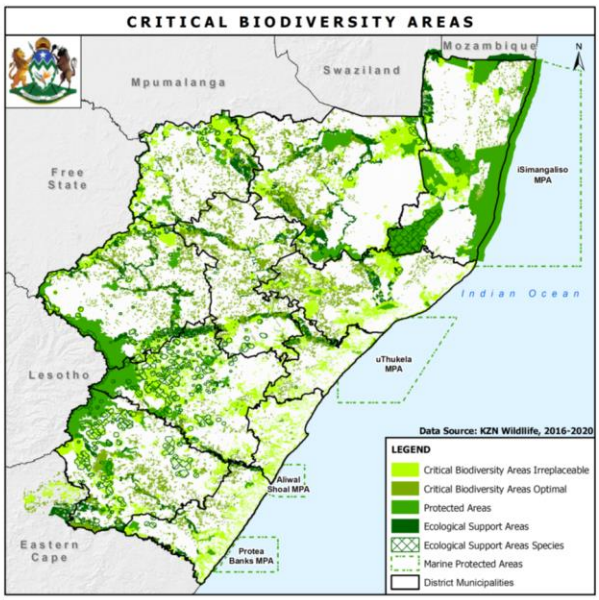
The current conservation estate of KwaZulu-Natal is made up of various types of Protected Areas, (depicted in insert below), in association with areas that present opportunities for expansion of the formal protected area network identified through a systematic conservation planning process as part of the National Protected Areas Expansion Strategy (DEA, 2016).

Only 9% of the province's land base is under some form of formal protection, while the province aims to work towards a target of 17% of its terrestrial and inland water area (originally set for achievement by 2020 and currently under review). KZN's progress in terms of meeting biodiversity targets are therefore an issue of national and global concern.

The spatial opportunity areas for protected area expansion have various degrees of ecological importance but are all considered as areas with high levels of environmental sensitivity where high intensity and incompatible land uses should be discouraged.

The province's integrated spatial plan for ecological sustainability - the so-called CBA Map - identifies the geographical areas that need to be maintained in a natural or near-natural state to remain within ecological sustainability thresholds (i.e., to achieve conservation targets). These natural areas, which are critical for landscape-level ecological functioning and climate adaptation, could practically be equated to the province's 'catalytic factories of ecosystem services. They can co-exist in a matrix of multiple land uses, including urban development, agriculture, plantation forestry, mining, and others.

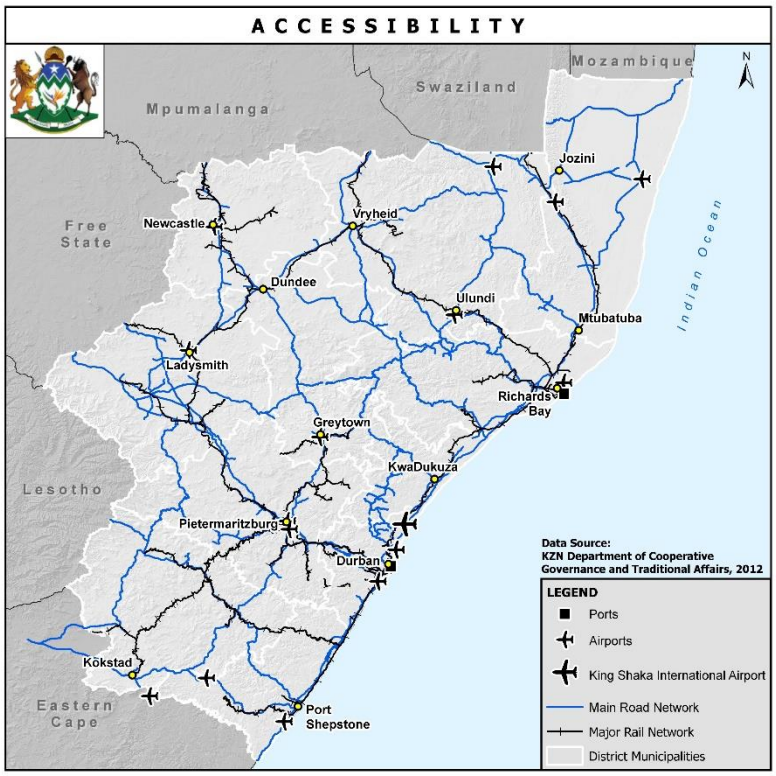




4.3 BUILT ENVIRONMENT

Access and Connectivity

Accessibility into the province from the ocean, is provided by ports. These are the Port of Durban and the Port of Richards Bay. Major towns and cities in the province are connected through various regional connectors.



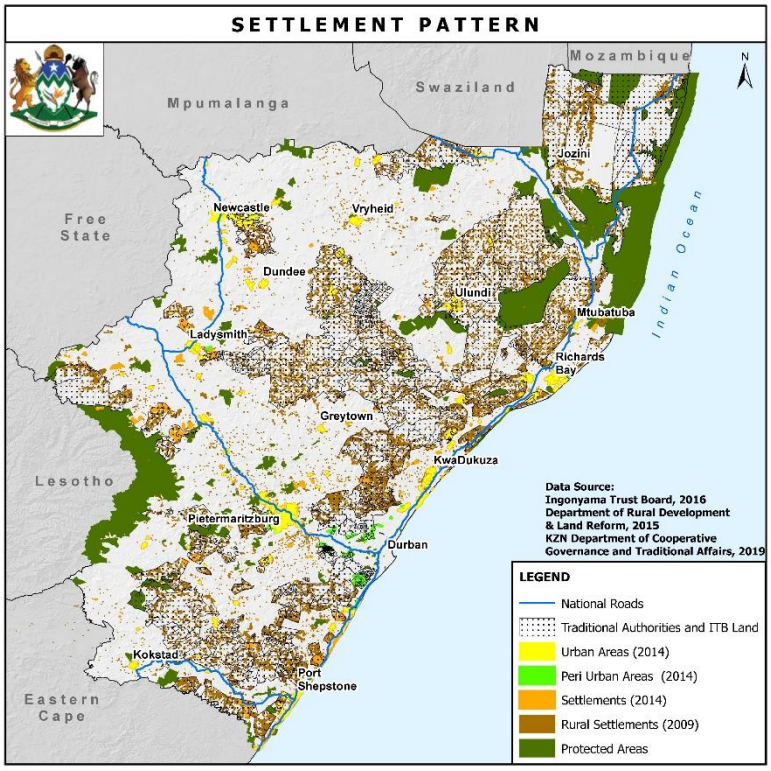
The main strategic roads in the province in terms of connectivity and movement, include the N3, N2 and N11.

The terrain, elevation and slopes in the Province influence the road network, resulting in most regional roads routing mainly in an east-west direction between the high-lying areas to the low-lying coastal areas.

There is very little north-south crossroad connectivity in the province, mainly because of high construction costs and natural settlement patterns.

Settlement Pattern

This settlement pattern is a product of a systematic fusion of demographic, social, cultural, economic, political, and environmental factors that occurred over a period of time. As a result, settlement pattern in the KwaZulu-Natal Province exhibits a wide range of vastly different settlements ranging from large urban centres to sparsely populated remote rural settlements. Large urban centres have relatively high population densities; and contain secondary, tertiary, and quaternary activities, while the main characteristics of rural settlements include different scales/intensities of agricultural production and relatively low residential densities. However, this distinction shows signs of blurring in some areas, thus establishing a continuum of settlements. The insert below indicates the broad rural settlement pattern of the province, which highlights the fragmented and dispersed pattern of settlement.



- → Metropolitan Areas /Regional City: eThekwini Metro
- → Major Urban Centres/Towns (Large Regional Centres): Pietermaritzburg, Richards Bay, Newcastle, Stanger, Port Shepstone
- → Small Towns (Regional Centres) and Rural Service Centres
- → Dense Rural Settlements
- → Dispersed Rural Settlements
- → Betterment Schemes (Umzimkhulu, Nquthu, Ntabamhlophe, Loskop)
- → Rural Settlement on Privately Owned and Mission Land
- → Land Reform Settlements

Land Use Pattern

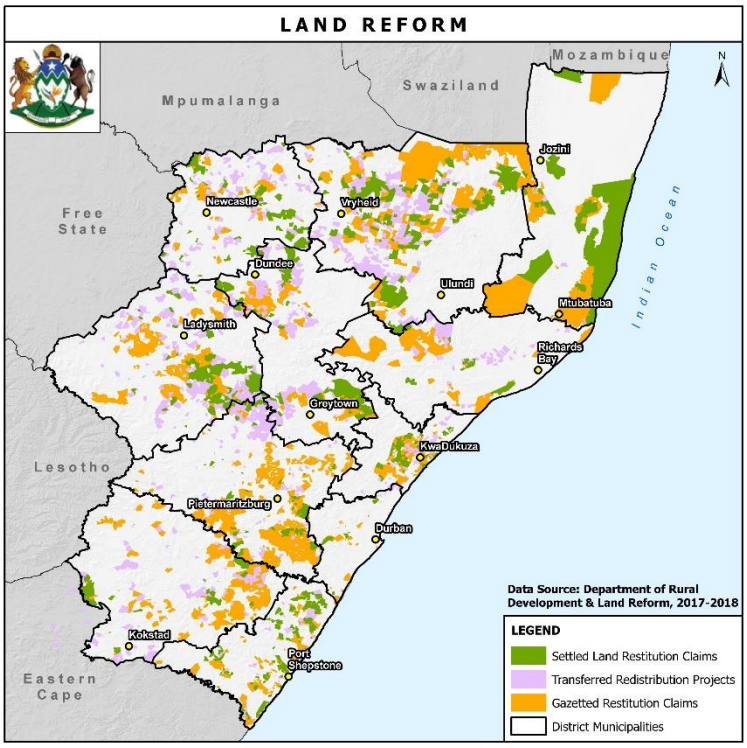
The main land use components within the province can be categorised into Urban Settlements; Agriculture; Conservation; Rural Settlements; and Mining. Urban settlements consist of built-up areas with residential, commercial, and industrial uses. It is highly concentrated in and around eThekwini and along the coastline of the province, while inland areas are more concentrated within the existing urban centres such as Pietermaritzburg, Ladysmith, and Newcastle. Rural settlements are scattered throughout the province, ranging from low density to higher densities along transport routes.

Agricultural land uses include forested land that stretches in a north -south direction just inland from the coast, as well as areas along Ixopo, Donnybrook, Harding, Greytown, Vryheid and the area between Nkandla and Ulundi. Forested areas also include natural wooded land, which forms part of conservation, and planted forest. Other agricultural land uses include natural grassland, which

dominates the western half of the province and transition to forested land when moving eastwards toward the coast. Cultivated land are scattered throughout the province, although more concentrated along the coastline.

Land Reform

The land tenure reform programme is the genesis and the core of the land reform policy. It is the terms and conditions on which land is held, used, and transacted. Reforming land tenure involves recognising or upgrading the informal rights of those occupying but not owning land as section 25(6) of the Constitution stipulates that "A person or community whose tenure of land is legally insecure as a result of past racially discrimination laws or practices is entitled, to the extent provided by an Act of Parliament, either to tenure which is legally secure or to comparable redress". It, therefore, seeks to address the inequalities between owners and occupiers by formalising informal rights, upgrading weak rights, and setting in place restrictions on the removal of rights to land (DLA 1997:57).



The spatial footprint of the land reform progamme in the province is depicted herewith. It indicates the nature and extent of the settled and gazetted land restitution claims, as well as the Transferred Redistribution claims.

Restitution claims represent the largest component of the land reform programme from a spatial perspective. The restitution process aims at restoring land to the dispossessed with concerns to minimize disruption to agricultural production, while the redistribution process aims to address the highly skewed ownership of land.

Infrastructure

Road Network

The main strategic roads in the province, contributing to connectivity and movement include the N3, N2 and N11. The N3 is one of the main national routes, running in an east-west direction linking KZN and Gauteng Provinces and the busiest road freight corridor in South Africa. The Durban–Gauteng corridor, by far, is the most important economic corridor in the country and is expecting massive increases in freight volumes. According to freight forecasts, it is expected that, during the next 30 years, containers moved from the Port of Durban to Gauteng will grow to 13 million a year. Without

a new rail line, these expected increases in freight will see a disastrous increase in the number of freight trucks travelling between the port and Gauteng.

The N2 national route runs along the coastline of the province and connects the most southern portion of the province to the Eastern Cape Province and the most northern portions of the province to the Mpumalanga Province. The N11 forms an important linkage to the Mpumalanga Province in the northwest of the province. These routes cover approximately 1740km and are integral to the transport network and freight access to the province and is integral the national network and transport linkages to the Free State and Gauteng.

The main regional road network includes the R56, linking Pietermaritzburg to Ixopo and Kokstad; the R33 from Pietermaritzburg to Greytown, Dundee and up to , Vryheid and Paulpietersburg; the R617 that runs south from the N3 near Howick, Bulwer, Underberg to Kokstad; the R612 linking Park Rynie to Highflats and Ixopo, continuing in a north-westerly direction from Ixopo to Donnybrook and Bulwer; the R74 through Maphumulo to Kranskop and the R66 through Gingindlovu to Eshowe and Melmoth, which ultimately links to Ulundi, Nongoma and Pongola in the north. Other important regional connectors include the R34 / R66 that links Richards Bay from the N2 to Vryheid, Utrecht, Newcastle, and Memel in the west of the province; and the R22 that starts from Hluhluwe north through Manguzi to the Mozambique border.

Railway

The Umlazi-Durban-KwaMashu (Central Corridor) has the highest passenger movement for KZN and is prioritised by PRASA for modernization. Unfortunately, PRASA have reported in their Corporate Plan 2021/2023 that the lack of implementation of key projects are due to: stalled procurement processes; lack of technical capacity; fragmentation of functions; lack of programme management and crime. Without addressing these issues through a PRASA Turnaround Strategy KZN commuters will be reliant on an unsafe and poor-quality train service.

The province has six main freight rails transporting imported goods from the harbour and export goods to the harbour. The main lines are Durban-Empangeni-Golela (and Swaziland) Secondary Main Line; Durban-Kelso-Port Shepstone-Simuma Secondary Main Line; Durban-Ladysmith-Volksrust (and beyond to Union in Gauteng); Glencoe-Dundee-Vryheid Main Line; Ladysmith-Van Reenen (and the Free State) Main Line; and Richards Bay-Vryheid East-Piet Retief-Ermelo (the coal line).

The existing rail line is in a poor condition and has speed limits in some places of as low as 50km/h. The new line will be built to have a maximum speed of 120km/h and will largely be dedicated to carrying freight.

The Waterberg–Mpumalanga–Richards Bay rail link/export coal line expansion is a key link between the coal mines and the coal export port of Richards Bay. This rail upgrade will see an increase in capacity for delivering coal for export and benefit the KZN economy through port activity.

A dry port at Cato Ridge is proposed to assist in reducing road traffic congestion in both the port and the Durban CBD. A combination of N3 road upgrades and rail links will ensure freight is shuttled

efficiently at Cato Ridge shunting yards. The Cato Ridge project will include not only containers but also break-bulk, liquid, and bulk cargo, with the facility acting as a truck stop for road hauled bulk cargo destined for the port.

Aviation

The King Shaka International Airport and the Aerotropolis are the most featured aviation infrastructure in the province. The launch of the Aerotropolis Masterplan marked the unlocking of 42 million m^2 of total development opportunity with a unique opportunity to generate sustainable urban growth and economic for the region.

The second-tier airports servicing 'feeder' routes are under the jurisdiction of local governments. There are nine Secondary Airports, which includes Pietermaritzburg, Richards Bay (looking to relocate airport to between Empangeni and Richards Bay), Ladysmith, Newcastle, Vryheid, Dundee, Margate, Mkuze, and Ulundi.

Maritime Infrastructure (Harbours and Ports)

Harbours and ports form an integral part of infrastructure in KZN, as the Provincial ports are the main entry and exit points for importing and exporting of goods. The Port of Durban (including proposed Durban dig-out port) and the Port of Richards Bay are the two most significant ports in the province.

- Port of Richards Bay: The Port of Richards Bay is the largest coal exporter and the largest Dry Bulk terminal in South Africa and handles approximately 54% of South Africa's total dry bulk cargo demand. It serves the hinterlands of Northern KwaZulu-Natal, Gauteng and Mpumalanga, the port is the largest exporter of coal in South Africa. The major activities of his port include the export of coal, dry bulk, break bulk and liquid bulk.
- Port of Durban: This is the main container port that handles approximately 60% of South Africa's container traffic. It serves KwaZulu-Natal, the Gauteng region, and a large portion of the Southern African hinterland. The port also accommodates dry bulk, liquid bulk, automotive and break bulk, as well as other activities such as facilities for local fishing industry, ship-repair industries, visiting cruise liner vessels and recreational boating. The significance of this port is underscored by the fact that it is the leading port in the SADC region and the premiere trade gateway between South-South trade, Far East trade, Europe & USA and East & West Africa regional trade. The Durban Port will need some critical port expansion within the 2035 timeframe of the PSDF as indicated in the National Ports Plan. The prioritisation of these upgrades is critical to the economic growth and success of the province.

Pipelines

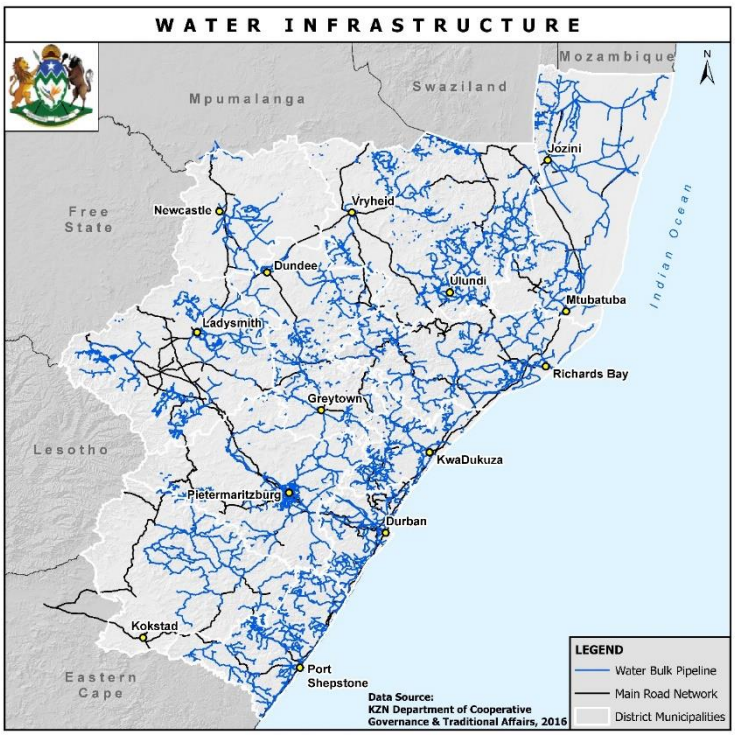
The core strategic objective of Transnet Pipelines is to ensure security of supply to the inland market from Durban and Richards Bay. Transnet Pipelines currently transports through KZN more than 65% of all refined products to the inland market; more than 70% of all jet fuel required at OR Tambo International Airport; 100% of the crude requirements for the Natref Refinery; and 100% of the methane-rich gas requirements to KwaZulu-Natal for Sasol Energy and its gas clients.

The New Multi-Product Pipeline's (NMPP) 24" trunk line is in full multi-product operation. The line transports two diesel grades (D50 and D500) and two unleaded petrol grades (93 and 95) as well as jet fuel. Of concern is the recent illegal tap-ins in theft of diesel. This pipeline is the lifeline for Gauteng and any risk to the operating of this pipeline is of national importance.

The decommissioning of the Durban-Johannesburg Pipeline (DJP) is currently in execution and is expected to be completed in 2021. Nonetheless, pipelines of national importance must be protected to ensure that KZN continues to benefit economically from being the supplier of gas, crude, and fuel to Gauteng.

Water Infrastructure

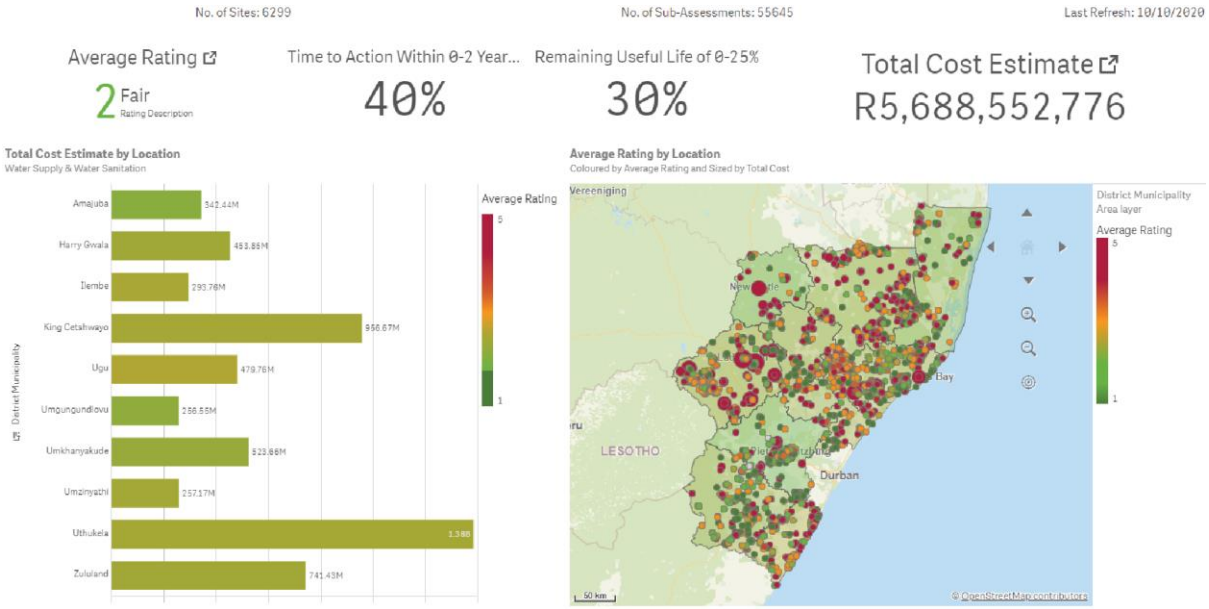
Water in KZN is supplied by Umgeni Water, Mhlathuze Water Boards. These Water Boards abstract, treat and feed drinking water to the various municipal networks via several bulk water supply schemes. The Water Service Authorities (WSA) are responsible for water service delivery to the people within their municipalities. There are fourteen WSAs in the province.



The figure to the left indicates the existing bulk water pipeline infrastructure in the province.

An assessment of the condition of water ibfrastructure in the province found that there were no preventative maintenance measures being undertaken, resulting in the fact that refurbishment is required across mostly all of the water infrastructure. The older the age of the infrastructure the higher the extent of maintenance required.

The figure below indicates the state of KZN water, sanitation. and electricity infrastructure (2019/2020).



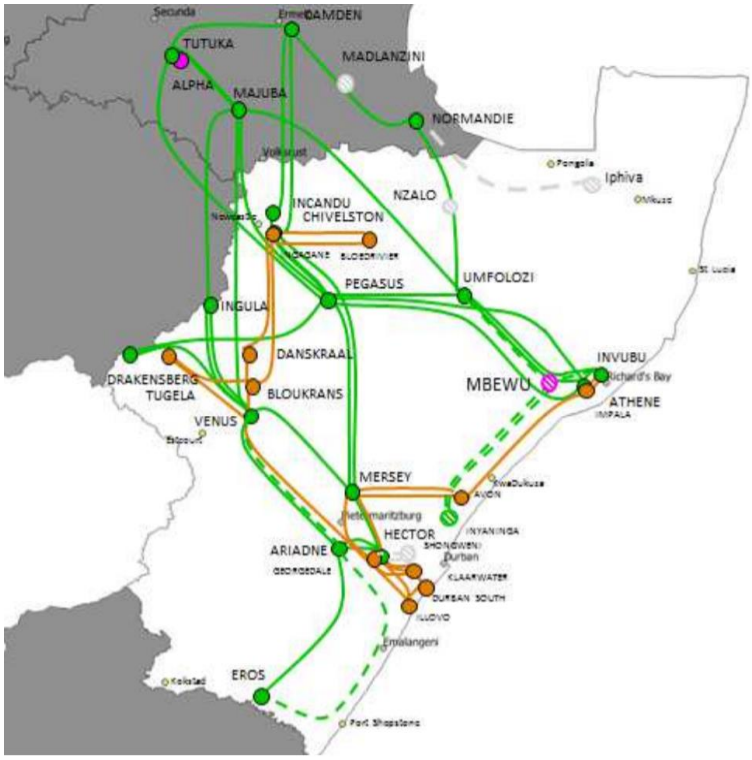
Source: COGTA KZN 2020 cited in the Provincial Water Master Plan, 2020

Electrical Infrastructure

The main Transmission supply network to KwaZulu-Natal is predominantly connected at 400 kV voltage level, with the local transmission stations predominantly connected at 275 kV. The KwaZulu-Natal grid comprises of four Customer Load Networks (CLN), namely Empangeni, Ladysmith, Newcastle, and Pinetown. The Empangeni and Pinetown CLNs are the two main load centres in the province, consuming approximately 32% and 55% of the load, respectively. Ladysmith and Newcastle CLNs make up the remaining 13% of the demand in the province. The provincial electricity demand peaked at around 5900 MW in 2018 and it is expected to increase to about 7314 MW by 2029 (ESKOM Transmission Development Plan 2020-2029).

Most of the electricity consumed in KwaZulu-Natal is sourced from the power stations in Mpumalanga via 400 kV Transmission lines. There are three peaking plants in the province consisting of a gas plant and two pumped storages. These comprise of Avon Open OCGT, Drakensberg and Ingula Pumped Storages. Avon OCGT has a generating capacity of 680 MW. Drakensberg and Ingula Pumped Storages have generating capacities of 1000 MW and 1333 MW, respectively. Richards Bay has been identified as one of the potential sites for the planned gas-to-power programme in accordance with the Draft IRP 2018. The estimated allocation for Richards Bay ranges between 2 000 MW and 3 000 MW.

ESKOM has identified constrained networks and requested that development in these supply zones be limited unless the MV network is upgraded. Spatial concentration of constrained networks is evident in the area between Richards Bay and Mtubatuba, areas to the north of Kwadukuza, Msunduzi (Imbali and Edendale), Newcastle East and other smaller areas in the province.



The economic mix in KwaZulu-Natal comprises redistributors, commercial customers, and industrial customers. The load in KwaZulu-Natal is forecasted to grow steadily at about 1.8% annually, from 5900 MW in year 2018 to 7314 MW by year 2029. The highest provincial load growth is expected in the Pinetown and Empangeni CLN due to industrial, commercial, and residential developments. The figure to the left shows the planned expansion of the transmission distribution in KZN (Transmission Development Plan 2020-2029 (ESKOM)). The green line indicates the 400kV distribution and the orange line indicates the 765kV the transmission distribution cables and network.

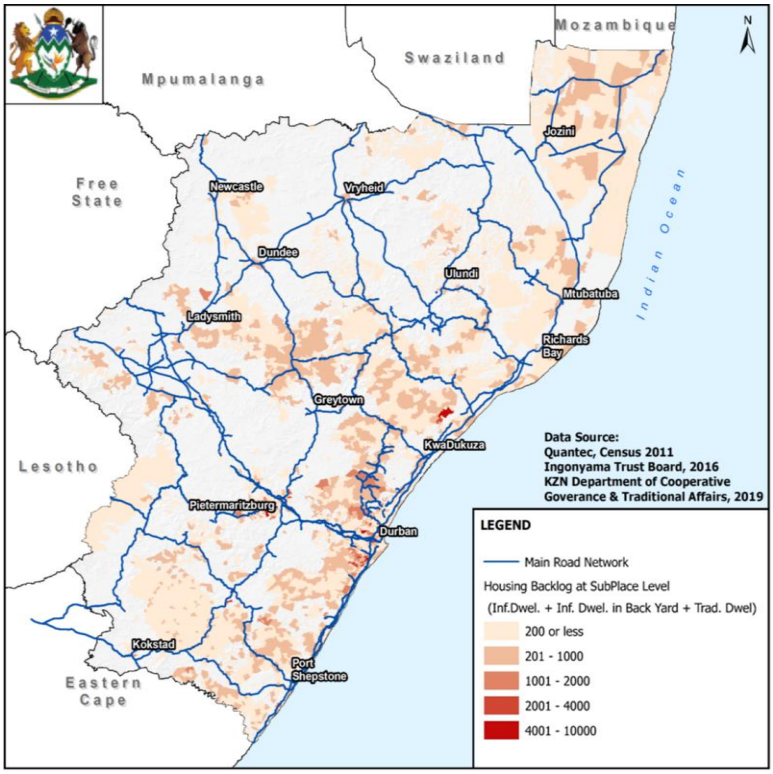
Sustainable Human Settlements

It can be estimated that 72.7% of households in the province resided in formal dwellings in 2016, which is approximately 7% lower than the 79.2% recorded for South Africa. Households living in informal dwellings[5] in the province was estimated at 8.5% or 245 167 households, as opposed to the 13% estimation for South Africa. Households in traditional dwellings, on the other hand was estimated at 18.1% or 524 244 in the province, while only 7% of households on a national level resides in traditional dwellings. While households in informal dwellings are on average lower than the national average, the households in traditional dwellings are far greater on a Provincial level than at a national level. Not all traditional dwellings can be regarded as representing inadequate shelter and thus not necessarily part of the housing backlog.

It is noted that Districts that recorded the highest numbers of households in informal dwellings in 2016 include Ugu, uMgungundlovu, Ilembe and eThekwini. eThekwini had the largest number of households in informal settlements (61%) and households in formal dwellings (44%), confirming the urban nature of this metropolitan area. Major increases in households in informal dwellings occurred in Ugu, Zululand and uMgungundlovu between 2011 and 2016. Districts with large numbers of households living in traditional dwellings include Ugu, Umzinyathi, Zululand, Uthungulu and Harry Gwala. More than 10% of households in these districts reside in traditional dwellings.

[5] Informal dwelling includes: Informal dwelling/shack in backyard, Informal dwelling/shack not in backyard (e.g. in an informal/squatter settlement or on a farm). (Source Stats SA, Community Survey Report p70)

A large decrease in the number of households in traditional dwellings are noted in in uMgungundlovu and iLembe, while uMzinyathi, Zululand, and eThekwini experienced large increases in households in traditional dwellings. These can be indications of housing delivery on the one hand, as well as in-migration into certain areas.



The figure indicates the housing demand in the province, based on households residing in informal dwellings and traditional dwellings. The KZN Provincial Human Settlements Master Spatial Plan (2016) indicates a housing demand of 189 476, based on 2011 Census data estimates.

However, the plan further notes discrepancies in housing demand estimates, that varies between Census 2011 estimates, municipal IDP's and municipal Housing Sector Plans. The latter estimating the housing backlog at much higher numbers than the Census data.

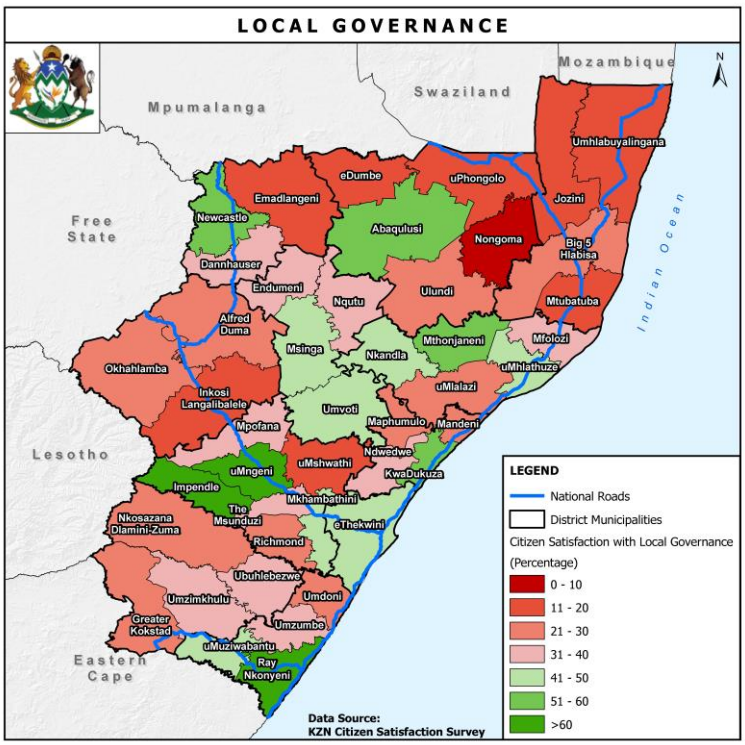
4.4 GOVERNANCE

The spatial development vision and the pursuit of a well-managed province directs the provincial spatial development framework to address spatial governance as part of the. This section will discuss the current governance challenges and considerations under eight themes as indicated by the figure.

FIGURE 11: GOVERNANCE THEMES

4.4.1 Link between Governance and Development

The importance of governance is based on the fact that it is considered as a cross-cutting/ transversal influence on sectors in spatial development. The quality of governance determines the measure of development impact which planning will have. This implies that good governance should constantly be aimed at impactful development and there need to be an understanding that governance directly determines development too.



Source: Stats SA, 2018

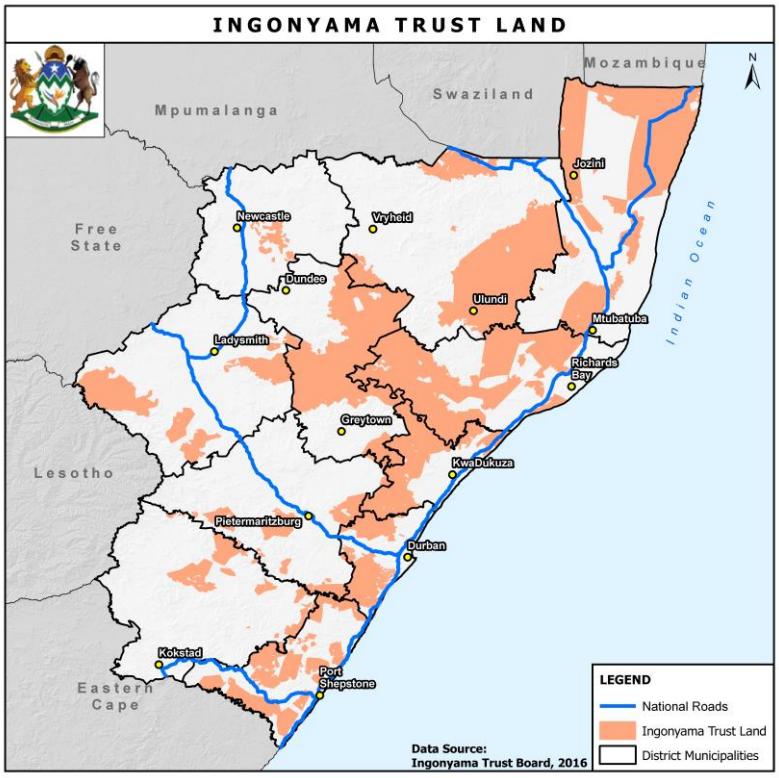
Where there is poor governance it could lead to misalignment, silo mentality, reactionary planning, slow decision making, and further entrenching of poverty. The is a spatial variation in governance across the province which is reflected in various audit reports, vacancy rates, capacity assessments and citizen satisfaction surveys. The map below represents an indication of citizen satisfaction survey with local governance based on citizen satisfaction surveys conducted in 2018 by Statistics South Africa.

When comparing the known areas of poverty concentration with the satisfaction survey results, it is evident that there is a measure of correlation between lower levels of governance and development. The dilemma is thus that areas which need strongest governance often have the least capacity and lowest levels of governance.

4.4.2 Spatially varied level of Governance

Within KwaZulu-Natal there further appears that the level of governance is affected by land ownership, especially when one considers the continued concentration of poverty on traditional communal & state land areas. In the converse, the low levels of household income in such areas also impacts on municipal income in terms of rates and thus the municipality's financial ability to improve governance and service delivery.

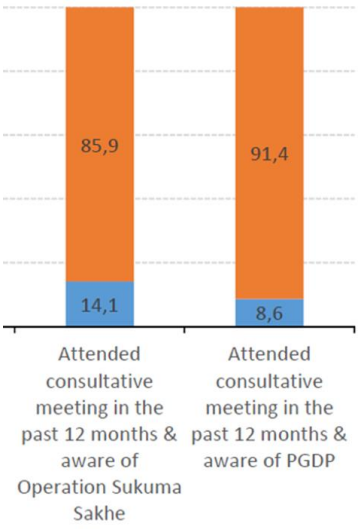
There is also a dynamic relationship between traditional and municipal governance which often impacts on the level of overall governance and service delivery in traditional areas (see figure below).



The clear role definition between these two leadership systems and the functional framework for collaboration has been a goal for some time and would need to be properly addressed towards improved governance in such areas.

4.4.3 PARTICIPATORY PLANNING

A well-managed province requires transparency to and participation by the public and the communities affected by spatial planning and land development. The 2018 Citizen Satisfaction Survey suggested that the citizens of the province are however generally disengaged in the planning process (see adjacent figure).



One of the possible reasons the seemingly disengaged citizens could be sure that the SPLUMA processes are not fully accepted in parts of the province, particularly in certain traditional areas.

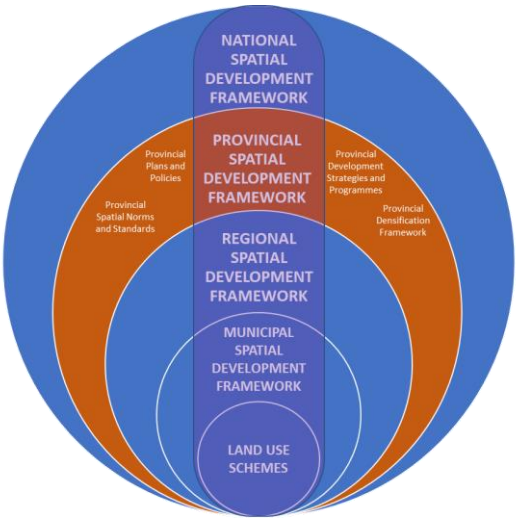
This may lead to dual a management and participatory system where community consultation occurs mainly through the traditional authority structures rather than full municipal public consultation.

The historical context of this situation needs to be considered and common directives to increase citizen participation in spatial planning and land use management will be needed toward improving local governance in such areas.

4.4.4 VERTICAL AND HORIZONTAL ALIGNMENT

Although vertical alignment is a legislative requirement for governance, it does not always occur. This is evident when comparing the spatial plans and land use directives between various tiers of

government as well as between some adjoining geographic areas which in turn impacts on development alignment and implementation.



In many cases the misalignment is attributed to factors such as:

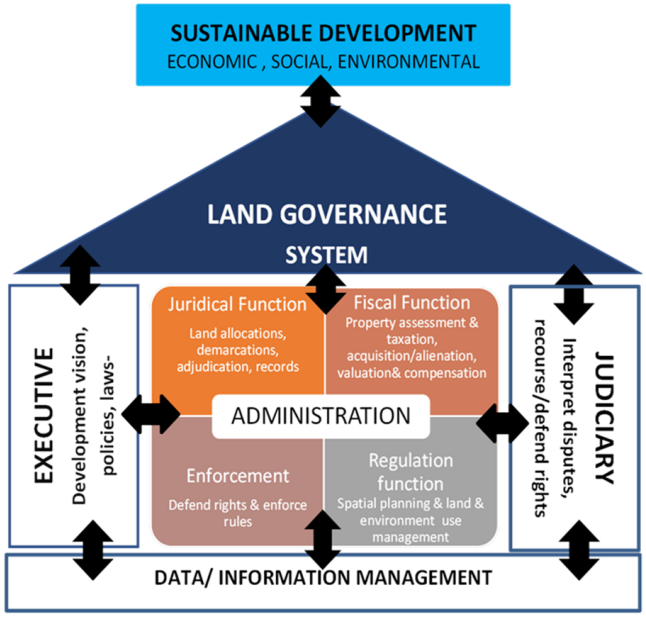
- The **level of completeness** of spatial plans which impacts on quality of the potential directives given to other tiers of government vertically up and down.
- The **level of detail** of those directives to an appropriate geographic scale which provides sufficient guidance to especially local municipalities and their land use management functions.
- The sheer **motivation and will to align** is often the largest factor in the level of vertical and horizontal alignment achieved.

It therefor seems to still be a need to further align the powers and functions within various tiers of government and service authorities towards the co-ordinated planning and development of land.

4.4.5 Co-ordination and Integration

Apart from the alignment between tiers of government, the practical co-ordination and integration of resources and efforts are considered as a prerequisite to a well-managed province. This is important as spatial planning, land use management and service delivery all require co-ordination between various tiers of government, but also between various sectoral departments and often also between public and private role-players.

Although major stride has been made to improve the level of co-ordination among development role-players, there are still instances where service connections are not aligned with implementation targets and there is a need for better alignment (both spatially and chronologically) between budgeting cycles of various role-players. The current global COVID-19 pandemic and the anticipated development and financial crisis will require even greater efficiency in financial planning and co-ordination than before.



The provincial spatial development framework and entire planning system could provide directives for better governance towards a co-ordinated system and toolset. There are already a number of provincial norms and standards either already adopted of in process of completion for:

- Climate Change and Energy Efficiency
- Electronic Communication
- Protection and Enhancement of Landscapes
- Public Social Facilities
- Provincial Interests
- Rural Land Use Management

Furthermore, it is evident that several SPLUMA related mechanisms are already in place to assist with the required capacities within local municipalities, reported as follow:

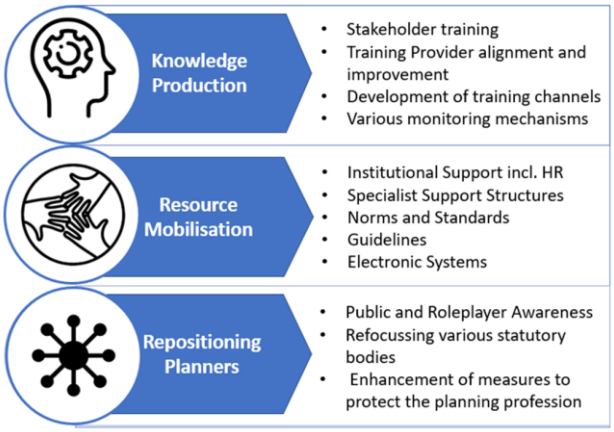
TABLE 2: SPLUMA RELATED MECHANISMS

SPLUMA requirement/ mechanism	Share of KZN Municipalities meeting the requirement.
1. Council Adopted Delegations	100%
2. Land Use Management Bylaws	100%
3. Municipal Planning Tribunals	100% (32% MPTs & 68% JMPTs)
4. Appoint Authorised Officer	100%
5. SPLUMA Compliant SDF	100%
6. SPLUMA Compliant Schemes	50%

Although these levels of SPLUMA compliant mechanisms are a good basis for ensuring co-ordination and integration, it must be considered that due to cyclic changes in municipal management and the frequent review of SDFs and Schemes, there would need to be a constant monitoring and support to retain / improve these levels of compliance.

4.4.6 ORGANISATIONAL CAPACITY

Municipal organisational capacity is mainly expressed in term of system-, human-, skills- and resource capacity. A recent national review of SPLUMA implementation found capacity constraints at national and provincial level as well as municipal level, particularly at small rural municipalities.



In order to address some of the capacity constraints experienced within the implementation of SPLUMA, the national DALRRD is in the process of preparing a SPLUMA Capacity Building Strategy prepared. The study firstly also found that there are capacity constraints are various tiers of government due to (inter alia):

- Lack financial resources,

- Rural / isolated municipalities being unable to attract skilled professional,
- Insufficient internal management support for planning and land use management functions,
- Limited to no mentoring opportunities for young planners,
- Existing limited skills which need to be augmented.

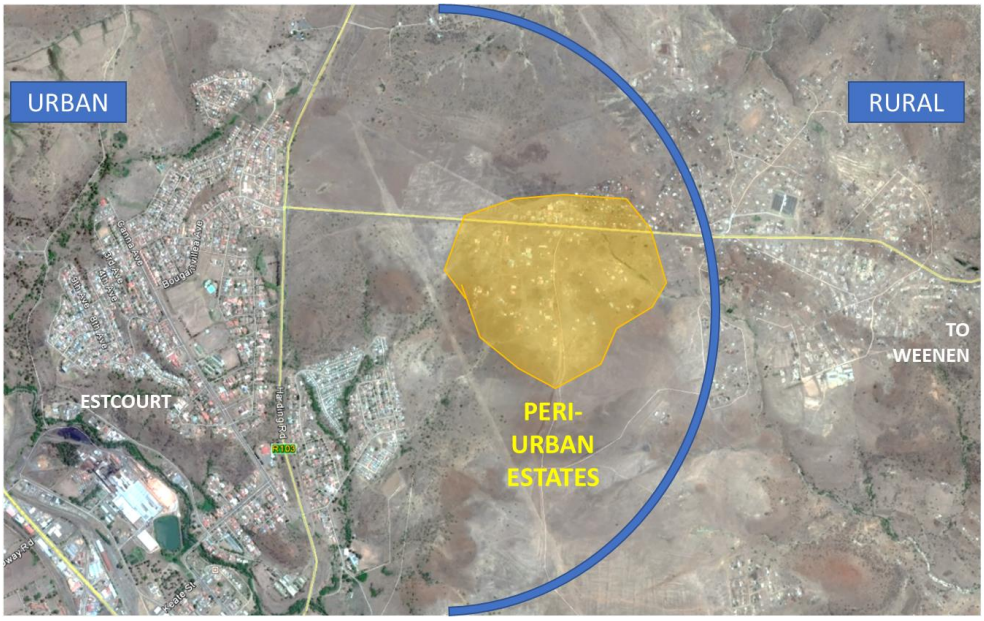
The strategy then provides a framework for capacity building which could be infused within PGDS & PSDF. The strategy pillars are illustrated by the adjacent figure and relates to knowledge production (skills development), resource mobilisation and repositioning planning as a vital part of development and the establishment of a well-managed area.

4.4.7 Enforcement

The level of governance and the capacity at especially municipal level directly impacts the level of enforcement of spatial directives and land use management regulations. The mentioned existing dual management system specifically creates challenges in the enforcement of municipal formulates strategies and regulations.

One example has been the emerging and continued expansion of a new form of peripheral settlement patterns which are often unsustainable. As illustrated in the example below (outside of Estcourt) there are growing peripheral settlements which included luxury private homes clustered together on mainly traditional authority land and state land projects.

Figure 12: Example of Peripheral Settlement



These peripheral settlements are developed with no formal township layout or establishment process and there is no freehold title on the land. Furthermore (in most cases) these settlements do not have formal municipal service networks and pay no municipal rates. Although there is a need for much deeper understanding of these peripheral residential estates, it is evident that it is not a sustainable settlement form and contradicts a variety of spatial polices and directives.

4.4.8 ACCOUNTABILITY

As mentioned before, effective governance will require a level of accountability which in turn need to be measurable against required outcomes. A recent MFMA circular on Rationalisation of Planning and Reporting Requirements further states that “Outcomes led planning implies the clear articulation of desired impacts, practical measurement indices and coherent reporting”.

Currently there seems to be various monitoring tools within provincial and local government, but fairly limited measurement of desired spatial outcomes making it difficult to measure governance and ensuring accountability. The PSDF will therefor need to contribute towards the establishment of a spatial performance management system which could be monitored against intended outcomes, and this will be addressed as part of the following phases of the process.

4.5 PROVINCIAL OPPORTUNITIES AND CHALLENGES

Several challenges and opportunities were identified from the preceding sections and grouped under the different themes. These are summarised in the table below:

TABLE 3: SUMMARY OF OPPORTUNITIES AND CHALLENGES

CHALLENGES	OPPORTUNITIES
SOCIO-ECONOMIC	
o Spatial Inequity / no-integration o Lack of land ownership and authority. o Inequitable access to social services o Poverty Concentrations in difficult to service areas. o Regional Infrastructure Backlogs and Needs o Slow rate of Spatial Transformation o Improved accessibility to basic infrastructure o Spatial correlation between poverty and low levels of education o Improving access to productive land o Urban - Rural Economic Integration o Migration Patterns o Rapid Urbanisation o Varied minimum service levels o Reducing Rural out migration o Countering Land Degradation o Improved Service delivery capabilities o Rapid Urbanisation o Loss of Productive Land o Food Security o Diversification of the Economy o Development of Agricultural Potential o Responding to Pandemics (e.g. COVID-19)	o Improved spatial integration between urban opportunities and rural needs. o Agricultural development around productive land and value chain. o Rural spatial structuring towards increased self-subsistence and reduction in economic vulnerability. o Improved access of all communities to local and regional social facilities. o Localised clusters/ hubs for improved social and economic infrastructure and services (Small Town Revitalisation). o Development of the Green Economy as catalyst to protect the environment while providing economic diversity. o Diversification of settlement structures to be more economically sustainable. o Use of ICT for increase rural development in terms of Education, Communication, Finance and Commerce. o Major strategic pipelines offer competitive advantage to Durban and Richards Bay ports. o Opportunities to increase value chain integration at key point. o Strategic location could benefit the development of the Blue Economy. o Improved Access roads to rural areas could significantly connect it to intra an inter-regional economies. o Diversified nature of economy may enable a resilient response to economic instability posed by COVID-19 impact. o Knowledge economy is a key emerging sector. o KZN is moving towards a service-based economy with its strongest sectors being in the tertiary sector.
BIOPHYSICAL CHALLENGES	
o Physical Landscape creating areas of opportunity and risk to natural disasters	o Rural Landcare programmes

CHALLENGES	OPPORTUNITIES
o Land degradation in rural areas o Unsustainable Settlement Patterns and Fragmentation o Ecosystem Service Provision o Poor Stormwater Management infrastructure and practices o Poor Waste Management o High levels of unemployment o A deteriorating resource base - concerns about ecosystem resilience. o Climate and land use changes are driving environmental change. o The 'basket of assets' around which to anchor economic growth is under threat. o A vulnerable population most exposed to the potential harmful effects of environmental change. o Countering Land Degradation o Loss of Productive Land o Addressing & adapting to Climate Change o Protection of Natural / Ecological Resource Base and networks o Loss of Biodiversity o Water Quality and Security o Ecosystem rehabilitation o Declining Air Quality	o Development of the Green Economy as catalyst to protect the environment while providing economic diversity o Ecological infrastructure as 'catalytic factories of ecosystem services' o Water as an economic enabler o Environmental management instruments
BUILT ENVIRONMENT	
o Spatial Inequity / no-integration o Inequitable access to social services o Scattered and service inefficient Settlements o Land use management in rural areas o Poor road and transport connectivity between rural areas o Slow rate of Spatial Transformation o Improving access to productive land o Urban - Rural Economic Integration o Migration Patterns o Clustering of rural activities o Degeneration of Small Towns o Unsustainable Settlement Patterns and Fragmentation o Regional Infrastructure Backlogs and Needs	o Strategic and increased data driven, spatial transformation. o Landscape Categorisation for targeted interventions o Improved accessibility to basic infrastructure o Geographically varied Minimum Basic Service Levels o Development of sustainable and creative wastewater solutions o Inclusion of stormwater solutions within all land use development o Implementation of provincially suitable renewable energy infrastructure o Use of ICT for increase rural development in terms of Education, Communication, Finance and Commerce o Increasing the use of freight rail systems o Smart Cities Development and Data Infrastructure o Major strategic pipelines offer competitive advantage to Durban and Richards Bay ports

CHALLENGES	OPPORTUNITIES
o co-ordination of project and integration between sectors o Poor Stormwater Management infrastructure and practices o Poor Waste Management o Administrative inefficiencies and capacity constraints. o Rapid Urbanisation o Reducing Rural out migration o Appropriate Increase in settlement densities o Emerging Peripheral Settlements o Measurement of spatial outcomes o Service delivery capabilities o Water Quality and Security o Limited financial resources requiring improved alignment and co-ordination.	o Improved alignment and co-ordination of financial resources
GOVERNANCE	
o Varied Land Governance Systems o Relationship between traditional and municipal governance o Lack of capacity within areas which require it most o Project co-ordination and integration between sectors o Limited vertical and horizontal alignment o Insufficient monitoring and accountability of spatial planning outcomes o Enforcement of spatial policies o Improving management within a low resource environment	o Improved integration between dual management systems (Traditional Authorities– Local Municipalities). o Utilising the PSDF as alignment framework between NSDF and Local SDFs. o Spatial targeting and monitoring to guide local implementation and governance. o Shared services and co-ordination (e.g., DDM). o Establishment of Development Partnerships. o Establishment of spatial planning and land development partnerships o Improved participatory planning

5 THE SPATIAL VISION

PSDF VISION

Equitable utilisation of physical and environmental resources toward greater spatial integration and sustainability in development."

The spatial development vision of the province is based on the policy directives as well as current known spatial and land use challenges. To ensure that the vision is clearly expressed a series of outcomes have been identified and grouped in anticipated outcomes of the provincial development vision for an equitable, resilient, sustainable, productive, and efficient, and well-managed province. The figure below illustrates how the grouping of envisaged provincial outcomes aligns with the development principles required within the Spatial Planning and Land Use Management Act.

FIGURE 13: KZN ENVISIONED

5.1 SPATIAL DEVELOPMENT OUTCOMES

FIGURE 14: ENVISAGED SPATIAL DEVELOPMENT OUTCOMES

ENVISAGED PROVINCIAL SPATIAL DEVELOPMENT OUTCOMES

Spatially Integrated and Inclusive Province	Sustainable Province	Resilient Province	Productive and Efficient Province	Well-managed Province

The specific intent and identified outcomes for each of the five provincial future states are discussed below:

A Spatially Integrated and Inclusive Province

A spatially integrated and inclusive province where past and current injustices area addressed to ensure an improved spatial structure and land use management practices which benefits all communities within the province in an equitable manner. The following intended outcomes will contribute to the development of an equitable and integrated province:

- Spatial planning and settlement structures guiding and accommodating **population structures and dynamic changes** (e.g., migration patterns) to avoid the structural marginalisation of any groups or settlements.
- Planning and development of **integrated and sustainable settlements** provide a basis for social inclusivity and cohesion.
- Settlements with defined **social or spatial networks** tying people and places together, providing access and opportunity for all.
- Improved **access to and the appropriate level of social facilities** contribute to healthy, educated, active and safer communities.
- Improved access of vulnerable groups to services and economic opportunities.
- Spatial planning and land use management addresses improved linkages between areas of need and areas of opportunity.
- Spatial focus on **viable rural development** provides for localised development within rural areas.
- **Social inclusion** through secure tenure for all, which include having a **recognised land right** to be where you are that enables access to basic socio-economic rights of a recognised citizen.
- Equitable and sustainable **access** to a minimum level of goods and services through the **provision of services and resources** in a space to ensure that a maximum number of people have access to socio- economic opportunities and choices.
- **Transformation** that includes deliberate changes through aligned investments to maximise the potential of an area in a way that improves the spatial form, accessibility, use, control and management of space, to enable equity and inclusion.
- Strengthen **cohesion** through spatial integration and development that will break down socially constructed boundaries and strengthen social bonds as part of maximising social benefits.
- **Economic transformation** through the diversification of the economy.
- **Economic inclusion** through equitable access to employment and the economy by individuals

A Spatially Sustainable Province

The **sustainability** of the province is based on the spatial structuring and development of the province in a manner which will maintain the bio-physical environmental while providing the social and economic opportunities required within settlements and communities. The following intended outcomes will contribute to the development of a sustainable province:

- Protection and sustainable development of land and water resources towards an integrative economic structure.
- **Water resources are protected, used sustainably** and well-managed by both authorities and communities.
- Increased **air quality monitoring and management** in both urban and rural production areas.
- **Sustainable wastewater solutions** in spatial planning and land use management across the province.
- Inclusion of **stormwater solutions within all land use development** process to protect lives, infrastructure and productive land.
- Implementation of **provincially suitable renewable energy infrastructure** as integral part of spatial planning and land use management.
- Carefully considered **settlement planning towards sustainable communities** which could flourish in their local area.
- Sustainable **waste management solutions** in spatial planning and land use management across the province.
- Consistent management of coastal areas and effective promotion of the marine economy.
- Conservation and protection of ecological infrastructure that provide valuable goods and services to meet the basic human needs across the province.

A Resilient Province

The vision of a resilient province relates to the ability of human and natural systems to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization and the capacity to adapt to stress and change. A resilient province will have an effective, progressive, and coordinated response to adjust the spatial vulnerabilities of social, economic, and ecological systems while fostering its resilience and adaptive capacity to future uncertainties and potential risks. The following intended outcomes will contribute to the development of a resilient province:

- Establishment of sustainable and multifunctional settlements at all levels.
- Adaptive design in settlement planning which creates modularisation and redundancy into the settlement structure.
- Strong focus on localised and regional economic production activities.
- Equitable distribution of social services to provide access to all communities.
- Incorporation of disaster risk reduction and climate change adaptation responses within all spatial planning and land use management.

A Productive and Efficient Province

The vision of a productive province relates to both public and private sector organisational efficiency as well as a productive use of available land and natural resources towards an economically productive province. In terms of the land productivity a province is envisaged where the following outcomes area achieved:

- **Reduced travel time** between residential and employment areas at all spatial scales.
- Increased **access to and development of productive agricultural** land for economic development and food security.
- **Agricultural resources** at both commercial and subsistence scale are protected and systematically development to contribute to improved food security.
- The **biodiversity economy** is expanded, strengthened, and transformed to be more inclusive of the rural poor.
- Strengthened **regional and localised economic centres** which are focussed on providing both local and regional economic growth opportunities.
- **Efficient urban centres service** as support of surrounding regions towards economic integration and localised growth.
- Secondary towns are structured and developed to provide a social and economic linkage between large economic centres and peripheral areas.
- **Increased data connectivity** within all urban and rural regions of the province.
- Land development optimises the use of existing resources and infrastructure.
- Spatial planning and development application **procedures are efficient and streamlined** to contribute to the rapid development of the province.
- Knowledge based spatial planning, land use management and production through digitally driven integration.
- Land use decision-making processes are structured to avoid negative financial, social, economic, or environmental impacts.

A WELL-MANAGED PROVINCE

The vision of a well-managed province relates to the improved level of provincial and municipal governance in spatial planning and land use management in terms of co-ordination between various role-players, consistency in governance systems, responsiveness, meaningful community participation and improved accountability. A well-managed province will be aimed at the achievement of the following outcomes:

- Clear and consistent **alignment between national, provincial, regional, and municipal** spatial planning initiatives and land use management strategies.
- **Co-ordinated land and resources planning** and utilisation between various regions and role-players within the province.
- Move toward **measurable development outcomes** within all spatial planning and land use management governance.
- Well **capacitated provincial, traditional, and municipal authorities** to implement spatial development priorities. **Appropriate and consistent land use management** which enables the implementation of spatial strategies and priorities.
- **Established system of landscape differentiation** with appropriate spatial planning and land use management and governance as part of an integrated provincial system.

- Structured, well informed, and **meaningful participation of communities** in spatial planning and land use management impacting upon them.
- **Integrated planning and land use management system** within traditional authority areas and surrounding municipal areas.
- Understandable, supported, and **localised enforcement** of spatial planning and land use management intentions towards protecting resources and implementing development priorities.
- Improve and consistent **accountability of decision makers** towards spatial development priorities and management policies.

5.2 SPATIAL OBJECTIVES

Strategic objectives have been developed per strategic goal and is indicated on the figure below. Between two and four strategic objectives were identified per strategic goal.

FIGURE 15: STRATEGIC OBJECTIVES

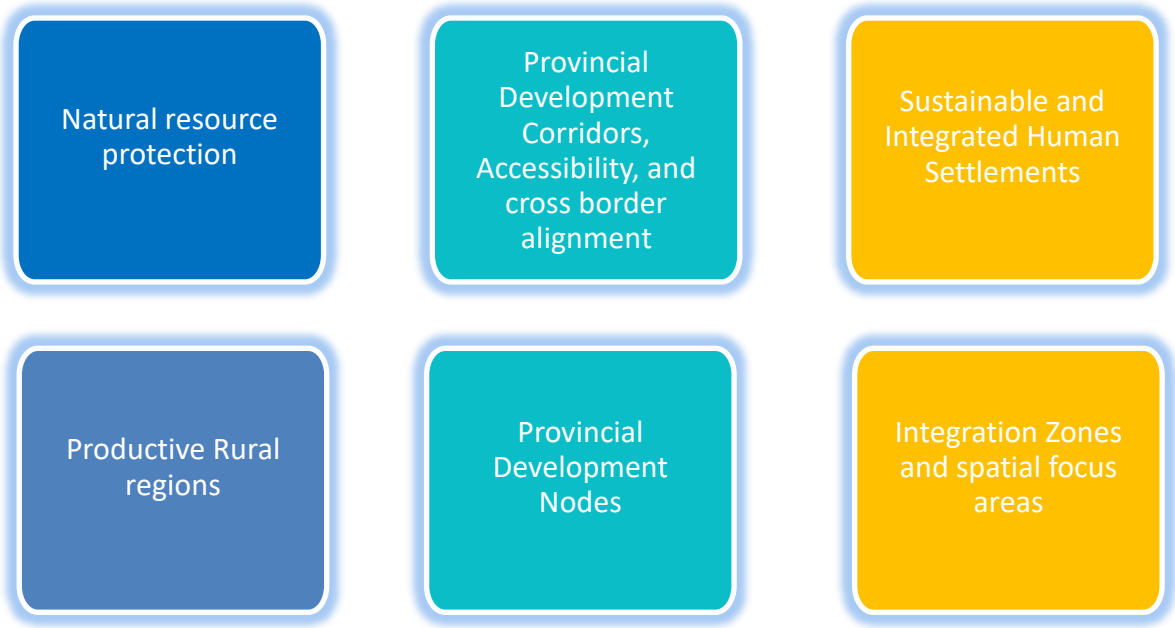
SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Spatially Integrated and Inclusive Province	INTEGRATED AND INCLUSIVE LAND DEVELOPMENT	1. Improved integration between urban/ rural opportunities and needs. 2. Actively create more inclusive settlement in especially Traditional Authority Areas. 3. Transformation of spatial form use and control of space to be more integrated and inclusive for urban communities. 4. Reduce urban sprawl through structured densification and compact development.
Sustainable Province	SUSTAINABLE USE OF RESOURCES	5. Sustainable use and protection of critical natural resources needed as basis for health and development 6. Sustainable land use management and spatial planning towards sustainable settlements.
Resilient Province	ESTABLISHING A RESILIENT PROVINCE	7. Reduce environmental degradation and loss which increases human vulnerability. 8. Create social, economic, and ecological resilience in spatial planning and land use management.
Productive and Efficient Province	PRODUCTIVE AND EFFICIENT DEVELOPMENT OF THE SPATIAL ECONOMY	9. Develop and promote the agricultural potential of KZN. 10. Develop and promote the biodiversity economy in KZN. 11. Provide regional infrastructure networks to support economic production. 12. Focus spatial economic development in strategic areas (note-link to nodal and corridor frameworks).
Well-managed Province	WELL-MANAGED SPATIAL & LAND DEVELOPMENT PROCESSES	13. Spatial planning and development application procedures are efficient and streamlined to contribute to the rapid development of the province. 14. Accountable and capacitated spatial governance systems. 15. Improved role-players participation in land use decision making

5.3 SPATIAL CONCEPTS AND DRIVERS OF SPATIAL TRANSFORMATION

The province will give effect to the intentions of the PSDF through a set of spatial planning concepts that indicates the desired future spatial situation, and broad policy positions to guide decision-making.

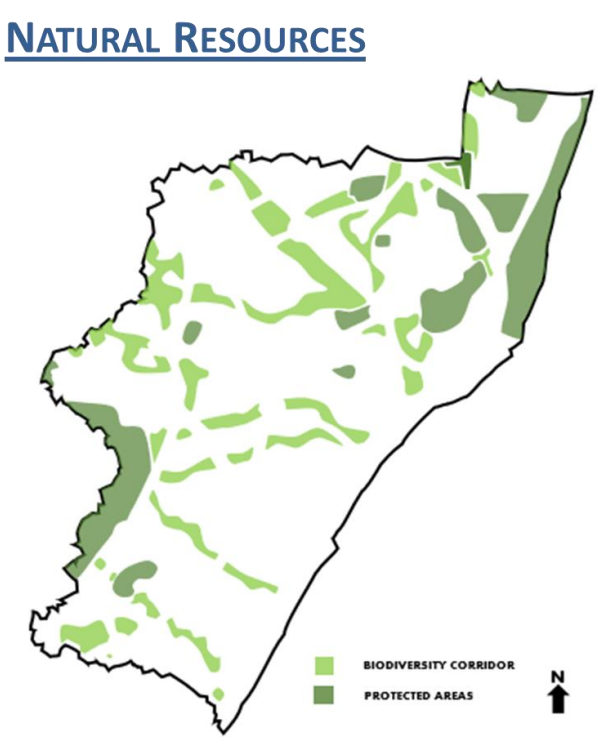
The following diagram presents a synthesis of the key spatial concepts and must be read together with the discussion on each concept in the following sections.

FIGURE 16: PSDF SPATIAL CONCEPTS



5.3.1 NATURAL RESOURCE PROTECTION

The identification of elements and systems within KZN must be considered as the foundations on which we build the PSDF. The spatial distribution of environmental areas of significance is considered vital to provide the spatial framework for future spatial development planning. It is of particular importance that development needs to be avoided in these areas, or at best, carefully managed.

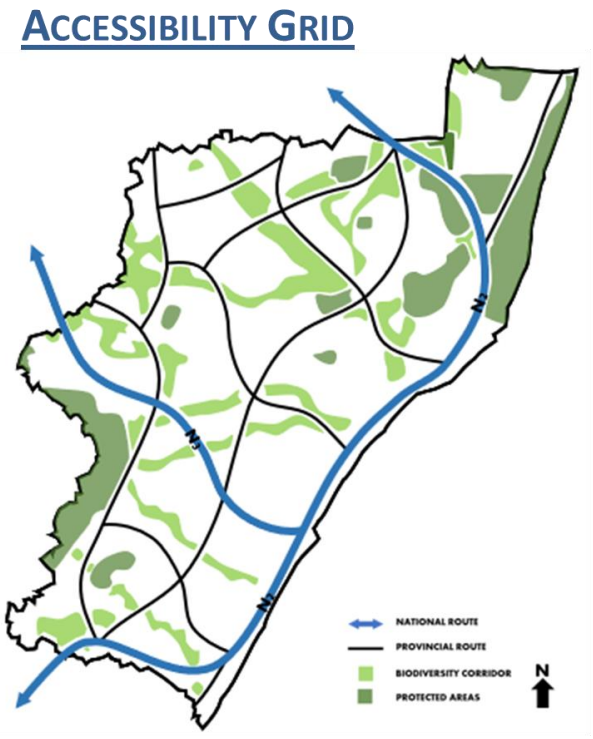


This spatial structuring principle focuses on conserving the core biodiversity areas, as well as elements such as topography, key catchment areas, fragile landscapes, environmentally sensitive zones / corridors, wetlands, flood plains, steep slopes and special sensitive bio-diversity areas. Development in sensitive areas must be compatible with the resource-specific objectives of such areas and emphasise the importance of the biodiversity corridors (buffer areas), which should link those core areas together, are important. Man-made elements such a major railway lines and highways could also form part of the key foundation elements. These assets

perform a substantial and significant role in conserving biodiversity as well protecting the quality of life.

5.3.2 Provincial Development Corridors Accessibility and Cross-border Alignment

The logical focus areas of an ordered strategy for development are through a system of provincial, regional, and local transport routes, which link several areas. It must be acknowledged that transport networks impact on the nature and extent of development in a specific development area. These routes should be seen as activity and investment lines. The structure they give to the area is articulated in the form of movement patterns and systematic distribution of land uses in space.



Not all regional routes are the same in terms of the intensity of use and ability to attract investment, services, economic activities, and settlement. Generally, larger routes linking generators of movement and investment have a greater generative capacity than smaller routes. As such, regional facilities and services should gravitate towards these areas, while smaller facilities requiring smaller thresholds should be located along smaller routes. This has an impact of reducing spatial marginalization, increasing equitable access to all level of services, and promoting investment.

Cross border alignment needs to consider trade and economic issues, regional migration trends, provide for regional gateways, service delivery and protection of strategic regional ecosystems and biodiversity through shared management of International Trans-frontier Parks. The Province of KwaZulu-Natal does not operate in isolation and are dependent on connections and linkages to surrounding regions and countries (Eswatini, Mozambique, and Lesotho). Elements such as trade ports, key national and provincial roads and railway lines, border posts, airports and harbours, thus become important.

5.3.3 Development Nodes

At a provincial level, the various development linkages, and corridors service to connected people and goods to appropriate town, which in turn serve as a diverse set of development nodes. These provincial nodes aim to establish cost effective service delivery due to a concentration of people and infrastructure, counter urban sprawl and focus on improving the fragmented morphological form of certain settlements to become more efficient and sustainable.

Together, the corridors and nodes structure the investment network of zones, routes, and points as a spatial indication of where investment should be directed. The concept attempts to extend social and economic opportunities to all throughout the province. Investment will typically follow existing trends, although there are several nodes identified to redress the negative impacts of past policies as well as unlocking future potential through public as well as private funding.

5.3.4 Productive Rural Regions

The rural regions of the province area often defined as the regions where the highest poverty concentrations perpetuate. The rural regions often lack accessibility (due to terrain, distance, and transport infrastructure) resulting in these settlements to have less access to urban economic opportunities.

Furthermore, the expanse of these rural areas impacts on productive agricultural land and critical biodiversity assets and there is thus a need to focus on the protection and development of productive rural regions to develop the agricultural and biodiversity economic potential of the province as well as the ability of the rural communities to access and develop the rural economy.

In order to balance the development of localised rural economic opportunities, protecting productive agricultural land, harnessing the economic opportunities of biodiversity resources and diversifying the rural economy, the PSDF will focus on productive rural regions. This will be done by defined productive land, and areas with potential for unlocking the biodiversity economy, denser settlements, important access, and distribution routes as well as economic production facilities and nodes to support the production within rural regions.

5.3.5 Sustainable and Integrated Human Settlements

The KZN Province is characterised by a complex settlement pattern and a wide range of settlement types across the province, which is further characterised by blurring lines between settlement types. One of the main features of the settlement pattern is the scattered nature of rural settlements, which is not sustainable and renders service delivery and development ineffective. The highest settlement densities are usually found along main transport routes where a web of local access roads and public facilities holds settlements together. At a regional level, they should be knit together by a system of regional access routes.

Settlements are not static and respond to change, thus they are continuously transforming. The key challenge is to turn these settlements into sustainable human settlements, which has certain implications for detailed planning and development of these settlements:

- Centrally located settlement should provide improved access to higher order public facilities, intensive agriculture, and other urban services.
- They should generate a wide range of opportunities. Sparsely populated settlements are opportunity areas for agricultural development such as crop production and livestock farming.
- A convenient settlement improves the level of choice, encourages creativity and investment while a less convenient settlement imposes a lifestyle on people and results in unnecessary expenses.
- Settlements should be equitable in the sense that they should provide a reasonable access to opportunities and facilities to all. It is neither possible nor desirable for settlements to be homogenous hence an emphasis on choice.

More compact settlements can be achieved with the maintenance of a settlement edge to discourage development sprawling into prime agricultural land and other natural resource areas. The settlement edge can be used to encourage more efficient use of underutilised land existing in a settlement, through development of vacant land or the re-use of ‘brownfield’ degraded land areas. It can also be used to manage the investment and characteristics of infrastructure levels according to the needs of communities and economic activities located within settlement edges or outside settlement edges. This requires detailed planning at a settlement level and could best be sustained through the coding or integration of the existing community rules into a land use management system. Certainly, the level of compaction will consider the nature and character of each settlement, as well as the prevailing spatial development trends and patterns.

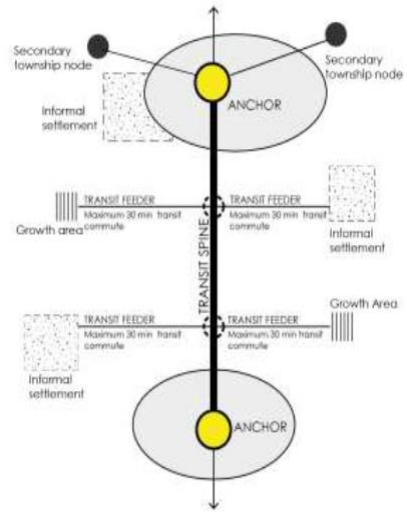
URBAN COASTAL CONSOLIDATION

SETTLEMENT INTEGRATION

5.3.6 INTEGRATION ZONES

The concept of integration zones is based on a spatially targeted network within a city, town, or city-wide network or between different service points. The network consists of different integration zones, which can be described as spatial planning elements that facilitate spatial targeting and transformation.

FIGURE 17: INTEGRATION ZONE CONCEPT



Source: National Treasury, Integration Zone Planning Guidelines, 2017

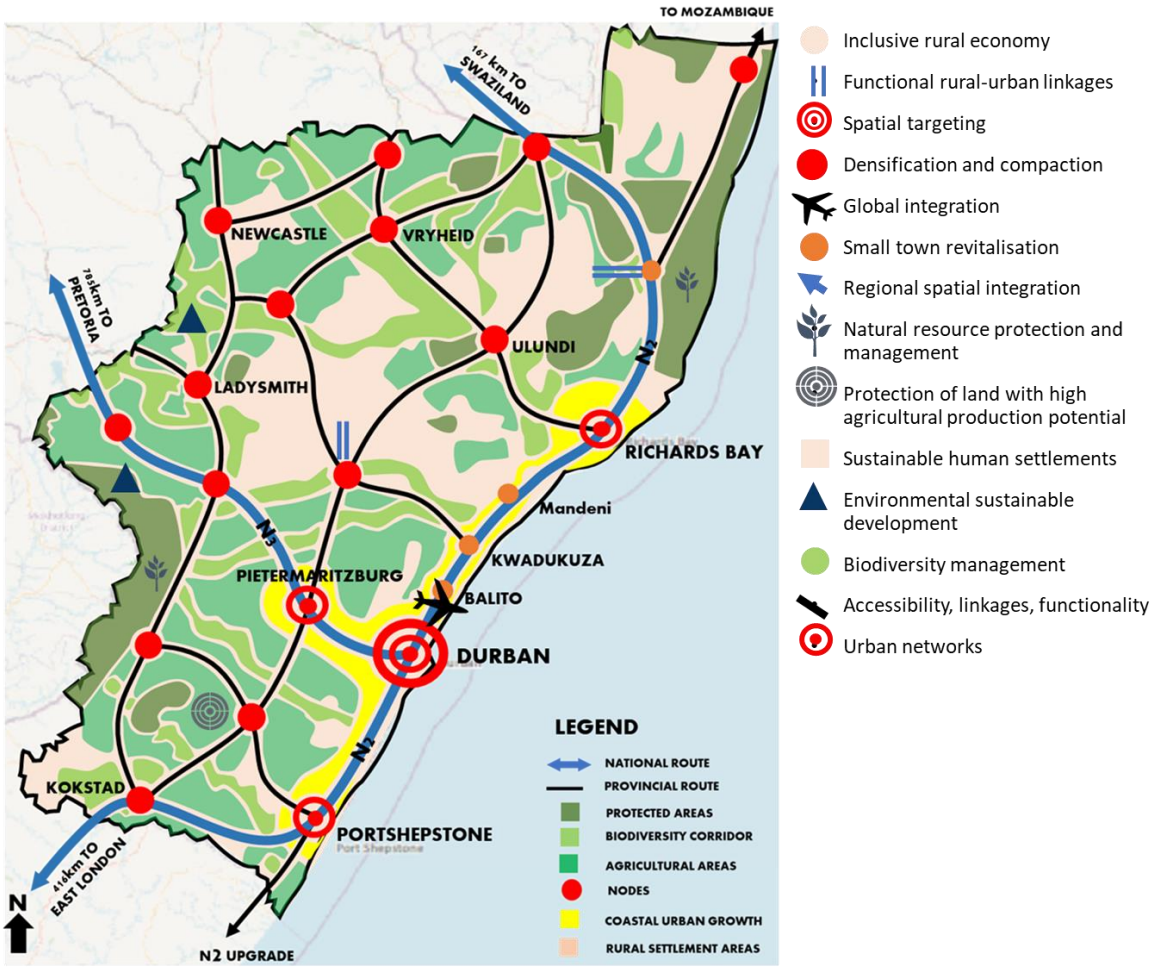
Elements that form part of the integration zone includes a transport / transit spine, as well as strategically located integration zone points or nodes located at strategic intersection points. These strategic points connect the marginalised areas such as townships, informal settlements, or rural settlements to economic nodes (commercial and industrial) via feeder routes (National Treasury, Guidance Note: BEPP Framework v5.3).

The intention of integration zones and points in the context of the PSDF is to be used as a tool by local municipalities to achieve spatial transformation of urban centres or towns and surrounding marginalised areas when developing their spatial development frameworks.

5.4 SPATIAL CONCEPT

The spatial concept map for the province is a consolidation of the conceptual layers, concepts or tools and informants discussed in the previous sections. The spatial visioning directives and emerging linkages to certain spatial areas in the province are depicted.

FIGURE 18: SPATIAL CONCEPT MAP FOR KZN



6 SPATIAL DEVELOPMENT STRATEGIES

The spatial development strategies are outlined in the sections below. The strategies are presented in a format that relates back to the five spatial development outcomes or intended impacts that are envisaged for the province, as well as the identified strategic objectives.

6.1 OUTCOME 1: INTEGRATED AND INCLUSIVE PROVINCE

SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Integrated and Inclusive Province	INTEGRATED AND INCLUSIVE LAND DEVELOPMENT	1. Improved integration between urban/ rural opportunities and needs. 2. Actively create more inclusive settlement in especially Traditional Authority Areas. 3. Transformation of spatial form use and control of space to be more integrated and inclusive for urban communities. 4. Reduce urban sprawl through structured densification and compact development.

The impacts related to the spatial development outcomes and objectives can be grouped or discussed within the following themes:

- Spatial integration.
- Clustering of social and economic activities in development nodes.
- Spatial transformation and restructuring.

6.1.1 SPATIAL INTEGRATION

6.1.1.1 Improve Accessibility and Movement

STRATEGIC OBJECTIVE: Improved integration between urban/ rural opportunities and needs.

The identification and classification of movement routes in the province is based on the function/role, and intensity of use or development along the route/corridor. The province recognises the significance of the national and provincial corridors such as the N2 and N3 and the opportunities it creates. It also recognises the significance of routes providing internal and external linkages within and around the province. Other corridors include the main arterial roads that define the spatial structure and drives settlement pattern, and the major local link roads between different settlements. Improved accessibility and movement thus not only relate to the identification of corridors and road networks that link nodal areas, settlements, and productive areas within the province, but also the important linkages to areas outside of the province.

Specific **spatial strategies** will include:

- Improved integration between urban and rural opportunities and needs by improving access roads to rural areas that can significantly connect to intra and inter-regional economies.
- Reduce Travel Time between residential and production areas.

6.1.1.2 Identify Integration Zones

STRATEGIC OBJECTIVE: Improved integration between urban/ rural opportunities and needs.

The identification of integration zones can actively start redressing the remaining segregated spatial planning structures and developing area specific interventions within those zones. The integration zones are aimed at integrating marginalised areas such as townships, informal settlements, and rural settlements to economic nodes and areas of potential growth. Linkage of these zones to a development node and the connection between these areas within the integration zone via transportation routes must be considered.

Specific **spatial strategies** will include:

- Identification of integration zones by actively redressing the remaining segregated spatial planning structures and developing area specific interventions within those zones.

6.1.2 Cluster Social Facilities And Economic Activities in Development Nodes

STRATEGIC OBJECTIVE: Actively create more inclusive settlement in especially Traditional Authority Areas.

The clustering of a range of social services and economic opportunities at central locations to improve access and restructure the existing spatial pattern is critical in the province. The establishment of a hierarchy of development nodes will assist in allocating facilities of various types to their most appropriate locations, based on the facility threshold and the appropriate number of people required within the catchment of that facility. Clustering will create opportunities for facility multi-use, sharing and land savings, cooperation and joint financial planning between the departments and the private sector. If this is achieved within nodes, it can contribute positively to service delivery, spatial restructuring, and financial sustainability.

Development nodes serve as points in the spatial system where potential access to a range of opportunities is greatest, where networks of association create diversity and where people can satisfy the broadest range of their day-to-day needs. They must be regarded as primary devices on which to anchor the structure of the regional and sub-regional spatial system.

6.1.2.1 Improved Access to Social Facilities and Basic Services

Different communities have different priorities in terms of social facilities, and different types of facilities will work efficiently in certain communities. The important issue is not to predetermine the form of all facilities, but rather the positioning of social institutions valued by the community. Community facilities are important place-making elements, and they should be deliberately used, in combination with public space, to make memorable places. They are dependent upon public support and play an important integrating function in and between communities/settlements. They should therefore be located in places of high accessibility and made accessible to the local and surrounding communities. In this way, they bring together people from different local areas and are not tied to the dynamics of any one community.

Social facilities and basic services that are planned well, designed in a way that it can be used for more than one use and located in highly accessible areas (e.g., along transport routes and areas with adequate available services) have different benefits. On the one hand it can attract economic activities and contribute to densification and diversification; but it can also promote nodal development, limit sprawl, and reduce transport costs.

Improved access to and the appropriate level of social facilities contributing to healthy, educated, active and safer communities through the identification and establishment of key multi-sectoral service points (as per the proposed nodal structure) thus becomes critical.

The structuring and development of secondary towns to provide a social and economic linkage between large economic centres and peripheral areas must be emphasised.

Specific **spatial strategies** will include:

- Improved access to and the appropriate level of social facilities contributing to healthy, educated, active and safer communities. (e.g., Health, Education etc). Identification and establishment of key multi-sectoral service points (as per the proposed nodal structure and associated interventions).
- Inkululeko as a basis for entrenching coordinated and integrated inter-departmental service delivery and development in KZN, by focussing on a single investment in an area by all departments to address social infrastructure as well as enablers for economic activities.

6.1.3 Spatial Transformation and Restructuring

6.1.3.1 Spatial Planning Systems

STRATEGIC OBJECTIVE: Transformation of spatial form, use and control of space to be more integrated and inclusive for urban communities.

The PSDF must provide clear guidance on directions for future settlement growth and proposed release of land for development. As such, it must facilitate the evolution of a settlement pattern that reflects strong functional linkages between the continuum of settlements ranging from rural to formal urban settlements. This pattern has several benefits, including:

- Maximizing lifestyle choice and where people want to live and attracting middle to higher income earners into an area.
- Providing an effective framework for the service delivery and application of service standards based on character of the area.
- Unlocking economic development potential at different scales thus enabling remote rural areas to realize their agricultural economic development potential.
- Improving economic performance of the region.

A convenient settlement improves the level of choice, encourages creativity and investment while a less convenient settlement imposes a lifestyle on people and results in unnecessary expenses.

Settlements should be equitable in the sense that they should provide a reasonable access to opportunities and facilities to all. It is neither possible nor desirable for settlements to be homogenous hence an emphasis on choice. Settlements should be located along the main transportation routes and held together by a web of local access roads and public facilities. At a regional level, they should be knit together by a system of regional access routes.

Specific **spatial strategies** will include:

- Provide clear guidance on directions for future settlement growth and proposed release of land for development.
- Develop clear guidelines for effective spatial planning tools for the settlement continuum (e.g., urban settlements, peri-urban estates, dense rural settlements, scattered rural settlements.

6.1.3.2 Promote Compact Development and Densification

STRATEGIC OBJECTIVE: Transformation of spatial form, use and control of space to be more integrated and inclusive for urban communities.

The promotion of compact development will mitigate the negative impact of sprawling settlements by encouraging the planning of co-ordinated, harmonious, sustainable, and compact settlements. Growth in peripheral areas is an inevitable process and needs to be managed to facilitate the establishment of planned settlements and to promote sustainable development. Compact development will further contribute to the protection of sensitive environmental and agricultural areas and will ensure effective and efficient social, engineering, and other services.

Targeted and structured densification can be achieved in a number of ways. This can include limiting and containing the urban development footprint within the Urban Development Line (urban edge / growth boundary); the application of growth boundaries and other growth management techniques; the delineation of settlement edges in rural areas (outer boundary) beyond which residential and other physical development will be discouraged; promoting higher “net” residential densities in strategically located areas within core areas, new growth areas and areas prioritised for infrastructure development; and creating new residential development opportunities that connect fragmented areas and consolidate urban form around high accessibility routes and nodes.

The local level spatial development plans must provide context to targeted densification at a local level, while the PSDF can only provide guidelines in respect of the densification framework for the province. Nodes and corridors should become the focus of densification, although the intensity and application of densification will differ. Measures and targets for densification within each of these categories will differ, depending on the unique situation within each municipal area. Focus areas for targeted densification should include the following:

- Identified nodes, as reflected in the Development Node sub-frame. Nodes are intended to give effect to the ordering and location of services and facilities, in a manner that promotes accessibility and efficiency in service delivery. This is critical for the performance of the province

as a whole and land use integration. As such, the clustering of various activities at appropriate and accessible nodal locations provides the province with a network/system of opportunity centres. Some of these nodes represent major economic growth centres, such as eThekwini, that benefited from significant public and private sector investment in services and infrastructure. Others are in previously disadvantaged areas, which have suffered from institutionalised neglect.

- Nodal areas along corridors and transport routes. This must include the nodal areas identified in the Corridor plans developed for the N3, the N2 North and South, as well as the Umhlathuze-Vryheid and the Vryheid-Emadlangeni-Newcastle-Ermelo (VENE) corridor. Densification cannot be applied evenly along different corridors or at the same scale across the board on a provincial level. Nodal points along corridors will provide an indication of the applicability and the level of densification to be applied.
- Areas under development pressure that require specific actions and interventions to improve an existing situation. These areas can include, amongst others, coastal areas, dense settlements on the urban periphery, informally settled areas, and urban areas requiring regeneration.

Specific **spatial strategies** will include:

- Promote compact development and targeted densification to reduce sprawl.
- Develop densification frameworks as part of local level spatial development frameworks.

6.1.3.3 Integrated and Sustainable Human Settlement Development

STRATEGIC OBJECTIVE: Transformation of spatial form, use and control of space to be more integrated and inclusive for communities.

The KZN PSDF perceives housing as a basic human right that must meet the basic needs of people at both household and community level. The national government defines sustainable human settlements in the Breaking New Ground (BNG) policy (p6), as: "well-managed entities in which economic growth and social development are in balance with the carrying capacity of the natural systems on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity".

The fundamental tenets of human settlement are basic services, security of tenure, social facilities, and shelter. Human settlements are the spatial dimension as well as the physical expression of economic and social activity. Access to employment opportunities and sensitivity to biodiversity enhances the sustainability of human settlements. Sustainable human settlements therefore define and condition the relationship between where people live, play and work on the one hand and how this occurs within the confines of the natural environment on the other.

It is therefore imperative that the fundamental provincial objective relating to the creation of sustainable and integrated human settlements must relate to the advancement of spatial transformation and consolidation of human settlements.

Emerging spatial strategies will include:

- Implementation of a radical Land Reform Programme.
- Upgrading and integrating informal settlements into the urban management system.
- Deliver a range of housing options and housing typologies to attract different market segments of appropriate quality and innovation.
- Packaging new projects using the Integrated Residential Development Programme.
- Facilitate the development of social housing in the gazetted Restructuring Zones.
- Prepare rural settlement plans.
- Develop site and service schemes.
- Use housing as a catalyst for socio-economic development.
- Identify, acquire, and release of well-located land.
- Use alternative technologies (alternative energy provision or water harvesting in all projects).

6.2 OUTCOME 2: SUSTAINABLE PROVINCE

SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Sustainable Province	SUSTAINABLE USE OF RESOURCES	5. Sustainable use and protection of critical natural resources needed as basis for health and development. 6. Sustainable land use management and spatial planning towards sustainable settlements.

The impacts related to the spatial development outcomes and objectives for a sustainable province can be grouped or discussed within the following themes:

- Protection of critical natural resources.
- Water resource and quality management.
- Human Vulnerability and Environmental Change.

6.2.1 PROTECTION OF CRITICAL NATURAL RESOURCES

STRATEGIC OBJECTIVE: Sustainable use and protection of critical natural resources needed as basis for health and development.

The increasing loss of natural habitat and changes in land cover are major drivers of biodiversity loss. These losses and changes pose significant challenges for meeting biodiversity conservation goals and targets. The main drivers of change in the landscape contribute to the direct loss of natural habitat. These effects may be direct (e.g., loss of habitat or extraction of water), indirect (e.g., pollution transported downstream), induced (e.g., associated industries and settlement) or cumulative (e.g., collective impacts on water quality and quantity) and where they cannot be altogether prevented are

minimised and remedied." The main challenge in KZN is thus to conserve biodiversity and natural habitat and strive toward conserving these areas in their near natural state.

Emerging spatial strategies will include:

- Protection of core bio-physical assets towards an integrative economic structure to serve various communities.
- Preparation of spatial linkage plans for core areas where critical biodiversity occurs.
- Prepare appropriate restrictive zoning categories and development control measures and guidelines for ecologically important areas.
- Adhere to regulatory requirements for development that is proposed within critical biodiversity areas.
- Participate in the National Protected Area Expansion.

6.2.2 Water Resource and Quality Management

STRATEGIC OBJECTIVE: Sustainable use and protection of critical natural resources needed as basis for health and development.

The management of water resources requires the protection of water resource assets to secure a sustained supply of water and ecosystem goods and services over time. In addition, it must also reduce vulnerability to the effects of climate change. To this end, a sustained supply of water requires the management of natural assets (water resources management) and the introduction of new infrastructure (water services management). The impact of current and proposed development activities on the water resources of the province is critical and goes hand in hand with investment into water services and sanitation infrastructure.

Emerging spatial strategies will include:

- Protect and use water resources sustainably and ensure that it is well-managed by both authorities and communities.
- Strategic investment in the maintenance and rehabilitation of water ecosystems.
- Declare strategic water source areas and critical groundwater recharge areas as protected areas.

6.2.3 Human Vulnerability and Environmental Change

STRATEGIC OBJECTIVE: Sustainable land use management and spatial planning towards sustainable settlements.

Poverty and vulnerability are interlinked and include various factors and agents influencing human well-being. Understanding the interrelationships between these factors is complex and demands an interdisciplinary approach. It is however becoming clear that issues of environmental degradation, water quality and scarcity, and limited access to agricultural production potential decrease the coping capacity of poor and vulnerable communities. Poverty and unemployment forces people to exploit

natural resources as a livelihood strategy and as a result fall victim to environmental degradation. Changes associated with a changing climate may further impair the resilience of communities.

Emerging spatial strategies will include:

- Improved settlement planning toward sustainable communities.
  - → Determination of rural settlements and associated development boundaries.
  - → Diversification of settlement structures to be more economically sustainable.
  - → Systematic targeting of provincial priority housing projects.
  - → Accelerate the provision of basic services and infrastructure to all households in rural and impoverished areas.
  - → Preparation and effective implementation and use of environmental management instruments.
- Address issues of poverty and settlement planning on par with issues of ecological vulnerability:
  - → Promote strategies to optimize resource deficiency.
  - → Implementing alternative energy options to reduce high dependencies on natural wood resources for domestic energy needs
  - → Inclusion of responsible waste management practices and appropriate waste collection services.
  - → Improve the traditional land allocation system.
- Sustainable wastewater solutions in spatial planning and land use management across the province.
- Inclusion of stormwater solutions within all land use development process to protect lives, infrastructure, and productive land
- Implementation of provincially suitable renewable energy infrastructure as integral part of spatial planning and land use management.

6.3 OUTCOME 3: RESILIENT PROVINCE

SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Resilient Province	ESTABLISHING A RESILIENT PROVINCE	7. Reduce environmental degradation and loss which increases human vulnerability. 8. Create social, economic, and ecological resilience in spatial planning and land use management.

The impacts related to the spatial development outcomes and objectives for a resilient province can be grouped or discussed within the following themes:

- Environmental degradation.
- Human and natural resilience in spatial planning.

6.3.1 Environmental Degradation

STRATEGIC OBJECTIVE: Reduce environmental degradation and loss which increases human vulnerability.

Development pressures in the province, such as population growth, a dispersed settlement pattern and unsustainable use of natural resources, leads to negative environmental impacts and degradation. These negative impacts must be reversed and halted by more effective land use management instruments and effective implementation thereof.

Emerging spatial strategies will include:

- Ensure that spatial planning and land use management considers the impact of and plan for improved adaptation to Climate Change.
    - → Incorporation of disaster risk analysis in spatial planning and land use decisions.
    - → Spatially delineate high flood risk areas, develop a disaster response strategy for settlements within these areas and implement a programme to relocate such settlements.
    - → Identify interventions to maximise community based natural resource management programmes, focused in those areas where land degradation has become a concern.

6.3.2 Human and Natural Resilience in Spatial Planning

STRATEGIC OBJECTIVE: Create social, economic, and ecological resilience in spatial planning and land use management.

KZN is inherently vulnerable to the impacts of economic and environmental shocks, due to its social, economic, and ecological characteristics. These vulnerabilities must be reduced by addressing the conditions determined by socio-economic, physical, economic, and environmental factors which increases the susceptibility to the impacts of hazards. This will require effective adaptation planning that integrates biophysical and socio-economic aspects of vulnerability and resilience. An integrated approach will also address the relationships between climate change, disaster risk and socio-ecological vulnerability.

Emerging spatial strategies will include:

- Ensure that spatial planning and land use management integrates effective adaptation responses.
- Implement effective adaptation planning:
    - → Spatial vulnerability and risk assessments to identify priorities.
    - → Interventions to increase resilience and adaptive capacity in human, economic, environment, physical and ecological infrastructure vulnerability.
    - → Integration of adaptation responses into spatial planning and land use management instruments.

- Increased flexibility in spatial planning and land use management to enable economic and social adaptation.
  - → Develop land use schemes and controls that introduce simplified development application procedures related to certain types of applications.
- Rural spatial structuring towards increased self-reliance and reduction in economic vulnerability.
  - → Develop interventions to improve the environmental management capacity of Traditional Leaders and development environmental planning standards that are aimed at creating ecological resilience.

6.4 OUTCOME 4: PRODUCTIVE AND EFFICIENT PROVINCE

SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Productive and Efficient Province	PRODUCTIVE AND EFFICIENT DEVELOPMENT OF THE SPATIAL ECONOMY	9. Develop and promote the agricultural potential of KZN. 10. Develop and promote the biodiversity economy in KZN 11. Provide regional infrastructure networks to support economic production. 12. Focus spatial economic development in strategic areas.

The outcome and its associated objectives aim to achieve greater spatial efficiency and making productive use of available land and infrastructural resources, trough focussing on the following key impacts:

- Protect high potential agricultural land for economic development.
- Increased access to and development of productive agricultural land.
- Regional infrastructure networks to support economic production.
- Invest in the green and biodiversity economy.

6.4.1 AGRICULTURAL DEVELOPMENT

6.4.1.1 Protect High Potential Agricultural Land for Economic Development

STRATEGIC OBJECTIVE: Develop and promote the agricultural potential of KZN.

Agriculture and farmland are an integral part of the economy, environment, and overall quality of life. Appropriately, managed agricultural lands can provide groundwater recharge, wastewater infiltration, flood prevention, and habitat protection. Although some transformation and conversion of agricultural land is inevitable, the protection of high potential agricultural land is critical. To this end, the agricultural authorities regard land with a high agricultural potential as a scarce non-renewable resource and accordingly applies a risk averse and cautious approach when development of such land for purposes other than agricultural production is proposed. It is this imperative to support this risk-averse approach as the basis for decision-making that leads to the requirement for legal protection of land with high potential for agriculture.

Settlement development and the protection of natural resources, such as good agricultural soils, are two of the primary planning goals. Outward expansion of settlement occurs at the expense of high value, well located agricultural land near urban markets. Such land is a scarce resource, which should be set aside for productive agriculture and food security. If growth is properly directed, the two goals rarely come into conflict. If it is not, neither goal can be achieved. Therefore, programmes for the preservation of agricultural land should be integrated with the general settlement growth management programs.

Specific spatial strategies will include:

- Identification of higher potential agricultural land and distribution of a common dataset to all departments and municipalities for spatial planning and land use management.
- Ongoing monitoring of high potential agricultural land and the transformation thereof.
- Alignment with spatial planning frameworks and the High Potential Agricultural land as identified within the Preservation and Development of Agricultural Land Bill.
- Minimising settlement concentrations within high potential agricultural areas by directing nodal concentrations elsewhere and applying settlement growth boundaries.

6.4.1.2 Increased access to and development of productive agricultural land

STRATEGIC OBJECTIVE: Develop and promote the agricultural potential of KZN.

The agriculture sector is the main driver in the primary sector of the province; produces almost 30% of national agricultural output; and hence contributes significantly to food security in South Africa. Increased access to and development of productive agricultural land for economic development and food security at provincial level is thus of grave importance. The linkage and development of this economic sector to large-scale agriculture, agro-processing, agro-eco enterprises, tourism and natural resource management and protection, play a key role in creating economic opportunities, and addressing poverty and unemployment. The implementation and establishment of viable regional Agri-Hubs and Farming Production Support Units (FPSUs), in line with the programmes of the National Department of Agriculture, Land Reform and Rural Development must be supported. In addition, agro-processing and rural economic activities must be promoted in local towns and rural service nodes.

Specific spatial strategies will include:

- Alignment between rural service nodes and Farming Production Support Units in support of each other.
- Identification and development of infrastructure (road, rail, water, and Electricity) to integrate agricultural activities between rural settlements and agricultural production areas.
- Balance agricultural and water production capacities within quaternary catchment areas to identify appropriate farming capabilities.

6.4.2 GREEN ECONOMY

STRATEGIC OBJECTIVE: Develop and promote the biodiversity economy in KZN.

Working towards a green economy is one of the strategic priorities identified in the National Strategy for Sustainable Development (NSSD) and is identified as an area of opportunity for rural development and prosperity through potential job creation and the development of biodiversity nodes.

The green economy relates to economic goals based on ecological sustainability and built on a culture that recognises that socio-economic systems are dependent on and embedded in ecosystems. Opportunities can include environmentally friendly infrastructure; green (renewable) energy generation and green manufacturing; public employment schemes to support natural resource management; environmental programmes; and the identify biodiversity economy nodes.

Emerging Strategies will include:

- Identify key green economy areas associated with bioproduction, tourism and other environmental assets.
- Ensure that spatial planning and land use management contribute to the existing Biodiversity Economy Transformation Nodes.
- Improve access to relevant resources with potential for promoting the biodiversity economy (wildlife and bioprospecting) by identifying additional opportunity areas for expansion of the biodiversity economy.

6.4.3 REGIONAL INFRASTRUCTURE NETWORKS TO SUPPORT ECONOMIC PRODUCTION

6.4.3.1 Development Corridors

STRATEGIC OBJECTIVE: Provide regional infrastructure networks to support economic production.

At a national and regional scale, KwaZulu-Natal provides an important gateway for both the import and export of goods through the Ports of Durban and Richards Bay. The SIP 2 Corridor is nationally the most significant corridor to the province, linking the Port of Durban, via the N3 route, to Gauteng and other African Countries. This route also includes multiple commercial pipelines of goods and crude oil, important to the national economy. The protection of the flow of goods (by road, rail, or pipeline) along the N3 route as well as the further development of potential beneficiation along key points of the corridor is an important anchor for the development of towns within the central parts of the province.

The development of the other major corridors such as the N2 north and south (to Mozambique and the Eastern Cape respectively) will further continue to provide not only intraregional accessibility and distribution of goods, but also serve as a development anchor for settlements along the entire coastline of the province.

An important emerging regional development corridor is identified between Richards Bay – Ulundi – Vryheid and Mpumalanga. This corridor will contribute not only to the economy of the province, but also assist in the rural economies where this (and other corridors) intersects with rural settlement areas.

As part of a focussed strategy for rural development a system of regional and local transport routes has been identifies, which link a number of areas. These routes should be seen as activity and investment lines. The structure they give to the area is articulated in the form of movement patterns and systematic distribution of land uses in space.

However, not all regional routes are the same in terms of the intensity of use and ability to attract investment, services, economic activities, and settlement. Generally, larger routes linking generators of movement and investment have a greater generative capacity than smaller routes. As such, regional facilities and services should gravitate towards these areas, while smaller facilities, requiring smaller thresholds should be located along smaller routes. This has an impact of reducing spatial marginalization, increasing equitable access to all level of services, and promoting investment. The location of facilities along major routes recognizes the importance of choice to the rural communities with respect to services such as education, health, and welfare facilities.

Specific **spatial strategies** will include:

- Integrated network of development corridors with varied strategic functions.
- Identification of major economic corridors linking economic production and distribution areas with markets.
- Identification of rural linkages and development corridors to improve rural accessibility to regional economic opportunities.
- Provincial alignment and implementation of NSDF spatial intervention areas.
- Increasing the use of freight rail systems.

6.4.3.2 Development Nodes and Service Points

STRATEGIC OBJECTIVE: Provide regional infrastructure networks to support economic production.

Both economic growth and social development requires an ordering and location of services and facilities, in a manner that promotes accessibility and efficiency in service delivery. This is critical for the performance of the province as a whole and land use integration at a localised level. As such, the clustering of various activities at appropriate and accessible nodal locations provides the municipality with a network/system of opportunity centres. Some of these nodes have benefited from public and private sector investment in services and infrastructure, which needs to be managed and maintained. Others are located in previously disadvantaged areas, which have suffered from institutionalised neglect. Although the nodes have contrasting characters, profiles, and management issues, they cumulatively accommodate most economic activities, employment prospects, an existing/growing residential stock, and access to community facilities and services. As such, the strength and feasibility of the nodal points are linked to the functioning and health of their catchment areas. The

concentration of activities in and around these areas will stimulate further development of higher order activities.

Specific **spatial strategies** will include:

- Development on a nodal network, with varied nodal functions, in support of each other and collectively aimed at regional and provincial development.
- Focussed integration, structuring and densification strategies and programmes within key nodes.
- Alignment of a nodal hierarchy with other spatial strategies such as corridor development and infrastructure investment.
- Identification and development of focussed economic zones (associated with nodes) for regional economic anchors and sector specific development (e.g., SEZs).

6.4.3.3 Long Term Planning of Regional Infrastructure

STRATEGIC OBJECTIVE: Provide regional infrastructure networks to support economic production.

The intended development of investment corridors and nodes requires improved long-term planning of infrastructure at a regional scale, in order to provide the necessary capacities within the investment zones to attract and accommodate the anticipated growth. This will require a direction towards more data driven and pro-active planning of infrastructure to not only respond to demands, but also guide/ direct intend development. The use of infrastructure provision as an instrument for regional spatial structuring will assist to achieve the desired spatial structure within the province.

The availability of natural, human, and financial resources will determine the strategic rollout and timing of such infrastructure investments and should therefore be used to direct strategic investments into areas where the greatest socio-economic impacts will be achieved.

Specific **spatial strategies** will include:

- Increased monitoring and modelling of spatial trends and future demands for services across the province.
- Improved integrated planning of all services within spatial and land use planning. (e.g., alignment between water and sanitation planning within settlements).
- Pro-active determination of major bulk infrastructure routing and supply points.
- Systematic establishment of an acceptable, geographically varied Minimum Basic Service Levels.

6.4.3.4 Data Connectivity

STRATEGIC OBJECTIVE: Provide regional infrastructure networks to support economic production.

Spatially, there is a high level of correlation between the distribution of areas with low data connectivity levels and areas of low development levels. There is also an established understanding that future social services and economic activities are greatly linked to access to data.

Economic activities are increasingly moving online in all sectors and also, for both large corporate businesses and small businesses. Increased data connectivity can also serve as an equaliser by enabling even rural areas to participate within economic activities. Socially, data connectivity provide access to education, population services, grant payments and electronic government services.

Although data connectivity is mainly driven by private sector providers, market demand and affordability, and spatial planning could contribute to directing these services through integrated infrastructure provision and dedicated poverty alleviation strategies.

Specific **spatial strategies** will include:

- Identify strategic geographical target areas for the rollout of ICT infrastructure.
- Establish Towns and Small Towns as centres where knowledge-based economic opportunities and ICT access nodes are made available to local communities and businesses in the broader rural and settlement communities that fall within the areas of influence of such towns.

6.4.4 Focus Spatial Economic Development in Strategic Areas

STRATEGIC OBJECTIVE: Focus spatial economic development in strategic areas.

Apart from investment concentration along development nodes and corridors, the broad economic sectors which drives the movement of people, goods and services along those nodes and corridors also needs to be targeted spatially.

This will include the identification of broad economic investment sectors linked to the province's strategic locality and competitive advantages such as the development of the **Blue Economy**, the **Green Economy** (see 6.4.2)**,** and the **Knowledge Economy**. Each of these economics may include primary, secondary, and tertiary economic activities, but need to be acknowledged as key economic opportunities which need to be developed and considered in regional spatial planning.

Specific **spatial strategies** will include:

- Develop the Blue Economy by identifying and integrating key maritime assets and opportunities in line with the Operation Phakisa Programme.
- Identification and integration of Technology Hubs within regional spatial development strategies.
- Establish local and rural centres of learning excellence in capacity building and skills development in all sectors of the local economy with a focus on the knowledge-based industries.

6.5 OUTCOME 5: WELL-MANAGED PROVINCE

SPATIAL DEVELOPMENT OUTCOMES	STRATEGIC GOAL	STRATEGIC OBJECTIVES
Well-managed Province	WELL-MANAGED SPATIAL & LAND DEVELOPMENT PROCESSES	13. Spatial planning and development application procedures are efficient and streamlined to contribute to the rapid development of the province. 14. Accountable and capacitated spatial governance systems. 15. Improved role-players participation in land use decision making.

The outcome and its associated objectives aim to achieved improved spatial governance, trough focussing on the following key impacts:

- Vertical and horizontal alignment and co-ordination.
- Improved Spatial Governance.
- Participation in decision making.

6.5.1 VERTICAL AND HORIZONTAL ALIGNMENT AND COORDINATION

STRATEGIC OBJECTIVE: Spatial planning and development application procedures are efficient and streamlined to contribute to the rapid development of the province.

The objective requires the adoption of an integrated approach in spatial planning and land development, particularly by different spheres of government and sectoral role-players. This alignment is important for the co-ordination and timing of resources to achieve the desired spatial structure and development levels.

Furthermore, although vertical alignment represents alignment between various tiers of government, horizontal alignment refers to cross border alignment at regional and local scales, but also between various service authorities and infrastructure providers to ensure co-ordination in focussed investment areas.

Lastly the co-ordination of spatial planning and land use management refers to the management of an improved integration between the dual land management systems employed by both Local Municipalities and Traditional Authorities in most of the municipalities within the province.

Specific **spatial strategies** will include:

- Integration of spatial planning within various tiers of government by using the PSDF as a coordinating mechanism.
- Systematic alignment of financial resources towards the desired spatial structure of the province.
- Increased departmental inputs into local spatial planning and land use management.
- Systematic implementation and co-ordination of online land use application systems.

6.5.2 Improve Spatial Governance

STRATEGIC OBJECTIVE: Accountable and capacitated spatial governance systems.

The achievement of the desired spatial transformation within the province will require both strategic plans, but also a level of accountability towards achieving specific spatial targets. This objective will require both specifically expressed targets, but also an increase in the capacity of role-players involved in the achievement thereof as well as the accountability of such role-players.

The envisaged level of monitoring an adjustment have not been fully implemented in the past and may have contributed to the lack of spatial transformation within the province. The mechanisms involved in municipal organisational management have a significant role to play in the development of capacity and the measurement of performance in this regard.

Specific **spatial strategies** will include:

- Establishment of both provincial and local spatial transformation targets.
- Establishment of a spatial monitoring and assessment system linked to structures and individual performance.
- Continued training and capacity building programmes towards improved spatial planning and land use management.

6.5.3 Participation in Decision Making

STRATEGIC OBJECTIVE: Improved role-players participation in land use decision making.

Participation in spatial planning and land use management within the province is driven by the fact that land is not always owned by the authorities planning on it and such planning furthermore impacts on various settlements, communities, and service authorities. Furthermore, the implementation of a number of spatial strategies are also not the responsibility of those involved in the spatial planning. It is therefore important to ensure that various key role-players are sufficiently included in the planning and decision-making processes which impacts on those role-players.

With KwaZulu-Natal, the recent community satisfaction surveys indicated that a fairly low percentage of the public engaged in the public spatial planning processes. Furthermore, the involvement of the traditional communities within planning has also been lacking. The objective therefor aims to improve the participation of various role-players by focussing on the mechanisms and motivation of participation with spatial planning and land use management processes.

Specific **spatial strategies** will include:

- Dedicated spatial planning and land use management capacity building programmes to specific groups such as Municipal Councils, State Owned Enterprises, Traditional Councils, Implementing Departments, and the public. (The Department of Agriculture, Land Reform and Rural Development is in process of developing a framework for such SPLUMA related capacity building)
- Systematic implementation and co-ordination of online land use application systems.

7 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

7.1 SPATIAL DEVELOPMENT SUB-FRAMES

The spatial development framework is developed and informed by subframes, which relates to the spatial concepts outlined above. The intention of the subframes is to provide a spatial representation of the desired spatial and land use pattern for the province. The subframes were developed represent the development policies strategies and objectives of the province in a spatial manner, where possible. The subframes include the following:

FIGURE 19: SPATIAL DEVELOPMENT SUB-FRAMES

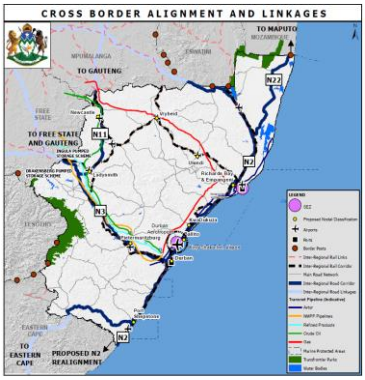
Natural Resource Protection

The intent of this sub-frame is to ensure the building blocks of natural resources, which includes water, biodiversity and agricultural land are protected, effectively managed and used in a sustainable manner.

Productive Rural regions

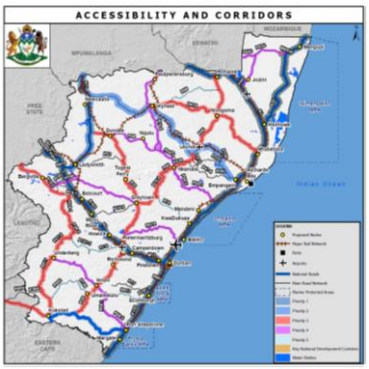
- Protect the primary resources necessary for the development of the Rural Space Economy.
- Protect and develop productive agricultural land to improve food security within the province.
- Identify areas for agricultural production and processing as input to other secondary sectors within the provincial economy.
- Identify linkages required within the productive rural regions to better integrated rural settlements with agricultural economic opportunities..

Cross Border Alignment and Linkages



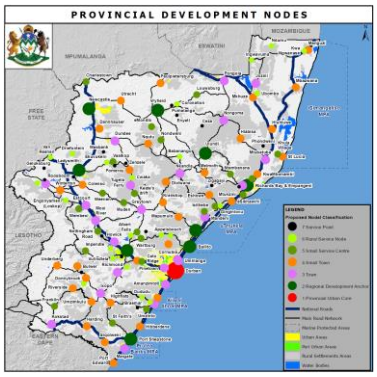
- Strengthen and enhance linkages to neighbouring countries and provinces through supporting and coordinating cross border spatial planning issues relating to spatial connectivity and linkages (transport and logistics), energy networks, ecological networks, and water availability.

Provincial Development Corridors, Accessibility & Cross border alignment



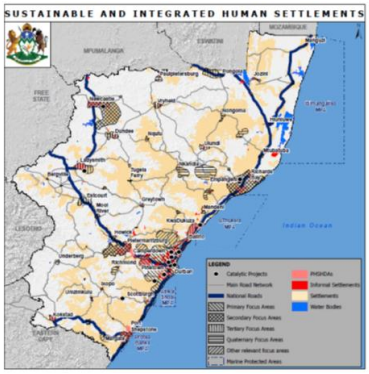
· Identify key regional linkages to improve accessibility to all areas and economic regions within the province.
· Identify national and international linkages and development corridors which impact on the provincial economic anchors, infrastructure, and growth opportunities.

Development Nodes



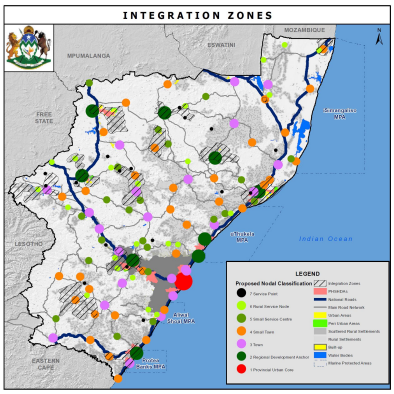
· Concentration of people, movement and production in certain points provides for cost effective service delivery,
· Enables better access to social facilities and opportunities
· Reduces Urban sprawl onto either sensitive environmental resources and/or productive agricultural land
· The mere focus on nodes will also address the inefficient and fragmented morphological form and allow for nodes to become more efficient and sustainable

Sustainable & Integrated Human Settlements



Creation of sustainable and integrated human settlements that relate to the advancement of spatial transformation and consolidation of human settlements.

Integration Zones



The intention of these zones are to spatially indicate areas that require specific interventions in terms of integration.

7.1.1 Natural Resource Protection

The natural resource system in the province forms the foundation that enables all human life and activities. As such, it must be protected from disturbance and displacement by future development and must be used, managed, and protected with great care. It is one of the provinces most strategic assets and includes some of the country's national and international protected areas (e.g., Maloti Drakensberg Trans-Frontier Conservation Area; Lubombo Trans-frontier Conservation Area, marine protected areas), irreplaceable agricultural areas and strategic surface and groundwater water production areas.

The spatial distribution of biodiversity areas of significance is considered vital to provide the spatial framework for future development planning, particularly indicating those areas where development needs to be avoided or carefully managed. The natural assets perform a substantial and significant role in conserving biodiversity as well protecting the quality of life of the residents of the province. Of vital importance is the protection of protected areas, ecological, agricultural, water and heritage resources through well managed spatial planning and development.

From a PSDF perspective, it is thus critical to ensure that the following guiding areas of interventions are noted:

7.1.1.1 Priority Environmental Areas

The priority environmental areas are defined by the formally protected areas within the province and viewed as some of the core environmental areas. These areas serve as environmental anchors to the biodiversity network within the province and include large areas such the uKhahlamba-Drakensberg World Heritage Site (233484ha) the iSimangaliso Wetland Park (324441ha), as well as various other smaller nature reserves, protected environments, and protected environments. The area also private and other parks which are found near the protected environmental areas and form part of the extended environmental resource network and tourism regions.

7.1.1.2 Critical Biodiversity Areas (CBAs)

The provincial spatial framework for the conservation of biodiversity (KZN Biodiversity Plan) identifies and map areas that are important to meet biodiversity conservation targets on a provincial scale. The CBA areas identified in the CBA Map are considered as priority biodiversity areas as these areas are critical for meeting biodiversity targets and thresholds and are required to ensure the persistence of viable populations of species and the functionality of ecosystems. These priority biodiversity areas, with the Protected Areas form the core biodiversity areas within the province that require protection. These core biodiversity areas cannot however function as closed units within which conservation occurs. Connectivity within the landscape and to other core biodiversity habitats is required to provide for species movement, gene flow, and ecological and climate change processes and the Ecological Support Areas (ESAs) have been identified and delineated to provide these important linkages. The core biodiversity areas and the linking ecological corridors thus form the biodiversity network that is required for the province to ensure the persistence and maintenance of habitats, ecosystems and their associated species. These spatial biodiversity priorities have implications for development, which

are expected to be consistent with specific land use objectives and guidelines that are aimed at safeguarding the country's biodiversity resources.

7.1.1.3 Biodiversity Landscape Corridors

The identified biodiversity landscape corridors are regionally critical conservation areas which are linked in a continuous network of ecosystems and bioregions traversing the province between the Drakensberg and the Indian Ocean. These areas were identified by Ezemvelo KZN Wildlife, by considering extensive environmental research into bio-resources throughout the province as part of the formulation of a Critical Biodiversity Plan for the province. These corridors are not viewed as absolute "no-go" areas, but rather highlighted as areas of environmental significance to the sustainable development of the entire province. Where economic opportunity (such as tourism development) and high social need exist within these biodiversity landscape corridors, it implies both that the rich natural environment should contribute to the address such needs and potential, and further that any interventions in these areas need to consider the impact on such important regional ecological corridors. These corridors are however perceived as areas where extensive densification would be discouraged, and sensitive development promoted.

7.1.1.4 Agricultural Production Areas

The agricultural production areas layer represents relatively high agricultural production areas, which are not located within biodiversity areas or combined with other potential economic sectors. These are highlighted by this category to identify and promote areas with the potential to make a significant contribution through agricultural production. Although successful farming practices are already occurring on some of these areas, it is proposed that underutilised agricultural land within these zones are more effectively utilised for sustainable agricultural production. Associated interventions may include agriculture specific infrastructure, skills development, market access interventions etc.

7.1.1.5 Low Potential Agricultural Areas

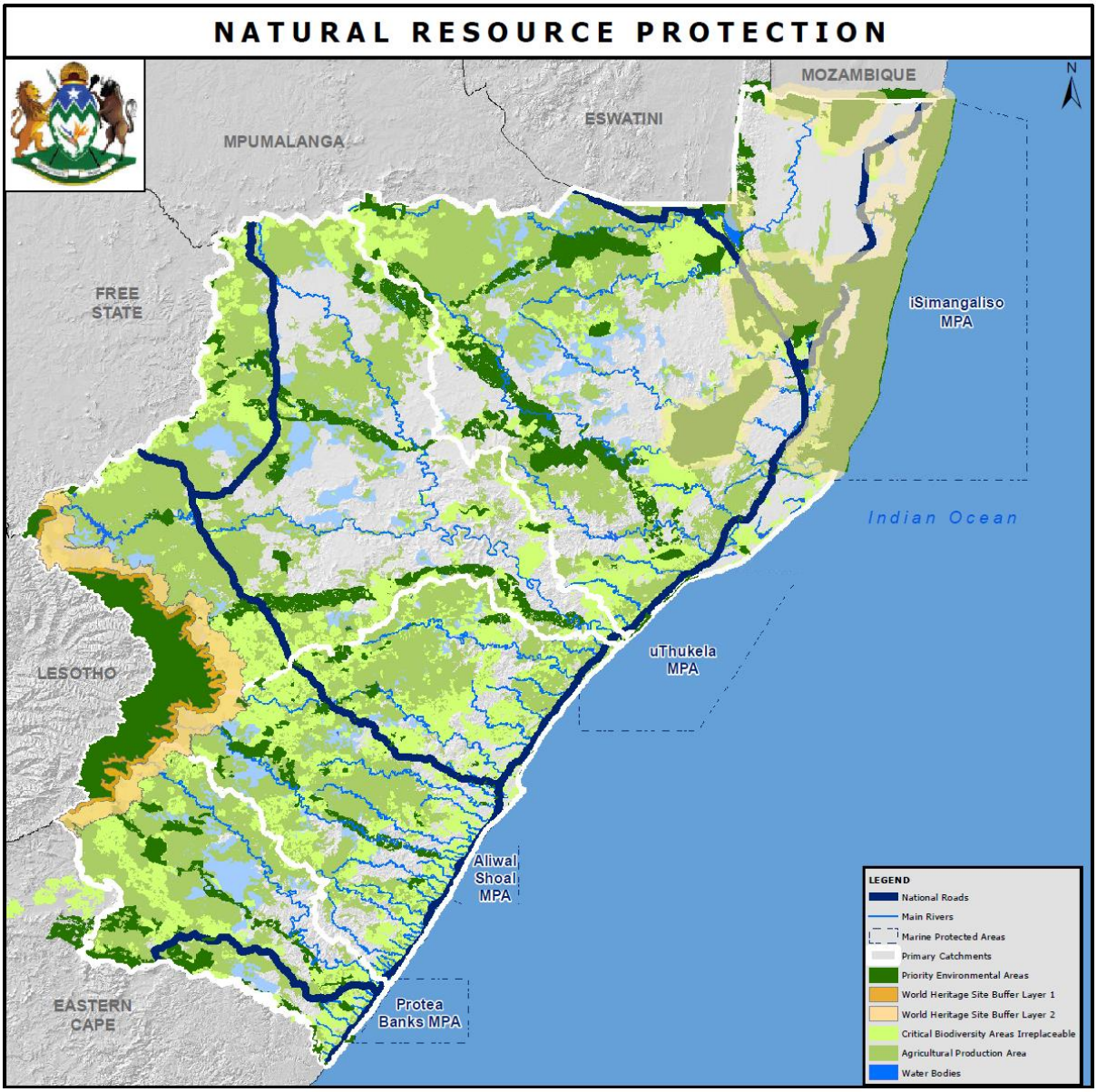
These are areas where the agricultural potential is relatively low, although limited and communal agricultural activities area often found within these areas. It is evident that it is found at the interface between the more productive agricultural areas and the rural settlement areas. These regions also have communities (although sparsely distributed) residing within these areas. It is therefore important that this category is not neglected from public and private interventions and as the various departmental programmes are inclusive in nature, these areas should also benefit from it. It is anticipated that the intensity of such programmes and the total portion of resource allocation to these areas would be less than the identified categories as well as the key intervention areas identified previously.

7.1.1.6 Strategic Water Source Areas

The Strategic Water Source Areas: Management Framework and Implementation Guidelines for Planners and Managers (2018) describes SWSAs as "are areas of land that either: (a) supply a disproportionate amount of mean annual surface water runoff in relation to their size and are considered nationally important; or (b) have high groundwater recharge or where the groundwater

forms a nationally important resource or both; or (c) areas that meet both criteria (a) and (b). They are vital for water and food security in South Africa and also provide the water used in generating most of the electricity." As such, these are of critical importance for the natural resource protection framework.

FIGURE 20: PROTECTION OF NATURAL RESOURCE SUB-FRAME



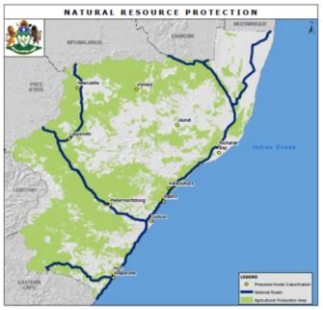
INFORMANTS

The composite Natural Resource Protection map consists of different informants, as indicated on the right:

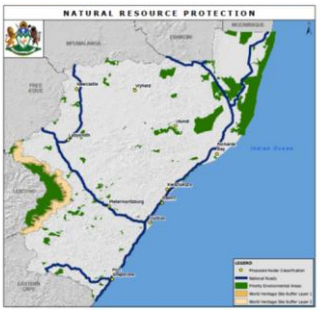
- Priority environmental areas (includes protected areas and biodiversity corridors)
- Critical Biodiversity Area (Irreplaceable)
- Primary catchments
- Strategic Water Source Areas (SWSAs) – ground and surface water.

CRITICAL BIODIVERSITY AREAS (IRREPLACEABLE)

AGRICULTURAL PRODUCTION AREAS



PROTECTED AREAS



STRATEGIC WATER RESOURCES AREAS

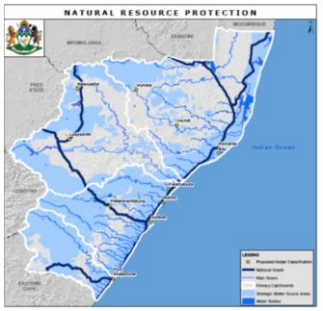


TABLE 4: PROTECTION OF NATURAL RESOURCES

PROTECTION OF NATURAL RESOURCES	
Purpose/ intent	The intent of this sub-frame is to ensure the building blocks of natural resources, which includes water, biodiversity and agricultural land are protected, effectively managed and used in a sustainable manner.
Informant policy or strategy (dept policy/strategy)	**INFORMANTS AND STRATEGIES IMPACTING PROVINCIAL PLANNING** o KZN Environmental Implementation Plan, 2016 o KZN Environmental Outlook Report, 2017 o KZN Biodiversity Plan (also referred to as the KZN Systematic Conservation Plan or the C-Plan) o National Biodiversity Strategy and Action Plan 2015-2025 (NBSAP) o Biodiversity Framework 2017-2022 (NBF) o National Coastal Management Programme of South Africa, 2014 o KZN Coastal Management Programme, 2019 o KwaZulu-Natal Integrated Waste Management Plan (IWMP) o KZN Agriculture Master Plan o National Framework for Air Quality Management in South Africa, 2017 o National Waste Management Strategy, 2019 o Municipal waste sector plan, 2011 o National Water Resource Strategy (NWRS2), 2013 o National Water and Sanitation Master Plan (NWSMP), 2018 o Policy for the Preservation and Development of Agricultural Land (2016) o National Strategy For Sustainable Development o National Biodiversity Assessment (2018) o UKhahlamba Drakensberg Park World Heritage Site Buffer Zone **INFORMANTS AND STRATEGIES IMPACTING LOCAL PLANNING** o Ezemvelo KZN Wildlife Guidelines Incorp Biodiversity LUScheme V2.1 April 2021 o Ezemvelo KZN Wildlife -Guideline for Biodiversity incorporation into SDFs 07 03 2017 o Ezemvelo KZN Wildlife - Norms and standards to regulate the impact of tourism development upon landscape character in a specified area (Kwasani subregion) in the uKhahlamba-Drakensberg region, Kwazulu-Natal. o National Protected Areas Expansion Plan 2016 (DEFF) o Management Plans: → aMahlongwa EMP (EDTEA) - under development → Durban Bay EMP (DEFF) - gazetted → iBilanhlonhlo EMP (RNM) - developed → iFafa EMP (uMdoni Muni) - under development → iKongeni EMP (EDTEA) - under development → iLovu EMP (EDTEA) - under development → iMpenjani EMP (Ezemvelo) - under development → iSipingo EMP (eThekwini Muni) - under development → iZinkwazi EMP (EDTEA) - under development → Kosi Bay EMP (IWP) - under development → Lake St Lucia EMP (iSimangaliso Wetland Park, IWP) - developed → Mgobozeleni EMP (IWP) - developed → Hlangeni EMP (RNM) - developed → uMbango EMP (RNM) - developed → uMhlangomkulu North EMP (RNM) - developed → uMhlathuze/Richards Bay EMP (consolidated) (DEFF) - gazetted → uMphambanyoni EMP (uMdoni) - under development

PROTECTION OF NATURAL RESOURCES	
	→ uMthente EMP (RNM) - developed → uMthwalume EMP (uMdoni Muni) - under development → Umuntongazi EMP (Ray Nkonyeni Muni, RNM) - developed → uMuziwezinto EMP (uMdoni Muni) - under development → uMzimkhulu EMP (RNM) - developed → uThongathi EMP (EDTEA) - under development o MDTP Draft Policy Documents o uKhahlamba Drakensberg Park World Heritage Site: Integrated Management Plan
Methodology of mapping	**DATA FOR MAPPING:** o Combined Protected Areas 2020 (NEMPA) o Maloti Drakensberg Trans-frontier Park (MDTP) World Heritage Site Buffer o Strategic Water Source Areas - surface water and ground water o Terrestrial CBA (CBA Irreplaceable, CBA Optimal, ESA, ESA Species) o Primary catchments. o Marine Protected Areas (Aliwal Shoal MPA; uThukela MPA; Protea Banks MPA; iSimangaliso MPA) o Water Bodies.
Provincial spatial strategies	Refer to section 4.
Include specific names/ regions/ routes/spatial location etc. (spatial focus areas)	o Trans-frontier Parks, such as Maloti Drakensberg Trans-frontier Park, Lubombo Trans-frontier Conservation Area. o Major National and Provincial Parks, such as the uKhahlamba Drakensberg Park World Heritage site, Hluhluwe iMfolozi Park, iSimangaliso Wetland Park. o Fresh Water Protection Areas. o Marine Protected Areas (Aliwal Shoal MPA; uThukela MPA; Protea Banks MPA; iSimangaliso MPA).
Local spatial planning and land use management guidelines	**BIODIVERSITY MANAGEMENT** o Reduction in the rate of ecosystem and species extinction. o Biodiversity assets are protected to secure a sustained supply of ecosystem goods and services over time. o The ability to secure the ecosystem goods and services upon which future communities must build their livelihoods will require short-term responses. This is challenging in a "pro-poor" policy environment where an eco-centric approach to development is neither applicable nor achievable. o Participation in the National Protected Area Expansion. o More detailed spatial linkage plans for core areas where critical biodiversity areas occur. o Applying appropriately restrictive zoning categories for ecologically important areas. o Adhering to regulatory requirements for development that is proposed within critical biodiversity areas. **WATER RESOURCE MANAGEMENT** o Flood risk areas must be delineated as "no-go" areas. o Wetlands and riparian zones must be rehabilitated and protected from future development. o Land use practices must conform to the National Freshwater Ecosystem Priority Area Guidelines. o Improving sanitation and waste management infrastructure and services in nodal areas.

PROTECTION OF NATURAL RESOURCES	
	o District Municipalities to facilitate and assist in establishing effective water quality monitoring programme, as well as the gathering and storage of all information available regarding water quality. **WATER QUALITY MANAGEMENT** o Development of Integrated Catchment Management Plans. o Develop and implement a scheduled maintenance and upgrade programme of all sewerage infrastructure and wastewater treatment works. o Develop a water pollution emergency response protocol. o Develop an integrated water quality and river health monitoring system. o Develop an incentive scheme designed to improve water quality. o Integrate the costs of restoration and sustainable management of catchments into the water reconciliation and pricing strategy. o Ensure adequate resources and capacity for the compliance monitoring and enforcement of relevant water legislation. o Develop policies for improved /efficient technologies at the points of waste generation and effluent treatment to reduce impacts. o Implement and ensure compliance with an integrated waste discharge-charge system **WATER DEMAND AND SUPPLY** o The restoration and sustainable management of water catchments. o Policies and measures implemented to significantly reduce levels of water consumption and demand through water use efficiencies. o Determination and maintenance of the ecological reserve for key rivers. o Coordinate and integrate strategies and programmes to ensure sustained implementation of alien plant control and rehabilitation. o Coordinate and integrate strategies and programmes for wetland and riparian area rehabilitation. o Implement a water loss and wastage management plan. o Develop policies and strategies for the more efficient and effective management of farm dams and irrigation systems. **MANAGEMENT OF CULTURAL HERITAGE** o Cultural resources, such as rock art, museums, archaeological sites, historical buildings and material must be protected and managed to avoid destruction due to inappropriate forms of development, as well as activities undertaken that are associated with these resources (e.g. tours). o Cultural heritage sites can be used as an income generating resource, which could be used to protect and manage the resources of the region. o Education in culture and history must be supported and encouraged in order to enhance knowledge, protection and full economic use of these assets. **MANAGEMENT OF LAND RESOURCES** o Provide strategy and guidelines in SDF. **HUMAN VULNERABILITY AND ENVIRONMENTAL CHANGE** o Spatially delineate high flood risk areas, develop a disaster response strategy for settlements within these areas and implement a programme to relocate such settlements. o Interventions to improve the environmental management capacity of Traditional Leaders and the Ingonyama Trust Board and the development of environmental planning standards that are aimed at creating ecological resilience. o Interventions to maximise community based natural resource management programmes, focused in those areas where land degradation has become a concern.

7.1.2 PRODUCTIVE RURAL REGIONS

Most poverty concentrations within the province, remain within the rural areas and associated with the traditional authority areas. This reduces accessibility (due to terrain, distance, and transport infrastructure) of these settlements to urban economic opportunities and necessitate the development of localised rural economic opportunities.

Furthermore, the expanse of these rural areas impacts on productive agricultural land and there is thus a need to focus on the protection and development of productive rural regions to develop the agricultural potential of the province as well as the ability of the rural communities to access and develop the rural economy.

7.1.2.1 Agricultural Production Areas

The agricultural production areas layer represents relatively high agricultural production areas, which are not located within biodiversity areas or combined with other potential economic sectors are highlighted by this category to identify and promote areas with the potential to make a significant contribution through agricultural production. This map indicates the areas with substantial agricultural potential, and those which have become highly degraded and have limited potential for agricultural production. Understanding agricultural land potential is essential in understanding the dynamics of rural communities and in formulating relevant strategies for rural development.

Although successful farming practices are already occurring on some of these areas, it is proposed that underutilised agricultural land within these zones are more effectively utilised for sustainable agricultural production. Associated interventions may include agriculture specific infrastructure, skills development, market access interventions etc.

7.1.2.2 Farming Production Support Units

As part of the AgriPark strategy being implemented within the province, the identification and development of the Farming Production Support Units (FPSUs) was identified as the priority first step towards anchoring rural agricultural efforts around production support facilities. A total of 22 FPSUs have been identified within the province as listed below:

TABLE 5: FARMING PRODUCTION SUPPORT UNITS

District Municipality	Local Municipality	FPSU Project	Longitude	Latitude
Amajuba	Emadlangeni	Bensdorp FPSU	30.3068	-27.6993
	Newcastle	Zamokwakhe FPSU	29.9621	-27.6965
Harry Gwala	Ubuhlebezwe	Texas Valley/Highflats FPSU	30.1993	-30.2573
	Greater Kokstad	Franklin FPSU	29.4788	-30.3071
	Umzimkhulu	Malenge FPSU	29.6347	-30.1269
		St Pauls FPSU	29.6477	-30.2402
Ilembe	Ndwedwe	Jikijela FPSU	31.1506	-29.325
		KwaNgcolosi FPSU	30.8925	-29.5698
	Maphumulo	Mthandeni FPSU	31.0782	-29.2671
King Cetshwayo	Nkandla	Nkungumathe FPSU	31.0467	-28.5297
	Umhlathuze	Clanso FPSU	31.8662	-28.7226
Ugu	Ray Nkonyeni	Horse Shoe Farm FPSU	30.1518	-30.7162
Umgungundlovu	Mpofana	Manana FPSU	30.2159	-29.1047

District Municipality	Local Municipality	FPSU Project	Longitude	Latitude
		Mooi River FPSU	30.3941	-28.8967
		Clarence FPSU	30.373	-29.5752
	Richmond	Hopewell FPSU	30.4036	-29.7745
Umkhanyakude	Jozini	Ndumo B FPSU	32.2521	-26.9519
	Big 5 Hlabisa	Hlabisa FPSU	31.8713	-28.1488
	Jozini	Ndumo FPSU	32.2611	-26.9916
Umzinyathi	Msinga	Tugela Ferry FPSU	30.4377	-28.7532
Uthukela	Imbabazane	Hlathikhulu FPSU	29.6489	-29.1994
Zululand	Nongoma	Bululwane FPSU	31.507	-27.9834

The FPSUs located in areas where productive agricultural land meets the rural communities and the associated socio-economic needs and would therefore significantly contribute to the regional agricultural production and process within rural areas.

7.1.2.3 Areas of Social Need

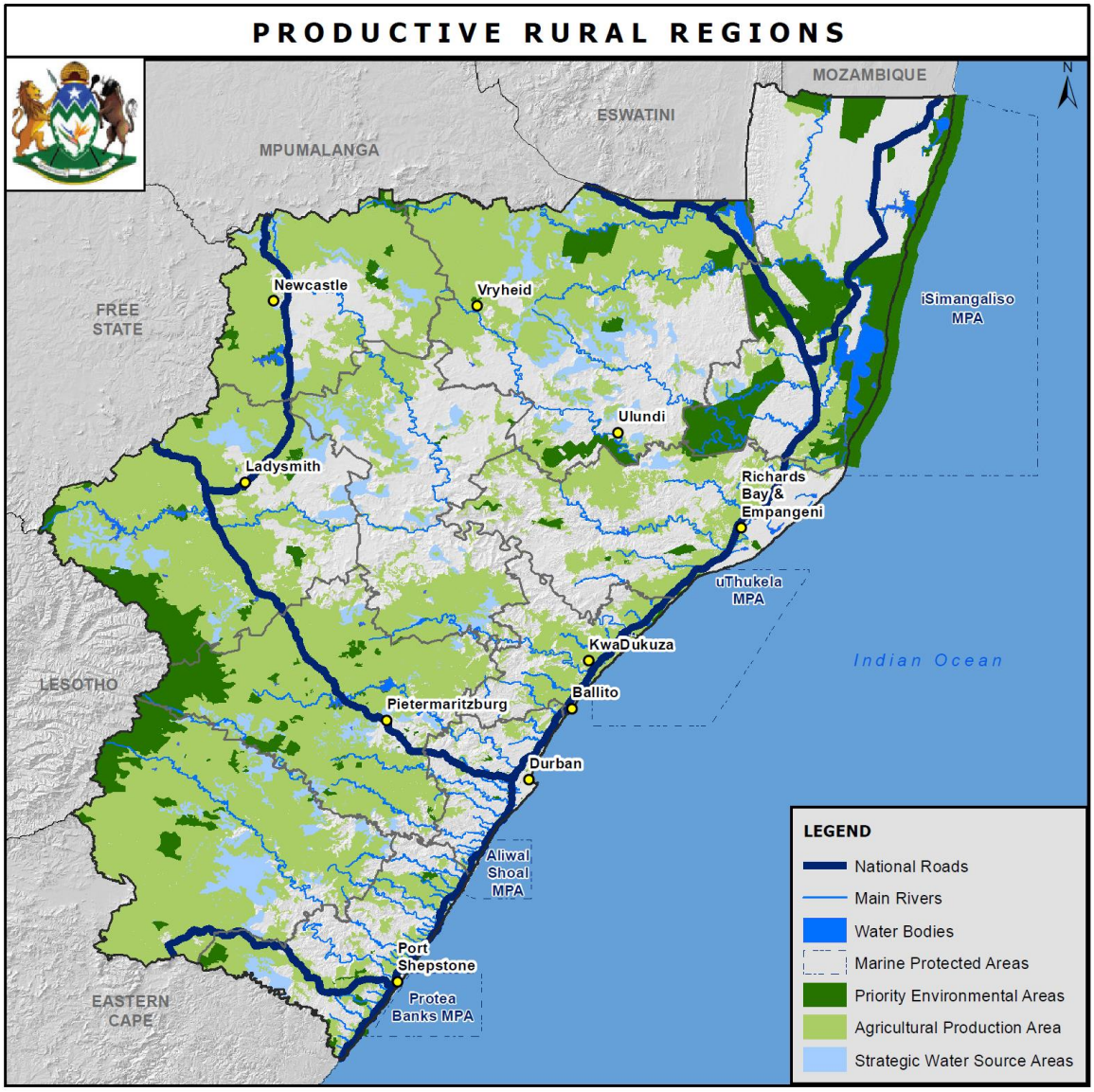
The highest ranges of combined social need, when considering the population density, dependency ratio as the provincial index of multiple deprivation is illustrated by this category of high social need. These areas are broadly where the most intensive social interventions area required, and this category is further overlayed above all categories to provide a spatial reference to the types of interventions which might be pursued towards addressing the concentrated social need in these areas.

Where high social need is identified within an area earmarked as a conservation corridor, this firstly provides a reference to the fact that social conditions of communities will need to be addressed if any conservation is to be promoted within such areas. Further it suggests that the effective utilisation of the high biodiversity within such areas might be harnessed towards addressing social need through example conservation tourism.

7.1.2.4 Mandated Service Delivery Areas

The areas which are not representative of any of the above-mentioned categories are classified as undifferentiated areas. It is acknowledged that these areas also have communities residing on them with economic potential and environmental resources, however, based on the approach followed these areas were not differentiated to the same degree as the identified preceding categories. It is therefore important that this category is not neglected from public and private interventions and as the various departmental programmes are inclusive in nature, these areas should also benefit from it. It is anticipated that the intensity of such programmes and the total portion of resource allocation to these areas would be less than the identified categories as well as the key intervention areas identified previously.

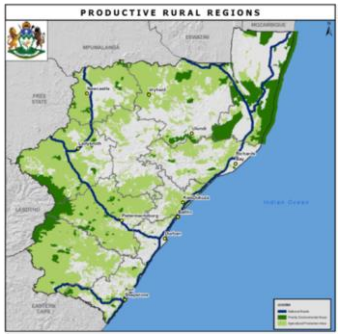
FIGURE 21: PRODUCTIVE RURAL REGIONS SUB-FRAME



INFORMANTS

- The composite Natural Resource Protection map consists of different informants:
- High Potential Agriculture Areas for Cultivation (Dept. of Agriculture, Land Reform Rural Development.
- Productive Agricultural areas data (KwaZulu-Natal Agricultural Land Potential Categories A, B, C).
- Strategic Water Source Areas (SWSAs) – ground and surface water.

AGRICULTURAL PRODUCTIVE AREAS



STRATEGIC WATER SOURCE AREAS

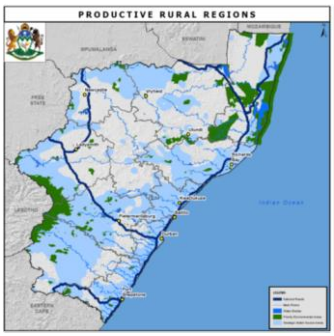


TABLE 6: PRODUCTIVE RURAL REGIONS

Purpose/ intent	The purpose of this sub-frame is to o Protect the primary resources necessary for the development of the Rural Space Economy. o Protect and develop productive agricultural land to improve food security within the province. o Identify areas for agricultural production and processing as input to other secondary sectors within the provincial economy. o Identify linkages required within the productive rural regions to better integrated rural settlements with agricultural economic opportunities.
Informant policy or strategy (dept policy/strategy)	Informants and strategies impacting provincial planning: o Provincial Growth and Development Strategy (PGDS) o Provincial Spatial Economic Development Strategy (PSEDS), 2017 o KwaZulu-Natal Poverty Eradication Master Plan (PEMP), 2014 o National Local Economic Development Framework, 2018 o KwaZulu-Natal Strategy for Radical Agrarian Socio-economic Transformation (RASET), 2015 o KZN Agriculture Master Plan (Draft) o Kwa-Zulu Natal Policy on Food and Nutrition Security, 2017 o Sustainable Agriculture Bill (Protection of high production areas) o Poverty Eradication Master Plan (PEMP) o KZN Environmental Implementation Plan, 2016 o KZN Biodiversity Plan (also referred to as the KZN Systematic Conservation Plan or the C-Plan) o Policy for the Preservation and Development of Agricultural Land (2016) o National Water Resource Strategy (NWRS2), 2013 o Policy for the Preservation and Development of Agricultural Land (2016) o National Strategy For Sustainable Development
Methodology of mapping	Data used for mapping: o Legally proclaimed and environmentally protected areas. o Productive Agricultural areas data (obtained from the Department of Agriculture) o Legally proclaimed and environmentally protected areas. o Maloti Drakensberg Trans-frontier Park (MDTP) World Heritage Site o Water Bodies. o Strategic Water Source Areas (national and provincial)
Provincial spatial strategies	Refer to section 4.
Local spatial planning and land use management guidelines	In support of this intentions of this sub frame. o Development of Rural Development Plans aligned between Traditional Authorities and local Municipalities. o Protection of productive agricultural land. o Establishment of Farming Production Support Units (FPSUs) o Identification and planning for important rural distribution networks ito. road and rail. o Focussed infrastructure planning and provision towards the achievement of productive rural regions.

7.1.3 Cross-Border Alignment

The province do not function in isolation and alignment and connectivity with neighbouring provinces and countries are imperative. Cross-border planning issues have become more prevalent and significant. The focus must be on strategic or shared development issues that would benefit from a joint approach and engaging with the relevant neighbouring authorities to explore joint working potential. Cross-border spatial planning issues relates to spatial connectivity and linkages (transport and logistics), energy networks, ecological networks, and water availability.

- There are two **cross border electricity schemes** between KZN and the Free State, namely the Drakensberg Pumped Storage Scheme, as well as the Ingula Pumped Storage Scheme where electricity is generated during times of peak demand. These schemes are important for the generation and sharing of energy and further investment and cross border cooperation must continue to be strengthened.
- KZN also shares the management of **ecological infrastructure** through international agreements, which includes the Maloti-Drakensberg Trans-frontier Park and the Lubombo Trans-frontier Conservation Area (KZN-Mozambique-Eswatini). The protection of these strategic regional ecosystems and bio-diversity networks through shared management are thus critical.
- The importance of **transport and logistics infrastructure** are noted as some of the building blocks of social and economic development. As such, sustained and focussed investment in national and international routes and railway lines (freight and passenger), international and national airports, border posts and harbours are critical. The upgrading and investment strategies and plans pertaining to the following cross border transport and logistics infrastructure are noted and the reinforcement and strengthening of transport corridors are proposed. These would include and relate to the following:
    - → Vryheid-Emadlangeni-Newcastle-Ermelo Strategic Development Corridor (link to the Mpumalanga Province).
    - → N11 link to Volksrust in the Mpumalanga Province.
    - → N2 South Strategic Development Corridor link to the Eastern Cape Province. This includes plans to construct the Wild Coast route, which will link Port Edward via a new linkage along the coastline to Port St Johns and Mthatha in the Eastern Cape.
    - → Lebombo SDI Corridor to Maputo (R22), linking from Hluhluwe - Mbazwana - Manguzi to Ponta Du Ouro). This corridor focuses primarily on developments along the southern and eastern sections of the Pongola Poort Dam and is thus important for regional integration with Mozambique and an important trade route.
    - → Rail corridors and linkages include the Durban - Free State – Gauteng rail corridor (includes the Natal Corridor mainline (NATCOR) from City Deep/Kascon to Durban Port). It also includes an inter-provincial feeder line from Kroonstad to Ladysmith (Danskraal yard) via Harrismith and the Vryheid to Glencoe line from northern KwaZulu Natal. PRASA's Long Distance Strategic Plan identified a high-speed Rail

Corridor to Gauteng as an intervention. A possible route from Durban via the Northern part of KZN (Ulundi) to Gauteng, is proposed.

- → King Shaka International Airport (KSIA) is the only international airport in the province. It is noted that the rapid expansion at the King Shaka International Airport and surrounding Dube Trade Port has made this area a natural selection for further development into an aerotropolis. It is envisaged that the area will become a major trade and business hub in sub-Saharan Africa.

- **Cross border water management**. KZN shares the Usuthu/Pongola – Maputo water catchment basin with Mozambique and Eswatini. There are international agreements in place on water sharing for this river basin that are shared with neighbouring countries. The Tugela-Vaal Project is an inter-basin transfer scheme between KZN and Gauteng through which water is transferred via the Drakensberg Pumped Storage Scheme to Sterkfontein Dam in the Vaal River Catchment.
- Pipelines are the most efficient and cost-effective means of transporting large quantities of liquids and gases over long distances in a safe and efficient manner. The Transnet pipeline infrastructure that traverses the province include a new multi-products pipeline (NMPP), gas, crude oil and refined products pipelines, all of which are critical for economic growth.

FIGURE 22: CROSS BORDER ALIGNMENT SUB-FRAME

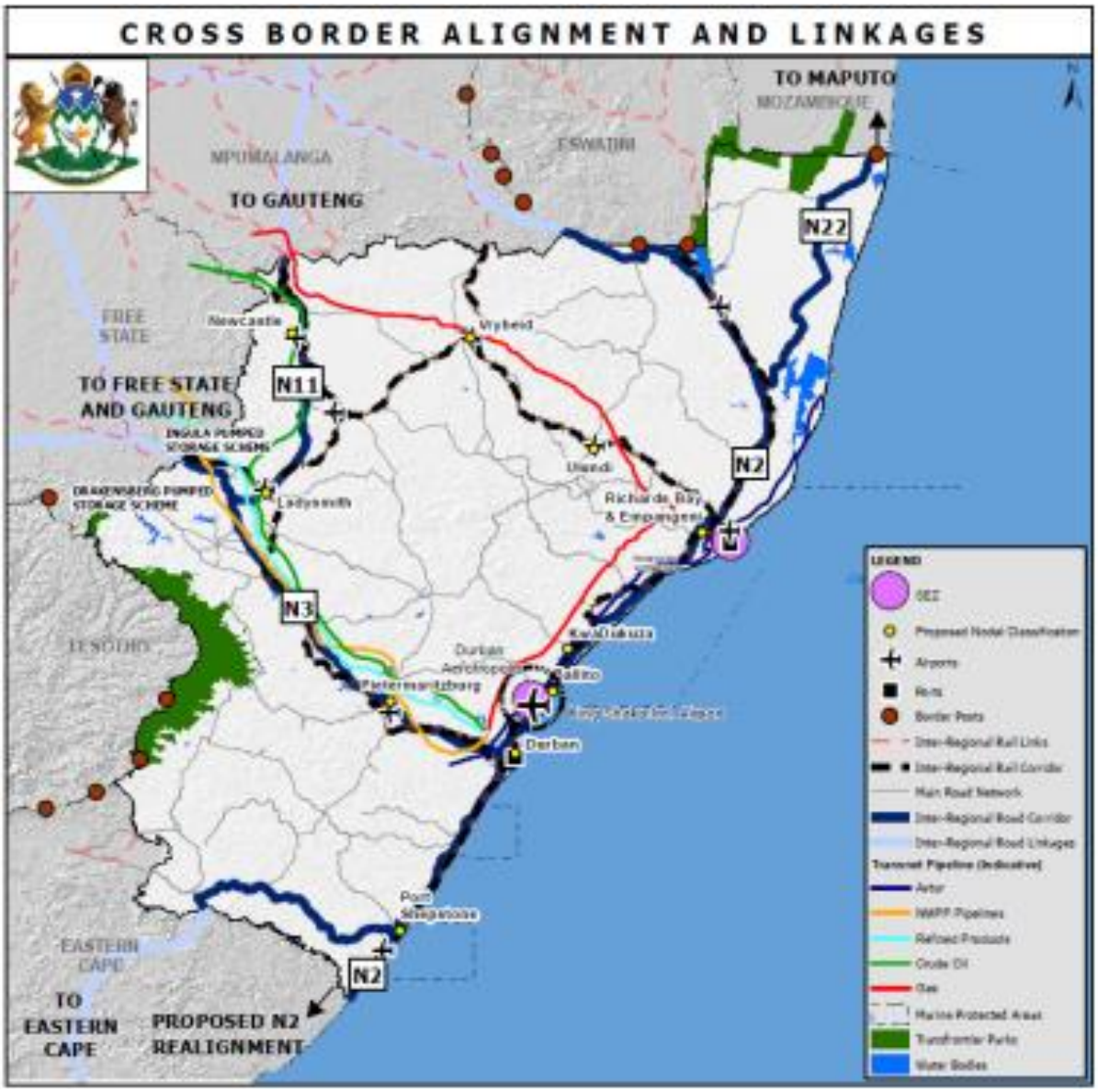


TABLE 7: CROSS BORDER ALIGNMENT

CROSS BORDER ALIGNMENT	
Purpose/ intent	The purpose of the cross border alignment sub-frame is to strengthen and enhance linkages to neighbouring countries and provinces through supporting and coordinating cross border spatial planning issues relating to spatial connectivity and linkages (transport and logistics), energy networks, ecological networks, and water availability.
Informant policy or strategy (dept policy/strategy)	o National Spatial Development Framework o National Transport Master Plan (NATMAP), 2050 o KZN Biodiversity Plan (also referred to as the KZN Systematic Conservation Plan or the C-Plan) o National Biodiversity Strategy and Action Plan 2015-2025 (NBSAP) o Biodiversity Framework 2017-2022 (NBF) o National Water Resource Strategy (NWRS2), 2013 o National Water and Sanitation Master Plan (NWSMP), 2018 o Strategic Infrastructure projects (SIP2 Durban-Free State Gauteng logistics and industrial corridor)

CROSS BORDER ALIGNMENT	
	o N3 Strategic Corridor Plan (Cogta) o N2 South Strategic Development Corridor (Cogta) o PRASA - KZN Strategic Plan o PRASA National Strategic Plan o NATMAP 2050
Methodology of mapping	**DATA USED FOR MAPPING:** o Key Provincial roads o Key provincial railways o Trans-frontier parks o Strategic Corridor Plans o Border posts with Lesotho, Mozambique and Eswatini o Transnet Pipelines (indicative)
Provincial spatial strategies (log frame strategies)	o Refer to section 4.
Include specific names/ regions/ routes/spatial location etc. (spatial focus areas)	o Hydro-electric power scheme (Ingula Pumped Storage Scheme and Drakensberg Pumped Storage Scheme) which is located between KZN and the Free State. o Tugela-Vaal Project through which water is transferred via the Drakensberg Pumped Storage Scheme to Sterkfontein Dam in the Vaal River Catchment. o N2 South Corridor. o Vryheid-Emadlangeni-Newcastle-Ermelo Corridor. o N11 corridor. o R22 corridor from Hluhluwe - Mbazwana - Manguzi - Ponta Du Ouro o Railway lines. o Transnet Pipelines (indicative)
Local spatial planning and land use management guidelines	o Local municipalities must ensure that cross border alignment with neighbouring provincial municipalities and countries is considered during the preparation of SDFs.

7.1.4 PROVINCIAL DEVELOPMENT CORRIDORS

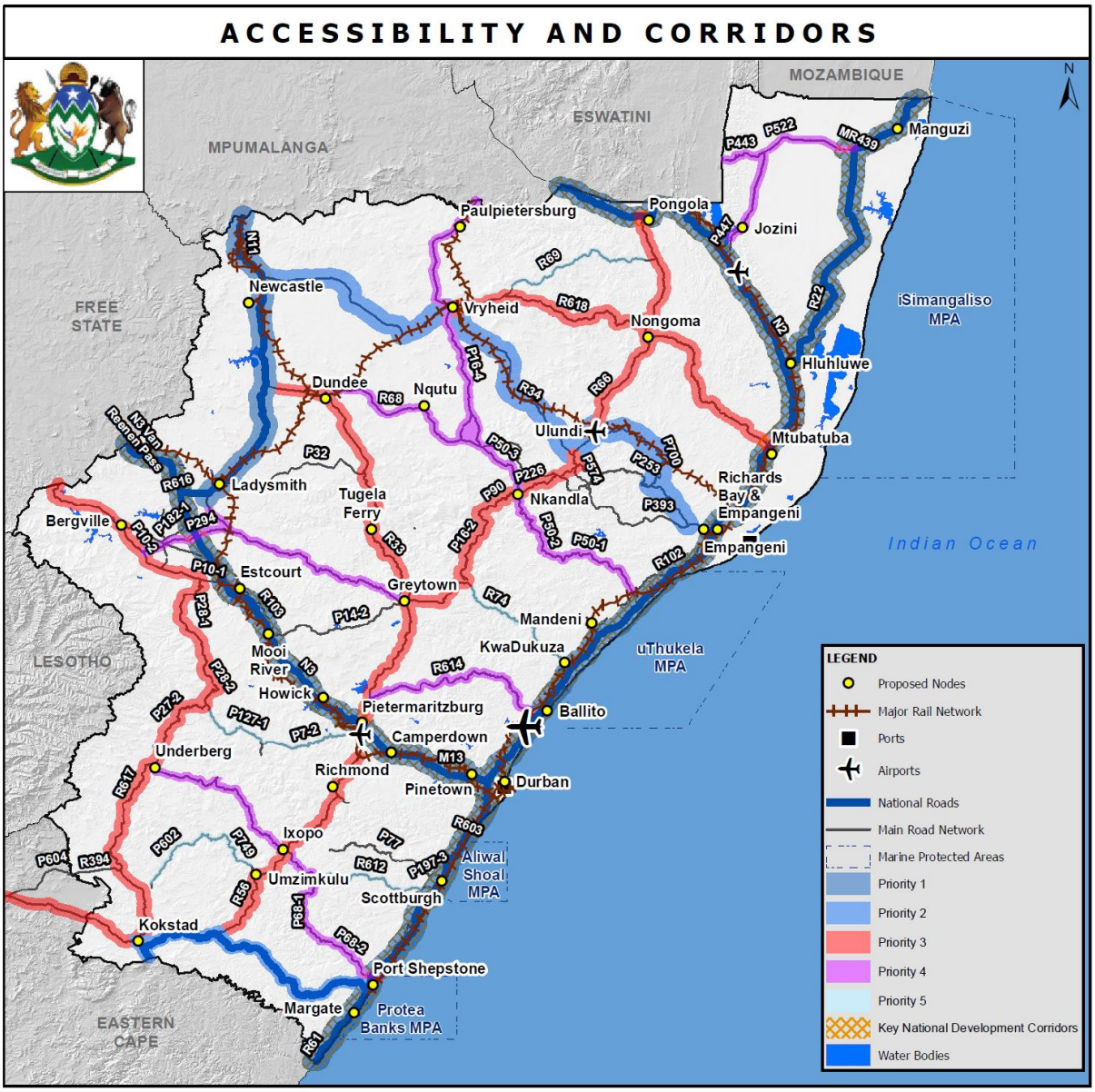
The network of provincial linkage routes and development corridors are aimed at establishing a network of economic growth areas and regional economic opportunities at both a provincial and regional scale. Provincially, the national routes (N3, N2 and N11 are important linkages to connect the province to the national and international (e.g., Mozambique) economies.

These national routes are further also subject to various national strategies such as the Strategic Integrated Projects (SIPS) identified by the Presidential Infrastructure Coordinating Commission (PICC). The specific SIPs which cover various social and economic sectors within the province are:

- SIP 1: unlocking the northern mineral belt with Waterberg as the catalyst
- SIP 2: Durban-Free State-Gauteng logistics and industrial corridor
- SIP 3: South-Eastern node & corridor development
- SIP 8: Green energy in support of the South African economy
- SIP 17: Regional integration for African cooperation and development

The SIPs were augmented by the National Transport Master Plan (NATMAP) 2050. Transport corridors identified in the NATMAP 2050 include the N3 Corridor (Durban-Free State-Johannesburg) and the Richards Bay Coal Export Line Corridor. In addition to the major corridors, the NATMAP 2050 also identifies the Drakensburg Tourism Area as an important potential node and a number of passenger rail transport lines that include a Johannesburg–Durban high-speed line.

FIGURE 23: ACCESSIBILITY AND CORRIDORS SUB-FRAME



At a provincial level, the provincial government produced the Provincial Growth and Development Strategy (PGDS), which identifies various provincial goals and aligned the provincial development agenda with ASGISA and the national priority outcomes of the NDP. Three of the PGDS goals were translated into a Poverty Eradication Master Plan (PEMP) that sought to eradicate poverty in the poverty.

The various priority development corridors proposed within the PSDF contribute to connect communities and lower order economic regions to higher order economic nodes and regions through

these corridors which are in some cases mainly linkages and in other instances, activity corridors where investment will be intensified. The Provincial Spatial Economic Development Strategy (PSEDS) have expressed in more detail the intentions of some of these corridors and should be read in conjunction hereto.

TABLE 8: ACCESSIBILITY AND CORRIDORS

Purpose/ intent	The purpose of this sub-frame is to: o Identify key regional linkages to improve accessibility to all areas and economic regions within the province. o Identify national and international linkages and development corridors which impact on the provincial economic anchors, infrastructure, and growth opportunities.
Informant policy or strategy (dept policy/strategy)	Informants and strategies impacting provincial planning: o Provincial Spatial Economic Development Strategy (PSEDS), 2017 o Draft National Spatial Development Framework (NPC), 2020 o Strategic Infrastructure projects (SIP2 Durban-Free State Gauteng logistics and industrial corridor) o N3 Strategic Corridor Plan (Cogta) o PRASA - KZN Strategic Plan o N2 South Strategic Development Corridor (Cogta) o N2 North Strategic Development Corridor (Cogta) o P700 Umhlathuze- Ulundi- Vryheid Secondary Corridor (CogTA), 2016 o Vryheid-Emadlangeni-Newcastle-Ermelo Strategic Corridor Development Plan o National Transport Master Plan, 2050 o PICC's 18 Strategic Integrated Projects (SIPS) o PRASA: KwaZulu-Natal Regional Strategic Plan (2012) o Durban-KwaDukuza Future Rail Linkages: Pre-Feasibility Study (PRAS), 2014 o South Coast Rail Corridor: Stations Feasibility Study (PRASA), 2014
Methodology of mapping	Data used for mapping: o National Spatial Development Framework (Draft 2020) o KwaZulu-Natal Department of Transport route and road mapping. o Transnet Railway network o Provincial Spatial Economic Development Strategy (2017) o Buffers to differentiate various priority levels to corridors.
Provincial spatial strategies	Refer to section 4.
Local spatial planning and land use management guidelines	In support of this sub-frame, local municipalities will be required to: o Map and define the national, provincial, and regional corridors identified within the PSDF, into their local municipal SDFs as well. o Corridors identified within the PSDF need to be reinforced and strengthened to support socio-economic development and equitable access to opportunities, services and facilities for both urban and rural communities o Develop localised / cross border strategies to develop the identified corridors. o Align infrastructure planning to support areas of economic concentration and intensification associated with the corridors. o Align densification strategies with the corridors and associated nodes along those corridors. o Increase data connectivity within all urban and rural regions of the province, through a systematic rollout of the ICT network along identified corridors.

7.1.4.1 Priority 1 Corridors

The Priority 1 Corridors align with the national routes (N3 & N2) to provide national and international accessibility with KwaZulu-Natal as well as associated trade and local investment opportunities along these routes. The priority 1 corridors are identified below:

TABLE 9: PRIORITY 1 CORRIDORS

Corridor	Description
N3 Corridor	o SIP2: Durban-Free State-Gauteng logistics and industrial corridor o N3 Strategic Corridor Plan (Cogta) guides investment into the various sections and nodes along the corridor. o Strengthen the logistics and transport corridor between SA's main industrial hubs. Particularly access to Durban's harbour and integrating the Free State into the industrial strategy o The National Transport Master Plan, 2050 identifies the N3 Corridor (Durban-Free State-Johannesburg) an important as a link road connecting Durban and Gauteng through the town of Harrismith in the Free State.
N2 South Corridor	o SIP 3: South-Eastern node & corridor development o Alignment determined by future alignment of the N2 route along the current R62. o Improve infrastructure around the N2 Wild Coast highway between Nelson Mandela Bay and KwaZulu-Natal.
N2 North Corridor	o Corridor linkage between the Ports of Durban, Richardsbay and Maputo o Important international trade corridor to be developed and planned further. o Aligned with the planned Lubombo Spatial Development Initiative. o SIP1: Unlocking the northern mineral belt with Waterberg as the catalyst o Unlock the mineral resources in the northern mineral belt of the country (coal, palladium, platinum, chromite) by improving the rail, water, and energy infrastructure. This included a shift from road to rail particularly in Mpumalanga and Richards Bay and creating a logistics corridor connecting Mpumalanga and Gauteng. o The National Transport Masterplan 2050 identified the Richards Bay Coal Export Line Corridor which links the coal fields in Mpumalanga to the coal port terminal in Richards Bay. o N2 North Strategic Development Corridor (Cogta) guides investment into the various sections and nodes along the corridor. o PRASA's Long Distance Strategic Plan has also identified a high-speed Rail Corridor to Gauteng as an intervention. A possible route from Durban via the Northern part of KZN (Ulundi) to Gauteng, is proposed. A second "higher-speed" rail corridor along the coast from Richards Bay – Durban – Port Shepstone – Eastern Cape is also proposed.

7.1.4.2 Priority 2 Corridors

- Richards Bay to Mpumalanga
  - → SIP1: Unlocking the northern mineral belt with Waterberg as the catalyst
  - → Unlock the mineral resources in the northern mineral belt of the country (coal, palladium, platinum, chromite) by improving the rail, water, and energy infrastructure. This included a shift from road to rail particularly in Mpumalanga and Richards Bay and creating a logistics corridor connecting Mpumalanga and Gauteng.
  - → The National Transport Masterplan 2050 identified the Richards Bay Coal Export Line Corridor which links the coal fields in Mpumalanga to the coal port terminal in Richards Bay.

7.1.4.3 Other Corridors

TABLE 10: OTHER CORRIDORS

Corridor	Description
Drakensburg Tourism Corridor	o NATMAP 2050 also identifies economic nodes which include the Drakensburg Tourism Area (The Maloti-Drakensberg Trans-Frontier Park in the Clarens-Qwa-Qwa area) as an important potential node whose transport infrastructure will need to be upgraded in order to make the most of the area as a tourist destination

7.1.5 DEVELOPMENT NODES

Together with the development corridors sub-frame the provincial development nodes represents a network of cities, settlements, centres and points which aims to increase the both the intensity of social and economic activity, but also reach and accessibility of citizens to those economic opportunities and an appropriate level of services. These provincial nodes aim to establish cost effective service delivery due to a concentration of people and infrastructure, counter urban sprawl and focus on improving the fragmented morphological form of certain settlements to become more efficient and sustainable.

Although these nodes are important and impacted on by provincial targeted initiatives such as corridor investments, social facility planning and provision as well as bulk transport and infrastructure investment, the largest impact on the development of these nodes (at all levels) would be local municipal prioritisation, planning, investment, and maintenance of these nodes towards both local and provincial priorities. It is therefore envisaged that the implementation of the identified nodes will require provincial level interventions and support in lower resourced local municipalities.

FIGURE 24: DEVELOPMENT NODES SUB-FRAME

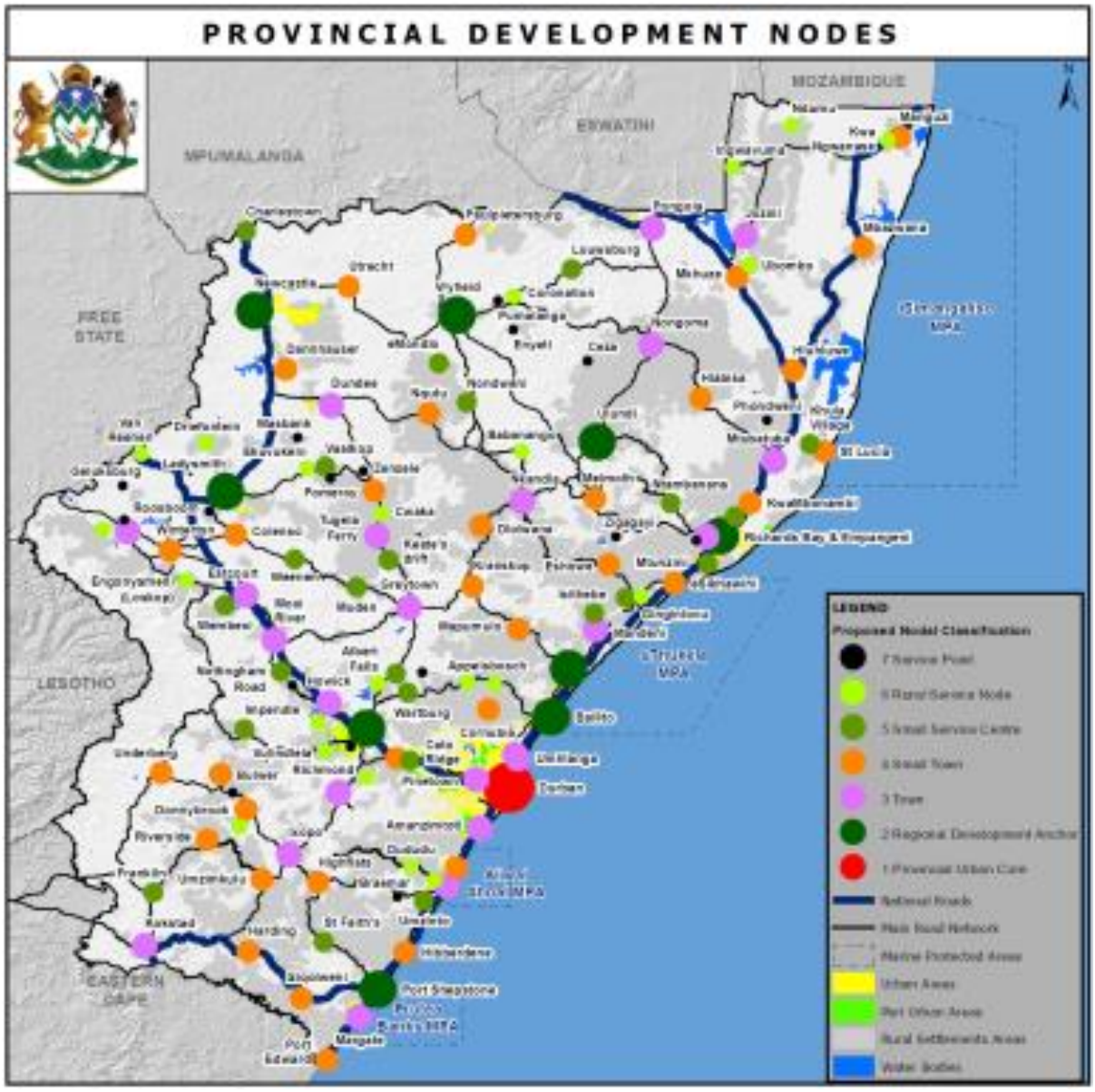


TABLE 11: DEVELOPMENT NODES

Purpose/ intent	The purpose of the provincial development nodes subframe is to: o Concentration of people, movement and production in certain points provides for cost effective service delivery, o Enables better access to social facilities and opportunities o Reduces Urban sprawl onto either sensitive environmental resources and/or productive agricultural land o The mere focus on nodes will also address the inefficient and fragmented morphological form and allow for nodes to become more efficient and sustainable
Informant policy or strategy (dept policy/strategy)	Informants and strategies impacting provincial planning: o Provincial Spatial Economic Development Strategy (PSEDS), 2017 o Draft National Spatial Development Framework (NPC), 2020 o Integrated Urban Development Framework o Draft Provincial Growth and Development Strategy (PPC), 2020 o Draft Provincial Small Town Socio-Economic Revitalisation Strategy (CoGTA), 2020

	o Provincial Norms and Standards for Social Facility Provision (Draft 2020). o Provincial Local Economic Development Plan per District (COGTA), 2018 o Feasibility Study for the Establishment of Youth Enterprise Parks (YEP) in KwaZulu-Natal (CoGTA) o National Local Economic Development Framework, 2018
Methodology of mapping	Data used for mapping: o Focus Areas contained in the KZN Provincial Master Spatial Plan 2016 o Data from Rural Settlements Study (DALRRD), 2009 o Data from Development Edges Study (DALRRD), 2015
Provincial spatial strategies	Refer to section 4.
Local spatial planning and land use management guidelines	o Land development within nodes should optimise the use of existing resources and infrastructure. o Spatial planning and development application procedures should be efficient and streamlined to contribute to the rapid development of the nodes. o Municipal implementation planning within nodes to focus on: o Nodal Intensification Strategy o Small Town Revitalisation o Regional Economic Infrastructure investment and integration. o Rural Space-Economy linkages o Urban Space-Economy, ensuring equitable access to opportunities o Establishment of Smart Cities and Settlement Digital Transformation

7.1.5.1 Provincial Urban Core

eThekwini is classified as the Provincial Urban Core as an urban centre with existing economic investment and the potential for expansion thereof. As the provincial urban core, eThekwini provides services to both the national and provincial economy and the NSDF also defines eThekwini as one of three National Urban Regions.

TABLE 12: PROVINCIAL URBAN CORE

PSDF Provincial Node	City/ Town/ Centre	PSEDS 2017 Classification	NSDF Town Services
1. Provincial Urban Core	Durban	Multi Sectoral Node	City Region

From the NSDF, the key strategic interventions specifically targeted within the eThekwini Urban Region, include:

- Establish compact, productive, sustainable, inclusive and well-governed settlements within the region.
- Prioritise infrastructure maintenance to mitigate against the expected impact of natural and climate change-related hazards on large numbers of people, especially the poor and most vulnerable members of society, and avoid repetitive infrastructure-repair costs.
- Manage demand and maintain, expand and refocus our infrastructure network, to enable and sustain bulk water supply and energy distribution within and to urban regions.

- Effectively utilise, protect and manage high-value agricultural lands, ecological infrastructure and national manmade and natural environmental assets, and mitigate down-stream impacts on water bodies, water catchments and other natural resources.
- Actively support national and international programmes aimed at climate change mitigation of CO2- emissions and introduce local policies and measures to assist such programmes.
- Utilise innovation, enterprise development and job creation opportunities in (1) agro-eco-industries, (2) tertiary and service sectors, (3) tourism, (4) knowledge-creation, and (5) cultural and entertainment industries.
- Maintain and upgrade road and rail routes within the urban region. Prioritise rail for bulk freight and improve the affordability of intercity public passenger transport.

7.1.5.2 Regional Development Anchors

The regional development anchors are also commonly referred to as the secondary cities within the province and identifies those strategic larger / significant towns and cities which should be prioritised and strengthened as key anchors or "engines" of the regional economy. These are also areas where significant future population growth is anticipated based on historical trends as well as the impacts of future targeted interventions in those areas.

They provide both the basis for regional economies as well as the centre for higher order social services to surrounding rural communities and are in some cased the core of the envisaged development integration zones.

The regional development anchors thus have an important role in the enhanced social service provision to provide for higher order services, but also enable officials working in rural regions to stay in these settlements and contribute to the local economy, instead of commuting to larger towns or cities on a daily or weekly basis or not settling in rural areas.

The regional significance of these nodes also identifies the role of specific settlements as gateways and interchanges on the regional public transportation network, which contributes both to the regional flow of economic goods, but also as vital support to functional rural areas.

The following Secondary Nodes have been identified important development anchors:

TABLE 13: REGIONAL DEVELOPMENT ANCHORS

PSDF Provincial Node	Place	Local Municipality	District Municipality
2. Regional Development Anchor	Newcastle	Newcastle	Amajuba
	Ballito	KwaDukuza	iLembe
	KwaDukuza	KwaDukuza	iLembe
	Richards Bay and Empangeni	uMhlathuze	King Cetshwayo
	Port Shepstone	Ray Nkonyeni	Ugu
	Pietermaritzburg	The Msunduzi	Umgungundlovu
	Ladysmith	Alfred Duma	Uthukela
	Vryheid	Abaqulusi	Zululand
	Ulundi	Ulundi	Zululand

Key strategic interventions specifically targeted at these nodes should include:

- Strengthen and Consolidate Existing Regional Development Anchor Towns to ensure there continued functioning at a regional level.
- Support Regional Development Anchors under stress.
- Prioritise and strengthen the identified regional development anchor towns in productive rural regions and provincial corridors to provide a range of services within the specific towns/cities and surrounding network of settlements and productive rural regions.
- Targeted settlement planning and provincial priority housing development.
- Higher-order social infrastructure provision.
- Focused support for small and medium-sized enterprise development, industrialisation and economic diversification.
- Priority Socio-Economic Development Spending.
- Promote as Primary Node in support of Corridor Development.
- Promote Compact Urban Development & Combat Urban Sprawl.
- Promote Focused Investment & Managed Growth.
- Promote Densification (Brown Agenda) and Infill Development.
- Provide Economies of Scale for Effective & Affordable Service Delivery.
- Infill where High Levels of Services are Available (Restructuring Nodes).
- Increased Residential Density (number of dwellings).
- Promote provision of sufficient Bulk Infrastructure Services (Demand & Supply).
- Priority spending on Infrastructural Upgrading Needs (New & Maintain).
- Promote Effective & Efficient Public Transportation Systems linked to Multi Modal Facilities.
- Single Land Use Management System (Township Formalisation).

7.1.5.3 Towns

Towns are identified as those formal towns where a formal and established structure and commercial component is already present, together with associated higher order social facilities. Towns are furthermore located at noticeable access points (e.g., Greytown, Estcourt, Ixopo) or at frontier points servicing as important border towns (e.g. Pongola, Kokstad, Bergville). Although these nodes are not envisaged to makes a similar contribution to the provincial economy as the Regional Development Anchors might, the Towns are important points for the transformation of the province and provide a vital distribution and support function to the Small Towns and other lower order nodes.

The following Towns have been identified within the PSDF:

TABLE 14: TOWNS

PSDF Provincial Node	Place	Local Municipality	District Municipality
3. Town	Amanzimtoti	eThekwini	eThekwini
	Cornubia	eThekwini	eThekwini
	Pinetown	eThekwini	eThekwini
	Umhlanga	eThekwini	eThekwini

PSDF Provincial Node	Place	Local Municipality	District Municipality
	Kokstad	Greater Kokstad	Harry Gwala
	Ixopo	Ubuhlebezwe	Harry Gwala
	Mandeni	Mandeni	iLembe
	Nkandla	Nkandla	King Cetshwayo
	Margate	Ray Nkonyeni	Ugu
	Scottburgh	Umdoni	Ugu
	Mooi River	Mpofana	Umgungundlovu
	Richmond	Richmond	Umgungundlovu
	Howick	uMngeni	Umgungundlovu
	Jozini	Jozini	Umkhanyakude
	Mtubatuba	Mtubatuba	Umkhanyakude
	Dundee	Endumeni	Umzinyathi
	Tugela Ferry	Msinga	Umzinyathi
	Greytown	Umvoti	Umzinyathi
	Estcourt	Inkosi Langalibalele	Uthukela
	Bergville	Okhahlamba	Uthukela
	Nongoma	Nongoma	Zululand
	Pongola	uPhongolo	Zululand

7.1.5.4 Small Towns

The Draft Small Town Socio-Economic Revitalisation Strategy (STRS) defines Small Towns as centres that provide services to the local economy (as opposed to the regional and sub-regional economy) and addresses community needs.

The **Draft Small Town Socio-Economic Revitalisation Strategy** (STRS) focusses specifically on the Small Towns identified as third order nodes within the Development Nodes sub-frame and aims to establish Productive, Resilient and Well-managed small town as vital interface as economic and social support centres within both economic regions as well as area of socio-economic need. The STRS further identifies nine drivers through which revitalisation could be achieved within small towns, including:

- Partnerships for Small Town revitalisation.
- Creating Smart Small Towns.
- Small Towns as Centres of Economic development through enterprise development and support.
- Small Towns Providing Quality Services.
- Small Town Economic and Social Infrastructure development.
- Small Towns as Centres of Learning Excellence through capacity and skills development.
- Mobilise under-utilised public assets and resources.
- Small Town Marketing Investment Retention and Attraction.
- Small Towns as Well Managed Places through Improving the governance and management of small towns.

The following Small Towns have been identified within the PSDF:

TABLE 15: SMALL TOWNS

PSDF Provincial Node	Place	Local Municipality	District Municipality
4. **Small Town**	Dannhauser	Dannhauser	Amajuba
	Utrecht	Emadlangeni	Amajuba
	Umkomaas	eThekwini	eThekwini
	Bulwer	Nkosazana Dlamini-Zuma	Harry Gwala
	Donnybrook	Nkosazana Dlamini-Zuma	Harry Gwala
	Underberg	Nkosazana Dlamini-Zuma	Harry Gwala
	Highflats	Ubuhlebezwe	Harry Gwala
	Riverside	Umzimkhulu	Harry Gwala
	Umzimkulu	Umzimkhulu	Harry Gwala
	Mapumulo	Maphumulo	iLembe
	Ndwedwe	Ndwedwe	iLembe
	KwaMbonambi	Mfolozi	King Cetshwayo
	Melmoth	Mthonjaneni	King Cetshwayo
	Dlolwana	Nkandla	King Cetshwayo
	eSikhawini	uMhlathuze	King Cetshwayo
	Eshowe	uMlalazi	King Cetshwayo
	Mtunzini	uMlalazi	King Cetshwayo
	Hibberdene	Ray Nkonyeni	Ugu
	Iziqolweni	Ray Nkonyeni	Ugu
	Port Edward	Ray Nkonyeni	Ugu
	Harding	uMuziwabantu	Ugu
	Camperdown	Mkhambathini	Umgungundlovu
	Hlabisa	Big 5 Hlabisa	Umkhanyakude
	Hluhluwe	Big 5 Hlabisa	Umkhanyakude
	Mkhuze	Jozini	Umkhanyakude
	St Lucia	Mtubatuba	Umkhanyakude
	Manguzi	Umhlabuyalingana	Umkhanyakude
	Mbazwana	Umhlabuyalingana	Umkhanyakude
	Pomeroy	Msinga	Umzinyathi
	Nqutu	Nqutu	Umzinyathi
	Kranskop	Umvoti	Umzinyathi
	Colenso	Alfred Duma	Uthukela
	Winterton	Okhahlamba	Uthukela
	Paulpietersburg	eDumbe	Zululand

Key strategic interventions specifically targeted at these nodes and their directly surrounding areas might include:

- Secondary economic growth areas.
- Promote as secondary node in support of corridor development.
- Promote compact urban development & combat urban sprawl.
- Promote focused investment & managed growth.
- Promote densification (brown agenda) & infill development.

- Provide economies of scale for effective & affordable service delivery.
- Infill where high levels of services are available (restructuring nodes).
- Increased residential density (number of dwellings).
- Promote socio-economic upliftment.
- Promote provision of sufficient bulk infrastructure services (demand & supply).
- Priority spending on infrastructural upgrading needs (new & maintain).
- Promote effective & efficient public transportation systems linked to multi modal facilities.
- Single land use management system (township formalisation).
- Social inclusion areas focus investment in people rather than places.

7.1.5.5 Small Service Centres

TABLE 16: SMALL SERVICE CENTRES

PSDF Provincial Node	Place	Local Municipality	District Municipality
5. Small Service Centre	Charlestown	Newcastle	Amajuba
	Cato Ridge	eThekwini	eThekwini
	Franklin	Greater Kokstad	Harry Gwala
	Isithebe	Mandeni	iLembe
	eNseleni	uMhlathuze	King Cetshwayo
	Ngwelezana	uMhlathuze	King Cetshwayo
	Ntambanana	uMhlathuze	King Cetshwayo
	Amatikulu	uMlalazi	King Cetshwayo
	Umzinto	Umdoni	Ugu
	St Faith's	Umzumbe	Ugu
	Impendle	Impendle	Umgungundlovu
	Nottingham Road	uMngeni	Umgungundlovu
	New Hanover	uMshwathi	Umgungundlovu
	Wartburg	uMshwathi	Umgungundlovu
	Khula Village	Mtubatuba	Umkhanyakude
	Keate's drift	Msinga	Umzinyathi
	Nondweni	Nqutu	Umzinyathi
	Muden	Umvoti	Umzinyathi
	Vaalkop	Alfred Duma	Uthukela
	Weenen	Inkosi Langalibalele	Uthukela
	Wembesi	Inkosi Langalibalele	Uthukela
	eMondlo	Abaqulusi	Zululand
	Louwsburg	Abaqulusi	Zululand

Key strategic interventions specifically targeted at these nodes and their directly surrounding areas might include:

- Focused investment in areas of Poverty Concentrations.
- Promote Integration (Green Agenda).
- Integration in terms of Mixed Densities & Uses.
- Improve Transportation linkages to Nodes.

- Promote Social-economic Integration.
- Eradicate Backlogs & Promote Basic Service Infrastructure & Delivery.
- Promote Socio-Economic Upliftment.
- Promote provision of sufficient Bulk Infrastructure Services (Demand & Supply).
- Priority spending on Infrastructural Upgrading Needs (New & Maintain).
- Rural Service Delivery Point.
- Promote & Establish PPP's.
- Promote Cultural & Community Based Tourism.

7.1.5.6 Rural Service Nodes

TABLE 17: RURAL SERVICE NODES

PSDF Provincial Node	Place	Local Municipality	District Municipality
6. Rural Service Node	Creighton	Nkosazana Dlamini-Zuma	Harry Gwala
	Ozwathini	Ndwedwe	iLembe
	Ginginlovu	uMlalazi	King Cetshwayo
	Amandawe	Umdoni	Ugu
	Dududu	Umdoni	Ugu
	Hopewell	Richmond	Umgungundlovu
	Vulindlela	The Msunduzi	Umgungundlovu
	Mpophomeni	uMngeni	Umgungundlovu
	Albert Falls	uMshwathi	Umgungundlovu
	Appelsbosch	uMshwathi	Umgungundlovu
	Ingwavuma	Jozini	Umkhanyakude
	Ndumu	Jozini	Umkhanyakude
	Ubombo	Jozini	Umkhanyakude
	Kwa Ngwanase	Umhlabuyalingana	Umkhanyakude
	Cwaka	Msinga	Umzinyathi
	Driefontein	Alfred Duma	Uthukela
	Ekuvukeni	Alfred Duma	Uthukela
	Van Reenen	Alfred Duma	Uthukela
	Engonyameni (Loskop)	Inkosi Langalibalele	Uthukela
	Woodstock	Okhahlamba	Uthukela
	Coronation	Abaqulusi	Zululand
	Babanango	Ulundi	Zululand

7.1.5.7 Service Point

The proposed rural service points are envisaged to serves as the lowest level of provincial nodes and could typically be established around existing traditional administration centres as well as other accessible rural points identified as periodic markets.

TABLE 18: SERVICE POINTS

PSDF Provincial Node	Place	Local Municipality	District Municipality
7. Service Point	Maoleni	Nkosazana Dlamini-Zuma	Harry Gwala
	Ngwelezana	uMhlathuze	King Cetshwayo
	Zigagayi	uMlalazi	King Cetshwayo
	Braemar	Umdoni	Ugu
	iMbali	The Msunduzi	Umgungundlovu
	Lidgetton	uMngeni	Umgungundlovu
	Dalton	uMshwathi	Umgungundlovu
	Phondweni	Mtubatuba	Umkhanyakude
	Wasbank	Endumeni	Umzinyathi
	Zenzele	Msinga	Umzinyathi
	Rockcliff	Alfred Duma	Uthukela
	Roosboom	Alfred Duma	Uthukela
	Bethany	Okhahlamba	Uthukela
	Geluksburg	Okhahlamba	Uthukela
	Enyati	Abaqulusi	Zululand
	Pumalanga	Abaqulusi	Zululand
	Ceza	Ulundi	Zululand

These will be identified in consultation with the district municipalities and should serve as first access to basic services within rural areas. These rural service centres will include, as some have already emerged to include a combination of the following activities:

- Traditional administration centre.
- Taxi/ bus stop.
- Informal trading / market area.
- Social facility (clinic, library etc).
- Skills development centre (mainly local schools).
- Mobile services point (mobile clinics, pension pay points, mobile library etc).
- Small commercial facility.
- Recreational facility such as a sport field.

7.1.6 SUSTAINABLE AND INTEGRATED HUMAN SETTLEMENTS

The PGDS (2016) identifies the promotion of sustainable human settlement as a strategic objective. Similarly, the PGDS (2020 Review, draft document) identifies "Spatial integration, human settlements and local government" as one of the five Provincial Strategic Priorities, with an intended impact being '*Achieving spatial transformation through improved integrated settlement development and linking job opportunities and housing opportunities*'.

7.1.6.1 Priority Human Settlements and Housing Development Areas

The Priority Housing and Human Settlements Development Areas (PHHSDAs) in the KZN Province intends to advance human settlements spatial transformation and consolidation. This is proposed by

ensuring that the delivery of housing is used to restructure and revitalise towns and cities, strengthen the livelihood prospects of households and overcome apartheid spatial patterns by fostering integrated urban forms. It is also imperative that National Housing Programmes be coordinated within the PHHSDAs.

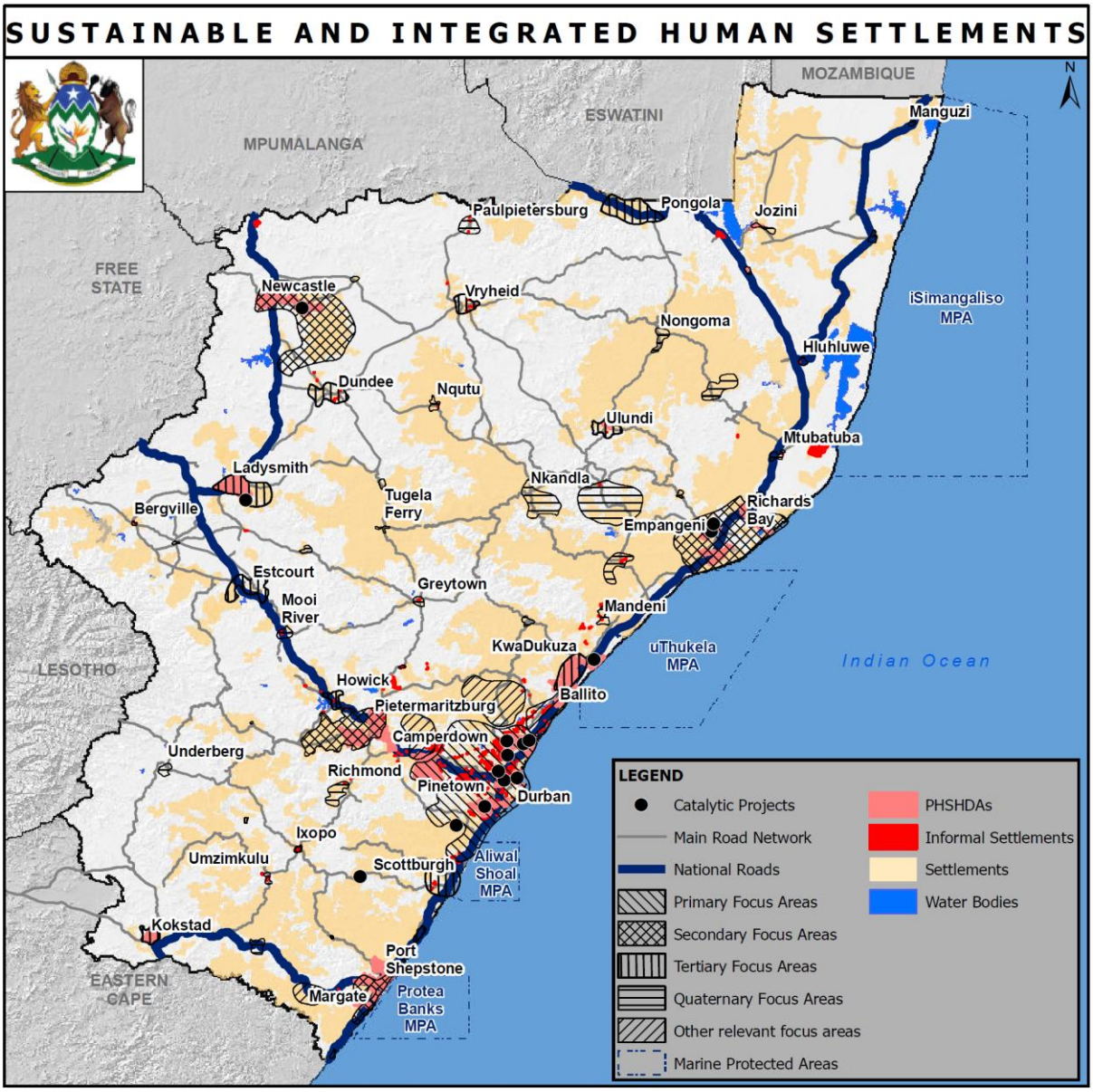
7.1.6.2 Human Settlement Focus Areas

The Human Settlement Focus Area Identified in the Provincial Master Spatial Plan (2016) provides guidance to the optimal spatial allocation of available discretionary resources for future human settlement development processes. It is noted that most of the provincial housing backlog, as well as more than 60% of the provincial population is located within these focus areas. Other areas outside the focused areas should however not be neglected but that the necessary housing interventions required be implemented in these areas. An appropriate range of housing typologies must be provided in these focus areas.

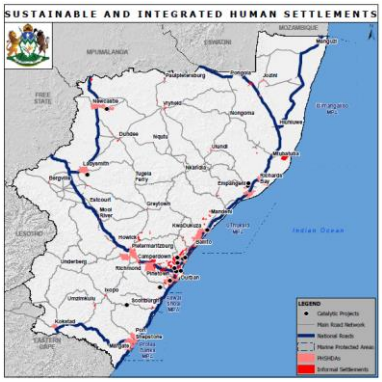
7.1.6.3 Informal Settlement Upgrading

Upgrading of informal settlements must follow the Upgrading of Informal Settlement Program (UISP), which supports a phased in-situ upgrading approach to informal settlements, in line with international best practice. The National Upgrading Support Programme (NUSP) provides further assistance to provinces and municipalities in their efforts to upgrade informal settlements.

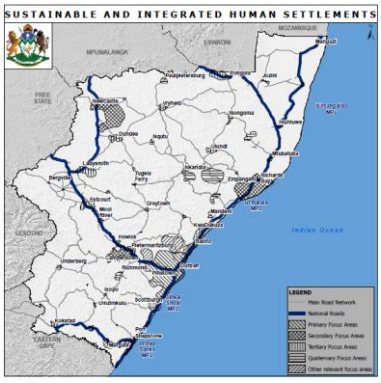
FIGURE 25: SUSTAINABLE AND INTEGRATED HUMAN SETTLEMENT SUB-FRAME



PRIORITY HOUSING AND HUMAN SETTLEMENT DEVELOPMENT AREAS



HUMAN SETTLEMENT FOCUS AREAS



SETTLEMENT AREAS

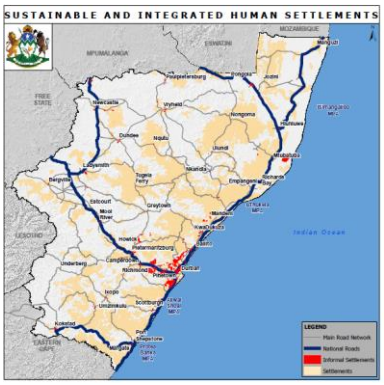


TABLE 19: SUSTAINABLE AND INTEGRATED HUMAN SETTLEMENT

SUSTAINABLE AND INTEGRATED HUMAN SETTLEMENT		
Purpose/ intent	Creation of sustainable and integrated human settlements that relate to the advancement of spatial transformation and consolidation of human settlements.	
Informant policy or strategy (dept policy/strategy)	o Gazetted 22 Priority Housing and Human Settlements Development Areas (PHHSDAs) o Informal Settlements Plan for KZN o Restructuring zones for social housing in KZN o KZN Provincial Master Spatial Plan (2016)	
Methodology of mapping	**DATA USED FOR MAPPING:** o PHHSDAs o Catalytic/Mega projects o Focus Areas contained in the KZN Provincial Master Spatial Plan 2016 o KZN Informal Settlements data o Data from Rural Settlements Study (DALRRD), 2009 o Data from Development Edges Study (DALRRD), 2015	
Provincial spatial strategies	Refer to section 4.	
Include specific names/ regions/ routes/spatial location etc. (spatial focus areas)	· **PHHSDAs** · 1 eThekwini Inner City Node · 2 Greater Cato Manor- uMkumbaan · 3 Greater Mpumalanga · 4 Mhlanga/Cornubia/Mawothi/KwaMashu · 5 Umlazi/Austerville · 6 Newcastle · 7 Ballito/Shakaskra al Development Area · 8 KwaDukuza Town/Hyde Park- Nonoti Area · 9 Kokstad Town · 10 Gamalakhe Nositha · 11 Greater Port Shepstone · 12 Shelly Beach · 13 Uvongo-Margate · 14 Edendale · 15 Msunduzi North and East Development Areas · 16 Jozini Urban Development Node · 17 Mkuze Urban Development Node · 18 Ladysmith Development Area · 19 Empangeni · 20 eSikhaleni- Vulindlela Corridor · 21 Richards Bay · 22 Ulundi Peri Urban Integration	· **Catalytic/Mega projects** · Amaoti · Cornubia · Empangeni IRDP · Ethekwini Inner City · Hyde Park · JBC · KwaMashu Bridge City · Umlazi · · **Focus Area Identified (Provincial Master Spatial Plan)** · **Primary:** Ethekwini · **Secondary:** Pietermaritzburg; Port Shepstone-Margate; Richards Bay/Empangeni; Newcastle/ Dannhauser · **Tertiary:** KwaDukuza; Pongola; Vryheid; Dundee; Ulundi; Howick; Umzinto/Scottburg; Kokstad; Escourt; Ladysmith; Ixopo; Hibberdene · **Quaternary:** Utrecht; Maphumulo; Nongoma; Weenen; Jozini; Mkuze; Paulpietersburg; Nqutu; Hlabisa; Melmoth; Eshowe; Richmond; Mooiriver; Greytown; Nkandla; Harding; St Faiths; Umzimkulu; Creighton; Underberg; Impendle; New Hanover; Mandeni; Ntambanana; KwaMbonambi; Mtubatuba; Hluhluwe; Mbazwana;

SUSTAINABLE AND INTEGRATED HUMAN SETTLEMENT		
		Manguzi; Tugela Ferry; Winterton; Bergville; Port Edward · **Other:** Pomeroy; Camperdown; Tongaat/Umhlali; Ndwedwe; Izinqoleni.
Local spatial planning and land use management guidelines	o Ensure that the delivery of housing is used to restructure and revitalise towns and cities. o Strengthen the livelihood prospects of households and overcome apartheid spatial patterns by fostering integrated urban forms. o Reduce urban sprawl and focus on more compact settlement structures. o Increase development densities that are appropriate to the level and function of the settlement. o Ensure investment in appropriate levels of infrastructure that are affordable and sustainable. o Systematic targeting of provincial priority housing projects. o Synchronise national housing programmes in priority human settlements and housing development areas.	

7.1.7 Integration Zones and Spatial Action Areas

7.1.7.1 Integration Zones

The application of the concept of integration zones has led to the identification of different areas within the KZN provincial landscape where spatial integration zones are required. These integration zones are aimed at integrating marginalised areas such as townships, informal settlements, or rural settlements to economic nodes and areas of potential growth. Thus, these zones generally include a provincial development node connected via transportation routes.

The following integration zones have been identified and are spatially indicated on Figure 26: Integration Zones:

- Integration zone 1: Mkuze is situated along the N2 corridor (also identified as a key national development corridor), linking Mkuze to the Lavumisa / Golela border post with Eswatini and Pongola. This area will be anchored by Mkuze and has the potential to and is well suited for the for future expansion and development but requires integration.
- Integration zone 2: This integration zone is proposed in the King Cetshwayo District along the N2 and includes Richards Bay (Regional Development Anchor), Empangeni, eNseleni, eSikaweni and Kwambonambi as anchors. Rural settlements within this zone will include Esikaweni, Ngwelezane, eNseleni and Mbonambi rural settlement area along the coast.
- Integration zone 3: The Ulundi integration zone are proposed around the town of Ulundi as an anchor (Regional Development Anchor), where a significant amount of infrastructure is available but not used to its full potential. This zone must include the surrounding rural settlements of the Mpungose traditional authority.
- Integration zone 4: This proposed integration zone is located around the town of Vryheid. Vryheid is at the intersection of the P34, the R618 and the R33. The anchors in this zone will include Vryheid (Regional Development Anchor), Coronation, Pumalanga and Enyati.

- Integration zone 5: The Emondlo integration zone is proposed to the south of Vryheid, stretching from Emondlo as an anchor to Nquthu in the south. The R68 runs through Nquthu.
- Integration zone 6: This zone will include the anchors of Newcastle (Regional Development Anchor), Madadeni and Osizweni along the P483. It includes the rural settlements of Ubuhlebomzinyathi to the south as well.
- Integration zone 7: This integration will focus on the area of Ladysmith (Regional Development Anchor) on the N11, extending to and including Ezakheni, the Driefontein area as an anchor to the North and Roosboom as an anchor to the southwest of Ladysmith.
- Integration zone 8: This zone includes Bergville as a main anchor along the R74, as well as Woodstock (Rural Service Node) and the rural settlement areas of Zwelisha, Dukuza, Rookdale, Bethany, Woodford and Hoffenthal.
- Integration zone 9: This zone extends from Ekuvukeni, Vaalkop, Pomeroy, Qwaka, Tugela Ferry and Keats Drift in the south. The main transport link linking these areas is the R33.
- Integration zone 10: This zone is concentrated around Riverside and the surrounding rural settlements and extend east to include Umzimkhulu town as an anchor. The R749 serves as the main transport route within this zone and between these anchors.
- Integration zone 11: This zone is concentrated around Port Shepstone (Regional Development Anchor) in the north and extends south along the N2 (key national development corridor) and including Margate. It also extends to the west to include Eziqolweni along the N2 inland.
- Integration Zone 12: This zone is concentrated around Pietermaritzburg (Msunduzi) along the N3 and stretches and includes the Camperdown node, Greater Edendale and Imbali, Howick and Mpophomeni.

FIGURE 26: INTEGRATION ZONES SUB-FRAME

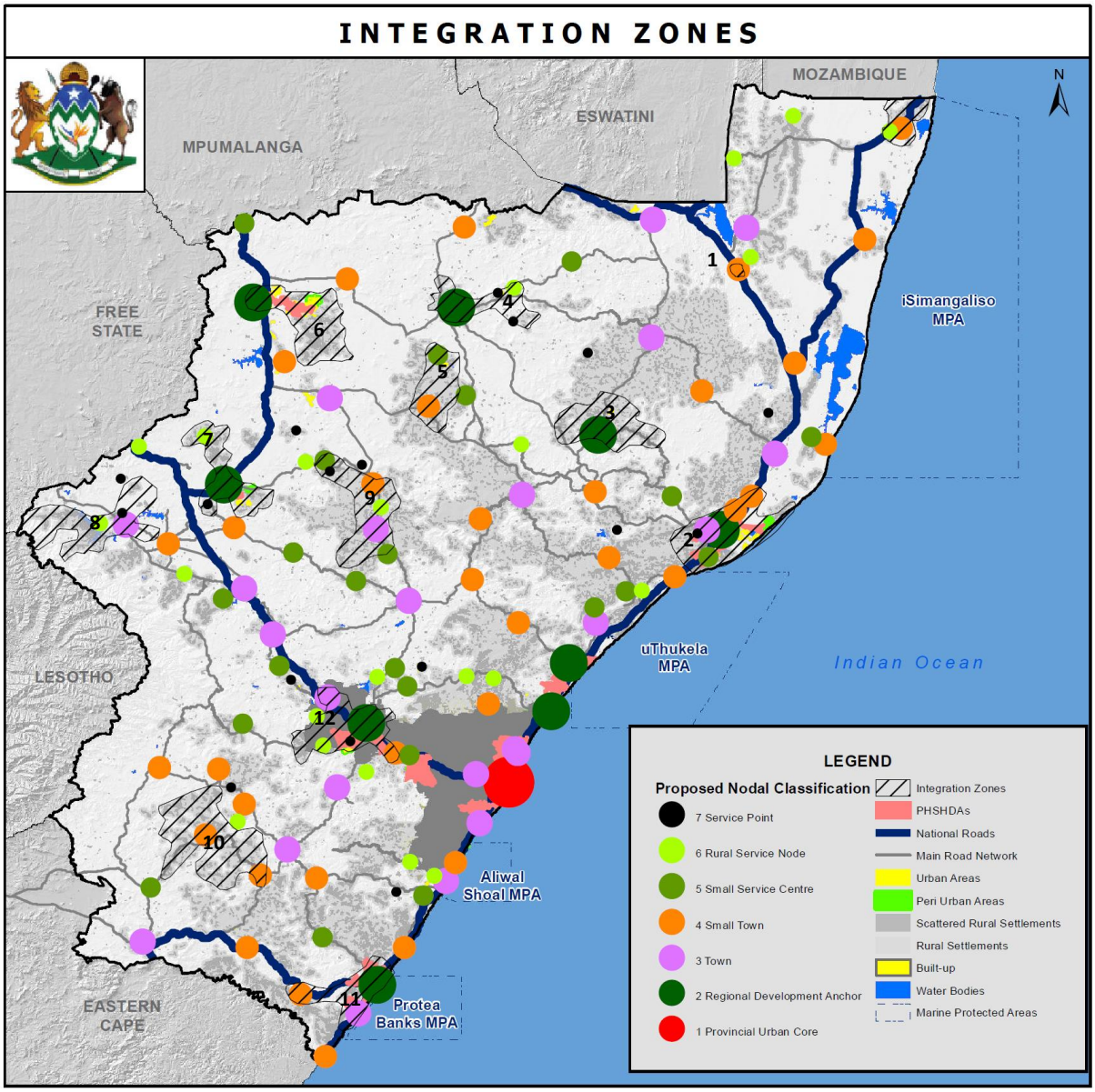


TABLE 20: INTEGRATION ZONES

INTEGRATION ZONES	
Purpose/ intent	The intention of these zones are to spatially indicate areas that require specific interventions in terms of integration.
Informant policy or strategy	o COGTA Spatial Integration Position Paper and Spatial Equity Tool
Methodology of mapping	DATA USED FOR MAPPING: o National roads o Development nodes (PSDF 2021) o Data from Rural Settlements Study (DALRRD), 2009 o Data from Development Edges Study (DALRRD), 2015 o Gazetted Priority Housing and Human Settlements Development Areas (PHHSDAs)
Provincial spatial strategies	Refer to section 4.
Include specific names/ regions/	o Integration zone 1: Mkuze is situated along the N2 corridor (also identified as a key national development corridor), linking Mkuze to the Lavumisa / Golela

INTEGRATION ZONES	
routes/spatial location etc. (spatial focus areas)	border post with Eswatini and Pongola. This area will be anchored by Mkuze and has the potential to and is well suited for the for future expansion and development but requires integration. o Integration zone 2: This integration zone is proposed in the King Cetshwayo District along the N2 and includes Richards Bay (Regional Development Anchor), Empangeni, eNseleni, eSikaweni and Kwambonambi as anchors. Rural settlements within this zone will include Esikaweni, Ngwelezane, eNseleni and Mbonambi rural settlement area along the coast. o Integration zone 3: The Ulundi integration zone are proposed around the town of Ulundi as an anchor (Regional Development Anchor), where a significant amount of infrastructure is available but not used to its full potential. This zone must include the surrounding rural settlements of the Mpungose traditional authority. o Integration zone 4: This proposed integration zone is located around the town of Vryheid. Vryheid is at the intersection of the P34, the R618 and the R33. The anchors in this zone will include Vryheid (Regional Development Anchor), Coronation, Pumalanga and Enyati. o Integration zone 5: The Emondlo integration zone is proposed to the south of Vryheid, stretching from Emondlo as an anchor to Nquthu in the south. The R68 runs through Nquthu. o Integration zone 6: This zone will include the anchors of Newcastle (Regional Development Anchor), Madadeni and Osizweni along the P483. It includes the rural settlements of Ubuhlebomzinyathi to the south as well. o Integration zone 7: This integration will focus on the area of Ladysmith (Regional Development Anchor) on the N11, extending to and including Ezakheni, the Driefontein area as an anchor to the North and Roosboom as an anchor to the southwest of Ladysmith. o Integration zone 8: This zone includes Bergville as a main anchor along the R74, as well as Woodstock (Rural Service Node) and the rural settlement areas of Zwelisha, Dukuza, Rookdale, Bethany, Woodford and Hoffenthal. o Integration zone 9: This zone extends from Ekuvukeni, Vaalkop, Pomeroy, Qwaka, Tugela Ferry and Keats Drift in the south. The main transport link linking these areas is the R33. o Integration zone 10: This zone is concentrated around Riverside and the surrounding rural settlements and extend east to include Umzimkhulu town as an anchor. The R749 serves as the main transport route within this zone and between these anchors. o Integration zone 11: This zone is concentrated around Port Shepstone (Regional Development Anchor) in the north and extends south along the N2 (key national development corridor) and including Margate. It also extends to the west to include Eziqolweni along the N2 inland. o Integration Zone 12: This zone is concentrated around Pietermaritzburg (Msunduzi) along the N3 and stretches and includes the Camperdown node, Greater Edendale and Imbali, Howick and Mpophomeni.
Local spatial planning and land use management guidelines	o National Treasury, Integration Zone Planning Guidelines, 2017

7.1.7.2 National and Provincial Spatial Action Areas

The National Spatial Development Framework (NSDF) identifies National Spatial Action Areas (NSAA), which are urgent short-term, strategic spatial development catalysts. These national spatial development priorities are informed by: (1) the challenges and trends most likely to impact our country, (2) development objectives in national and provincial development and sector plans, and (3) the gap between our national spatial development vision and status quo (NSDF, Draft 2021; p142).

These national spatial development priorities seek to: (1) identify urgently required interventions in national space and priority spatial development enablers for accelerated development impact in this space, and (2) ensure the restoration, management and sustainable utilization of our country's rich natural resource foundation and ecological infrastructure (NSDF, Draft 2021; p142).

These areas are identified as areas of significant national risk and potential and are the most urgent short term, strategic spatial development catalysts aimed to bring out radical spatial transformation at scale; manage and mitigate rising national risks; and move our country at speed towards the ideal national spatial development pattern.

The spatial action areas as they relate to KZN includes the following:

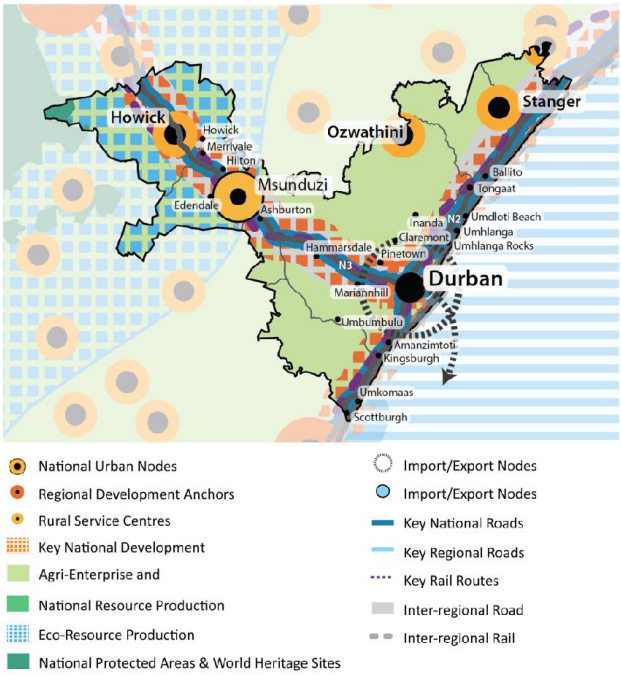
- KwaZulu-Natal Urban Region.
- Coastal Spatial Transformation and Transition Region (as it relates to KZN).
- National Resource Risk Area, namely the uMgeni River Catchment.

The integration of these NSAA in the KZN PSDF will be in the form of provincial spatial focus areas, as discussed below.

KWAZULU-NATAL URBAN REGION

This region extends from the eThekwini Metro (Provincial Urban Core) and runs along the N3 (identified as a key national development corridor) to include the municipalities of Umdoni in Ugu District Municipality, KwaDukuza and Ndwedwe in Ilembe District Municipality, Mkhambathini, Richmond, uMsunduzi, uMngeni, uMshwathi, Local Municipalities in Umgungundlovu District Municipality, and KwaDukuza and Ndwedwe Local Municipalities. Areas of importance that fall within this region includes Pietermaritzburg (Regional Development Anchor), Vulindlela (Rural Service Node), Edendale (Small Service Centre), Imbali (Service Point), Camperdown (Small Town), Howick (Service Town), Mphophomeni (Rural Service Node).

FIGURE 27: KWAZULU-NATAL URBAN REGION



Source: National Spatial Development Framework Draft, 2021

Key actions and interventions proposed:

- Infrastructure maintenance must be undertaken within this area, as it will ensure economic viability.
- Develop tailor-made funding, land access, land tenure and service provision mechanisms, to (1) enable higher residential densities and the provision of a range of housing options, (2) alleviate pressure on basic and social services, (3) optimize urban land reform dividends, (4) manage urban growth, and (5) provide effective public transport.
- Support innovation and skills development in growing economic sectors, with a focus on youth development and employment.
- Prepare for climate change through urban-specific research and mitigation and adaptation strategies.

COASTAL SPATIAL TRANSFORMATION AND TRANSITION REGION

The Coastal Transformation Corridor comprises the N2 (north and south) and the towns to the south of eThekwini to and Nelson Mandela Bay in the Eastern Cape, as well as along the N2 to the north up to Manguzi and Ndumo. What needs to be recognised in terms of this corridor is that the N2 from Port Shepstone to Kokstad includes the new alignment of the N2 from Port Shepstone along the coastline to Port Edward and then Mthatha (Wild Coast Highway). This realignment requires its own interventions but will in the end form part of this Coastal Transformation Corridor. As such, interventions and activities proposed must also relate to this corridor.

FIGURE 28: COASTAL SPATIAL TRANSFORMATION AND TRANSITION REGION

Source: National Spatial Development Framework Draft, 2021

Several strategic corridor studies have been undertaken in KZN, namely the 1) N3 SIP corridor study, 2) N2 North corridor study and 3) N2 South corridor study. These corridors are divided into regions that includes its own projects. Some of the projects along the Coastal Transformation Corridor includes:

- The Wild Coast Highway that will connect Shepstone to Mthatha in the Eastern Cape. This proposal will reduce travel distance by approximately 100 km and improve commuter and freight linkages between KZN and Eastern Cape.

- The Margate Airport Upgrade and Mixed-Use Development, which includes the expansion of Margate airport and associated mixed use development, including commercial/mixed use and freight and logistics.
- A Tertiary Education Facility, of which the preferred location is in the vicinity of Port Shepstone and Margate airport. The aim is to retain young people, develop skills and help to drive business development and employment generation within the area.

The significance of the N2 South corridor as part of the Coastal Transformation corridor is that it is aimed at strengthening local connectivity to the international, national, and provincial economy, which hinge on the ability of local, provincial, and national government to fostering human resource development, technology and innovation.

The following are proposed in terms of this corridor:

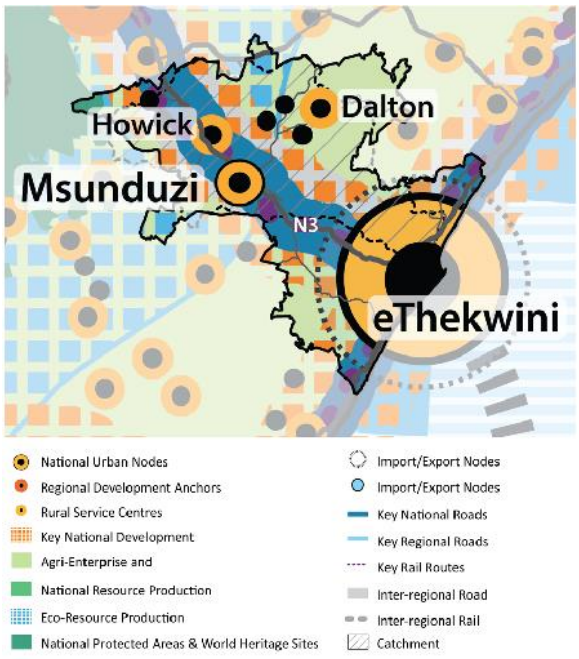
- Enhance cross-boundary collaboration with regards to spatial and economic development.
- Strengthen small-and-medium sized farming activities, agro-eco production and agri-led industrialization.
- Ensure protection and management of ecological infrastructure.
- Create strong and viable regional development anchors, small towns and small service centers.
- Use rural design, rural/settlement edges and land administration and reform to ensure innovative settlement planning.
- Enhance rural-urban and rural-rural connectivity and ICT infrastructure.
- Plan for and ensure regular infrastructure maintenance.

7.1.8 National and Provincial Resource Risk Areas

The National Resource Risk Areas, with relevance to the KZN Province, includes the Umngeni River Catchment [Part of eThekwini Metro, Mpofana and Richmond (Umgungudlovu), part of Impendle, Mkhambathini, Msunduzi, uMngeni and Umshwathi in Umgungundlovu District and Umvoti in Umzinyathi District Municipality].

The National Resource Risk Areas are areas that have national importance to the economy of the country and the lives of its people. They are under severe stress from an ecological perspective, while also being 'resource critical regions' for other economic sectors, such as agriculture and human settlement. Keeping these economies going, and expanding them further, as is currently happening in a number of these catchment areas, poses a serious risk to the quantity and quality of the water

Figure 29: Umngeni River Catchment



Source: National Spatial Development Framework Draft, 2021

supplied by these areas to the country, and presents the country with a serious conundrum and set of trade-offs. Now, however, the trade-offs between water, food and energy security in these areas (and the knock-on effects in other places) are playing out in a largely ad hoc way. It is, however, not due to lack of awareness and concern, as numerous plans refer to the challenge. The problem is that not much has been done to date, with urgent engagement being required concerning the following trade-offs:

- Water supply for eThekwini both domestic and industrial
- Intensive agriculture and
- Expanding settlements

The challenge with the uMgeni River Catchment is that it does not have the capacity to provide water to eThekwini, the Provincial Urban Core. As a result, other catchments must be used.

Besides water being rerouted from the Umkomaas and Lions River Catchment to the uMgeni Catchment the other challenge is settlement growth.

7.2 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

Moving towards the future vision for the province, the various sub-frames have been consolidated to reflect the intended spatial development pattern for the province.

FIGURE 30: CONSOLIDATED PSDF MAP