



NC PSDF | SPATIAL AND SECTORAL ANALYSIS AND STAKEHOLDER



Province of the
Northern Cape
REPUBLIC OF SOUTH AFRICA

BID NO:	5/2/2/1 DALRRD NC – 0001 (2023/2024)		
DOCUMENT TITLE:	SPATIAL AND SECTORAL ANALYSIS AND STAKEHOLDER CONSULTATION		
DOCUMENT PHASE:	PHASE 3		
DURATION:	n/a		
SUBMISSION DATE:	7 August 2024	SIGNATURE:	
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NORTHERN CAPE PROVINCE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

SPATIAL PROPOSALS

FEBRUARY 2024

PREPARED FOR:



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PREAMBLE

Spatial development frameworks are mostly technical documents. In terms of the legislation and procedures governing their preparation, they must address a host of matters, all of which are not of equal importance to all stakeholders. The framework may not resolve all the issues discussed to the same extent, some matters need time to be investigated further, while others are reasonably firm. In its elaboration to meet requirements, spatial frameworks can become dull, hiding the core message. We present the critical underlying narrative here and argue that adhering to it, through numerous individual actions and decisions – across sectors of society – is at the core of managing development and land use in the region better, at the heart of a better future for all.

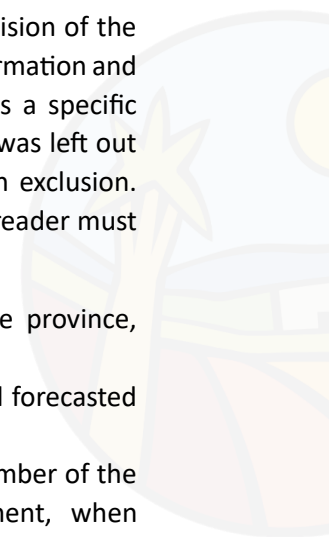
The Northern Cape Provincial Spatial Development Framework (NC PSDF) recognises that the spatial decisions and actions of many make what settlements are. It asks us to understand that plans cannot do everything or predict everything. It asks all to consider action with a few core beliefs, principles, or concepts, geared towards the common good. Specifically, it asks us to consider the following principles:

- Maintain and grow the assets of the province's natural environment and farming areas.
- Respect and grow our cultural heritage, the legacy of physical artefacts, and intangible attributes of society inherited from past generations maintained in the present and preserved for the benefit of future generations.
- Clarify and respect the different roles and potentials of existing settlements and settlement clusters.
- Address human needs – for housing, infrastructure, and facilities – clearly in terms of the constraints and opportunities related to natural assets, cultural assets, infrastructure, and the role of settlements.
- Work harmoniously with nature; reduce the province's ecological footprint; and introduce sustainable disaster risk reduction measures.

- Adopt a precautionary approach to the use of resources; switch to sustainable patterns of resource use; and mitigate against negative development impacts.
- Adopt a strategically located land policy and stance on availing land for high-impact/catalytic development in the province with the support of all stakeholders.
- Encourage local, national, and international connectivity.
- Offer maximum access to the province opportunities, resources, and amenities, and redress spatial imbalances in this regard as far as possible.
- Create safe, high-quality living environments that accommodate a range of living environments and lifestyles and offer a vibrant mix of land uses, and
- Promote cross-sectoral planning, budgeting, and growth management approaches.

The inclusion of information and references in existing documentation that has no significance or relevance to the PSDF, and the spatial vision of the province were excluded and only referred to if necessary. If information and references were however included in this document, there is a specific reason and background for such an inclusion. If a component was left out or is not included, there is also a specific reason for such an exclusion. Whilst reading and studying the document and the maps, the reader must acquire the following information in the document:

- A proper visual presentation of the spatial vision of the province, focussing on regional-specific needs and inputs.
- To understand and interpret what is spatially required and forecasted for the province.
- To understand exactly what can be expected from any member of the public or a developer, state, and semi-state department, when considering or investigating the needs and spatial visions and investment potential for the province.
- iv. To understand and visualise the changes and diversification that may be expected to take place during the short-, medium- and long-term



period and to inform the public of plans for their immediate surroundings, and

- What considerations, policies, and detailed inclusions and indications must be submitted when applying for any form of development in a specific region or area.

GLOSSARY OF TERMS

- **Agriculture** - Agriculture in terms of this document refers to land used for, or a building designed or used for arable land, grazing ground, pig farming, horticulture, poultry farming, dairy farming, breeding, and keeping of livestock, bee keeping, forestry, mushroom, and vegetable farming, floriculture, orchards, and any other activities normally regarded as incidental to farming activities or associated therewith, including farm stalls.
- **Agro-Processing** – refers to a subset of the manufacturing sector that processes raw materials and intermediate products derived from the agricultural sector. The aim is to develop and advance new processing technologies from lab to pilot and commercial-scale implementation, using tools to demonstrate product and process capability at various scales.
- **Biodiversity** - The variability among living organisms from all sources, including, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part. It also includes diversity within species, between species, and of ecosystems.
- **Built Environment** - The manmade surroundings that provide the setting for human activity, on a district level, ranging from bulk infrastructure (i.e., energy, water, waste) to transport infrastructure, human settlements, and heritage resources.
- **Catalytic Project** – A project of significant scale (National/Provincial Importance) that has an impact on a large scale in terms of employment, services, economic and social investment as well as spatial form within the Northern Cape Province.

- **Critical Biodiversity Areas (CBAs)** - These are natural areas of critical importance for ecological sustainability and should be kept in their natural, or at least semi-natural state. The management objective of CBAs is for identified areas to be maintained in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity, and sensitive land uses are appropriate.
- **Climate Change Mitigation** - The use of new technologies and renewable energies with the aim of (1) making older equipment more energy-efficient, and/or (2) changing management practices or consumer behaviour to reduce the emission of greenhouse gasses.
- **Conservation** - The management of the use of natural and human resources to ensure that these are preserved and protected against undesirable development. It also relates to the protection, maintenance, and rehabilitation of resources.
- **Corridors** - Corridors are links between nodes, along which an increased intensity of development may be encouraged. Corridors provide efficient access to a higher level of economic opportunities than would generally be the case in less structured spaces. They typically include public transport routes.
- **Densification** - Densification is the increased use of space both horizontally and vertically within existing areas/ properties and new developments, accompanied by an increased number of units and/or population threshold.
- **Development Corridor** - An integrated linear network of dense infrastructure, economic activity and residential development built on and along a major road and/or railway line that (1) bind(s) it together and (2) act(s) as (a) form-giving and structuring spine(s). Development corridors typically fulfil a variety of multiple, complex and interrelated functions, such as: (1) the movement of people and freight; (2) retail and trade; (3) the flow of information; (4) the provision of basic services, such as water and gas; and (5) tourism. Supportive functions may also be located in corridors, e.g. logistics. Development corridors generally include both a human settlement and economic component,



i.e. (1) higher-density, transit-oriented mixed-use residential development, and (2) industrial, retail, entertainment and office development adjacent to, or along, the main transport routes.

- **Economic Sectors** - description of (1) the type/kind of economic activities in a region, or (2) the kinds/types of activities in which the population of a Province are active/employed. The following five categories/ sectors of economic activity are generally used in such descriptions: (1) the 'primary sector', which includes agriculture, mining and other natural resource-based industries; (2) the 'secondary sector', which entails manufacturing, engineering and construction; (3) the 'tertiary sector', meaning service industries; (4) the 'quaternary sector', which refers to intellectual activities involving education and research; and (5) the 'quinary sector', which refers to high-level decision-making in government and industry. In some instances, including this PSDF, the last two sectors are included in the definition of the tertiary sector.
- **Ecological Support Areas (ESAs)** - Natural, near-natural, degraded, or heavily modified areas must be kept in ecologically functional condition in order to support Critical Biodiversity Areas and/or Protected Areas. ESAs protect the ecological processes that support Critical Biodiversity Areas and Protected Areas.
- **Infill Development** - Development of vacant or underutilised land within existing settlements to optimise the use of infrastructure, increase urban densities, and promote integration.
- **Integrated Development Plan** - the IDP is a five-year plan which local government is required to compile to determine the development needs of the municipality. The projects within the IDP are also linked to the municipality's budget.
- **Infrastructure** - The basic equipment, utilities, productive enterprises, installations, and services essential for the development, operation, growth, sustenance and continued viability of human settlements and economic activities. Infrastructure includes items such as (1) roads, railway lines and stations, airports, and harbours; (2) utility lines and related structures for the provision of water, sanitation, electricity and

drainage services; and (3) information and communications technology grids/networks. A distinction is often made between (1) 'engineering infrastructure', such as roads, electricity, sewerage and water services; and (2) 'social infrastructure', which includes facilities at which social services, such as health, education, community, welfare support, citizen registration, and cultural facilities are offered/provided.

- **Land Reform** - The process of correcting the historical imbalances in the ownership of, and access to land. It entails three types of intervention by the State: (1) "land restitution", meaning the redress of wrongs committed during the Colonial and Apartheid Eras; (2) "land redistribution", meaning the provision of land for residential and economic purposes to those who do not have the means to access land; and (3) "tenure reform", meaning the provision of security of tenure to those who do not have it due to historical or other reasons.
- **Land Use Management** - Establishing or implementing any measure to regulate the use or a change in the form or function of land and includes land development.
- **Mixed Land Use** - Mixed land use refers to a combination of land uses such as a mix of commercial/industrial/residential / retail/entertainment / institutional uses. It also refers to a mix of uses within a specific use. The advantage of mixed uses is that access and convenience are increased as transportation distances are decreased. The combination depends on the specific area. A mixed-use building could refer to retail at street level and residential on the floor(s) above. Mixed land use in an industrial area could include industry, commercial and retail uses.
- **National Protected Areas Expansion Strategy (2016)** - This is a strategy with the goal of achieving cost-effective protected area expansion for improved (1) ecosystem representation, (2) ecological sustainability and (3) resilience to climate change. As such, it (1) sets protected area targets, (2) maps priority areas for protected area expansion, and (3) makes recommendations on mechanisms for achieving these objectives.



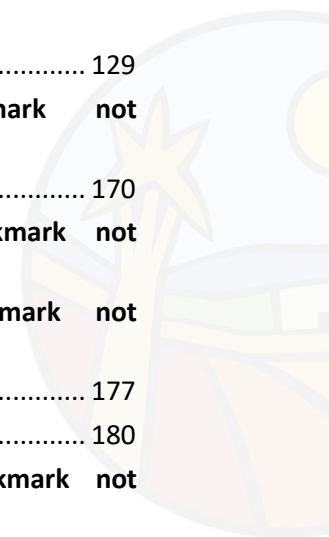
- **National Spatial Development Framework** - A national spatial planning instrument with a long-term horizon that (1) is mandated by the Spatial Planning and Land Use Management Act, 2013 (SPLUMA), (2) has to be aligned with the National Development Plan (NDP), and (3) is adopted by Cabinet as official national spatial development policy for implementation throughout the country. As such, it provides (1) an overarching spatial development framework including a set of principle-driven spatial investment and development directives for all three spheres and sectors of government, meaning 'where, when, what type, and how much to invest and spend throughout the country'; and (2) a set of strategic spatial areas of national importance from an ecological, social, economic and/or ICT or movement infrastructure perspective to be focused on and targeted by government and the private sector in the pursuit of strategic national development objectives and/or the prevention or mitigation of national crises.
- **Node** - Nodes are concentrations/clusters of mixed land-uses. Ideally, such nodes should include high-density residential land-uses and public transport and inter-modal transport facilities. In accordance with national legislation and international protocols, nodal development must also adhere to and advance the principle of 'universal access', which refers to the conscious act of ensuring that all spaces and facilities are accessible to all people at all times, irrespective of their age, gender or disability.
- **Protected Area** - An area of special natural, ecological, architectural or historical interest that is protected by law. The protected areas referred to in this PSDF are those areas that are officially classified as such in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003).
- **Rural** - Areas of land located outside of defined urban areas and where much of the land is devoted to agriculture / natural environment.
- **Spatial Development Framework** - an SDF is a framework that seeks to guide the overall spatial distribution of current and desirable land uses within a municipality to give effect to the vision, goals, and objectives of the municipal IDP.
- **SPLUMA** - the Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA) is a national law that was passed by Parliament in 2013. The law gives the DRDLR (now DALRRD) the power to pass regulations in terms of SPLUMA to provide additional detail on how the law should be implemented.
- **Strategic Water Source Areas** - Strategic Water Source Areas (SWSAs) can be described as 'water factories' that support growth and development needs that are often a long distance away from these areas. SWSAs contribute significantly to the overall surface and ground water supply of the country. SWSAs were identified and mapped by the Water Research Commission in 2015. Only 13% of the total extent of SWSAs was formally protected in 2017.
- **Sustainable Development** - development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
- **Urban Edge** - A demarcated line and interrelated policy that serves to manage, direct, and limit urban expansion.
- **Urban Sprawl** - An undesired situation in which the geographical size of a town keeps expanding to include the development of normally greenfield land located outside the urban edge.



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ABBREVIATIONS

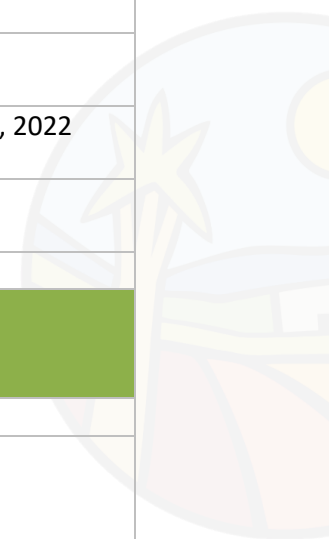
COGHSTA	Department of Cooperative Governance, Human Settlements and Traditional Affairs
CSAA	Coastal Spatial Action Area
DALRRD	Department of Agriculture, Land Reform and Rural Development
DDM	District Development Model
DEDAT	Department of Economic Development and Tourism
DENC	Department of Environmental Affairs and Nature Conservation
DKSAA	Douglas to Kakamas Spatial Action Area
DM	District Municipality
DR & PW	Department Roads and Public Works
DSAC	Department Sports Arts and Culture
DSD	Department of Social Development
DTSL	Department Transport Safety & Liaison
DWS	Department of Water and Sanitation
GIS	Geographic Information System
GSAA	Gamagara Spatial Action Area
IDP	Integrated Development Plan
KHSAA	Kalahari Spatial Action Area

KSAA	Karoo Spatial Action Area
LM	Local Municipality
NCDOE	Northern Cape Department of Education
NCDOH	Northern Cape Department of Health
NCPT	Northern Cape Provincial Treasury
NSDF	National Spatial Development Framework
OTP	Office of the Premier
PSC	Project Steering Committee
PSDF	Provincial Spatial Development Framework
RSAA	Rural Spatial Action Area
RSDF	Regional Spatial Development Framework
SACN	South African Cities Network
SALGA	South African Local Government Association
SALT	Southern African Large Telescope
SARAO	South African Radio Astronomy Observatory
SEZ	Special Economic Zone
SKA	Square Kilometre Array
SPLUMA	Spatial Planning and Land Use Management Act 16 of 2013
VSAA	Vaalharts Spatial Action Area
WTW	Water Treatment Works
WWTW	Waste Water Treatment Works

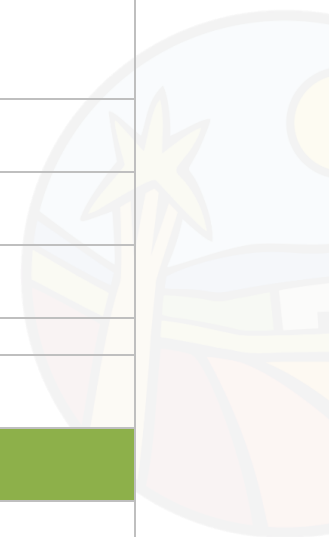


PSDF 2020		PSDF 2023 REVIEW
	CHAPTER 1 INTRODUCTION	
	BACKGROUND	
1.1	terms of reference	Aligned towards the Terms of Reference for the Review of the PSDF
1.2	document status	Aligned the document towards the PSDF Guidelines, as indicated by DALRRD, 2017 Guidelines
	USING THE DOCUMENT	
2.1	Report structure	Aligned the document towards the PSDF Guidelines, as indicated by DALRRD, 2017 Guidelines
2.2	Background and Purpose	Aligned towards the Terms of Reference for the Review of the PSDF
	THE NORTHERN CAPE PROVINCE	
3.1	Northern Cape Context	Remained the same as in PSDF 2020
3.2	Administrative Overview	Incorporated Demarcation Board Changes
	METHODOLOGY	
	APPROACH	
5.1	Bio-Regional Planning	Remained the same as in PSDF 2020
5.2	Towards sustainable development	Remained the same as in PSDF 2020
	CHAPTER 2 GOVERNANCE	
	POLICY ALIGNMENT	
1.1	International	Updated Policies and include Regional Policies
1.2	National	Remained the same as in PSDF 2020
1.3	Provincial	Included new Policies and Strategies
1.4	Municipal Spatial Development Framework Coordination	Included a list to indicate SPLUMA Compliance of all District and Local Municipalities.
	SPATIAL GOVERNANCE	
2.1	Integrated development planning	Included and updated within the Governance Structure of the Report

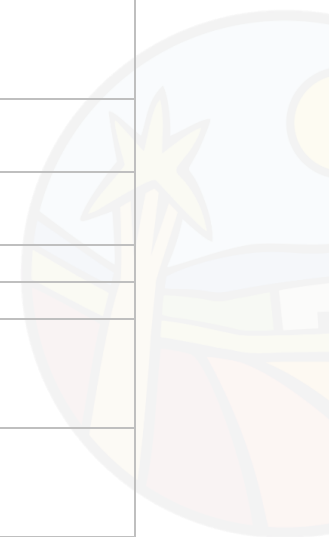
2.2	Institutionalisation	Included and updated within the Governance Structure of the Report
	CHAPTER 3 SPATIAL CHALLENGES AND OPPORTUNITIES	
	INTRODUCTION	Incorporated and reviewed within the Status Quo Analysis – Updated and elaborated within Chapter 3 in terms of Sector Planning and District Spatial Development Frameworks.
1.1	Human settlements	
1.2	infrastructure development	
1.3	connectivity and mobility	
1.4	Provincial resources	
	CHAPTER 4 SPATIAL AGENDA	
	INTRODUCTION	Remained the Same
	SPATIAL GOALS	Remained the Same
	SPATIAL LOGIC	Aligned the Spatial Logic with the NDP and NSDF
	DEVELOPMENT VISION	Remained the Same
4.1	Spatial Vision	Remained the same, with small amendments in terms of alignment of Spatial logic and elements with the NSDF, 2022 AND Karoo RSDF.
4.2	Spatial Development Values	Remained the Same
	CHAPTER 5 SPATIAL DEVELOPMENT FRAMEWORK	
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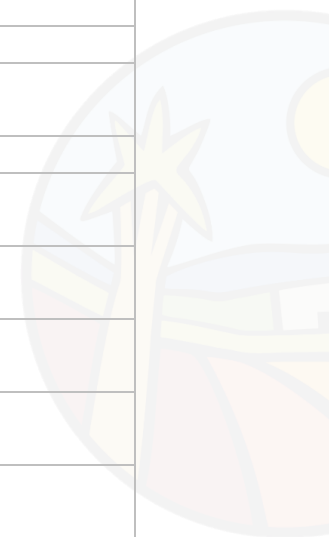
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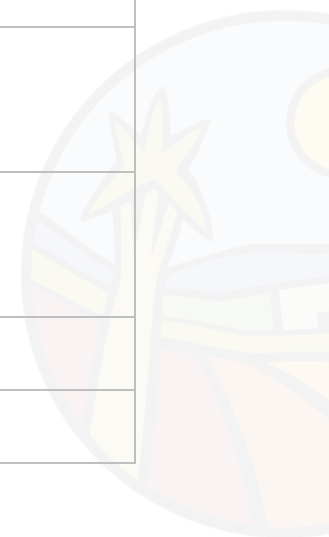
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1 PROVINCIAL POLICIES AND SPATIAL PLANNING DIRECTIVES

1.1 INTRODUCTION

CHAPTER 3 Provides a strategic overview of the Provincial policies and directives and highlights the impact they have on future growth and development. Moving from our current, undesirable 'national spatial development pattern' to the desired new post-Apartheid 'provincial spatial development pattern', requires targeted and sustainable interventions in all four components of the national transformation process, which is what the NCSDP seeks to do.

The Spatial Challenges and Opportunities can be derived from the above policies and directives. As part of **CHAPTER 3**, they will provide the crucial components that underline sustainable development, i.e. need for basic infrastructure and development for the poor, economic growth and development, environmental conservation, and improved livelihoods. These spatial development priorities form the basis for guiding specific decisions regarding the desired spatial development and arrangement of broad land uses within Northern Cape Province and investment and development spending.

2 NORTHERN CAPE VISION 2040 (2019) NORTHERN CAPE ECONOMIC GROWTH AND DEVELOPMENT PLAN

“The Northern Cape will be a smart and dynamic province with a flourishing economy and a pristine environment, where all people live in safe, sustainable spaces and enjoy equitable opportunities and quality of life.”

The Spatial Framework is structured based on three interrelated impact areas. This approach is based on the NPC conclusion that the Government and other stakeholders should be willing to prioritise and focus most of their resources on a few strategic priorities.

The approach that the plan takes is that, in order to achieve the desired socio-economic outcomes, key mechanisms must be put in place to facilitate the achievement of these goals. In turn, these mechanisms need to build on strong foundations and conditions. Unless the conditions are in place, it will not be possible to drive development and create jobs through infrastructure development.

Northern Cape Vision 2040 includes key targets for the province that are in line with those expressed in the NDP. These targets have been developed with due consideration given to the specific demographic, institutional, spatial, and socio-economic advantages, and challenges of the province.



Figure 1: Achieving Vision 2040



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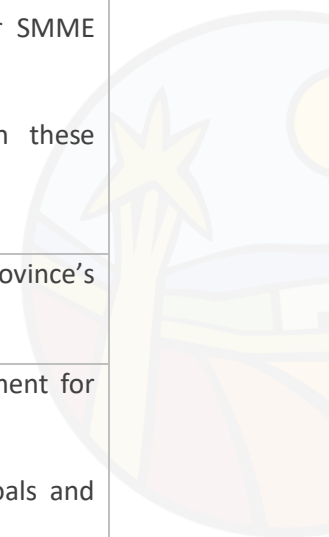
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Table 1: PGDP Drivers Alignment with PSDF

DRIVER	PATHS TO PROSPERITY	RELEVANCE TO NCSDP
Driver 1: Economic Transformation, Growth and Development	Agriculture and Agro-Processing	This driver presents an array of opportunities for SMME participation and development. The Strategy recommendations are aligned with these specific sectoral opportunities in the province.
	Mining and Mineral Processing	
	Tourism Market Development	
	Development of the Energy Sector	
	Manufacturing and Trade	
	Competitive Infrastructure Development	
	Innovation and Knowledge economy	
Driver 2: Social Equity and Human Welfare	Marine Economy	This driver presents an array of opportunities for SMME participation and development. The Strategy recommendations are aligned with these specific sectoral opportunities in the province.
	Social Cohesion and Community participation	
	Social Protection and Safety	
	Education	
	Health	
Driver 3: Environmental Sustainability and Resilience	Rural Development, Land Reform and Food Security	The Strategy recommendations are aligned to the province's sustainability goals.
	Improve Environmental Sustainability	
Driver 4: Accountable and effective Governance	Sustainable Human Settlement Development	This driver is critical for enabling a policy environment for SMMEs. The Strategy is aligned with the developmental goals and institutional framework that supports effective governance.
	Developmental State	



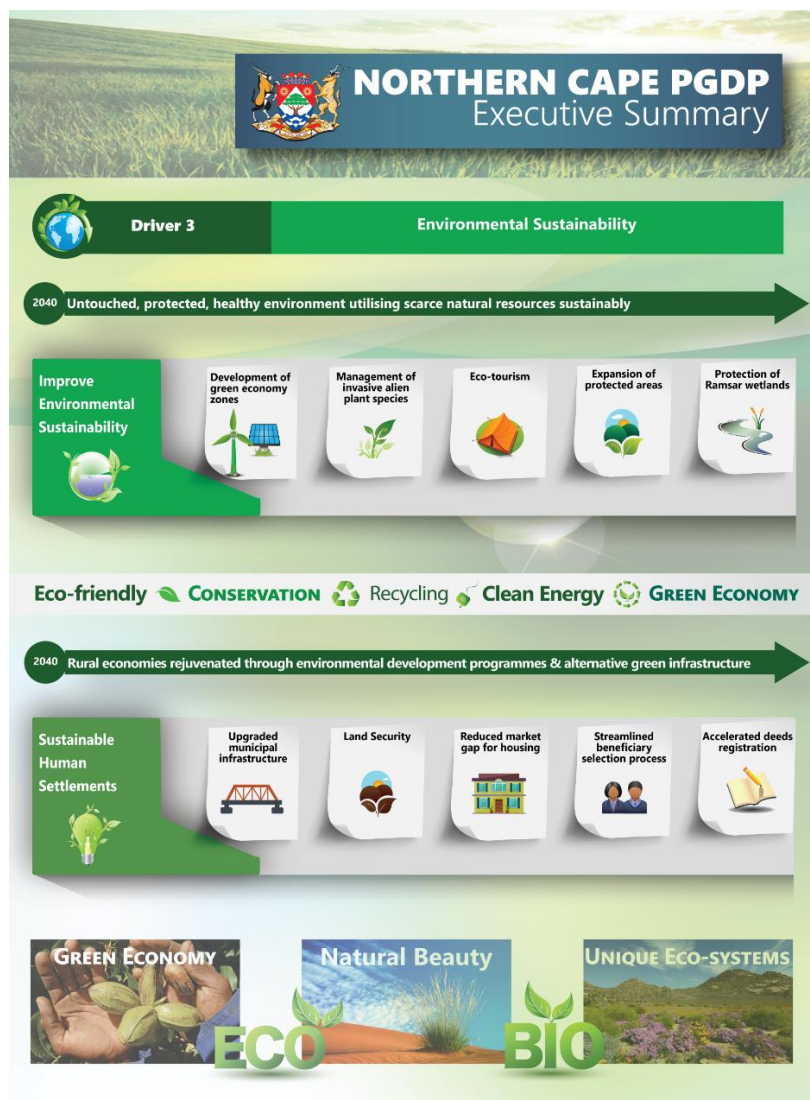


Figure 2: Driver 1 - Economic Transformation, Growth And Development

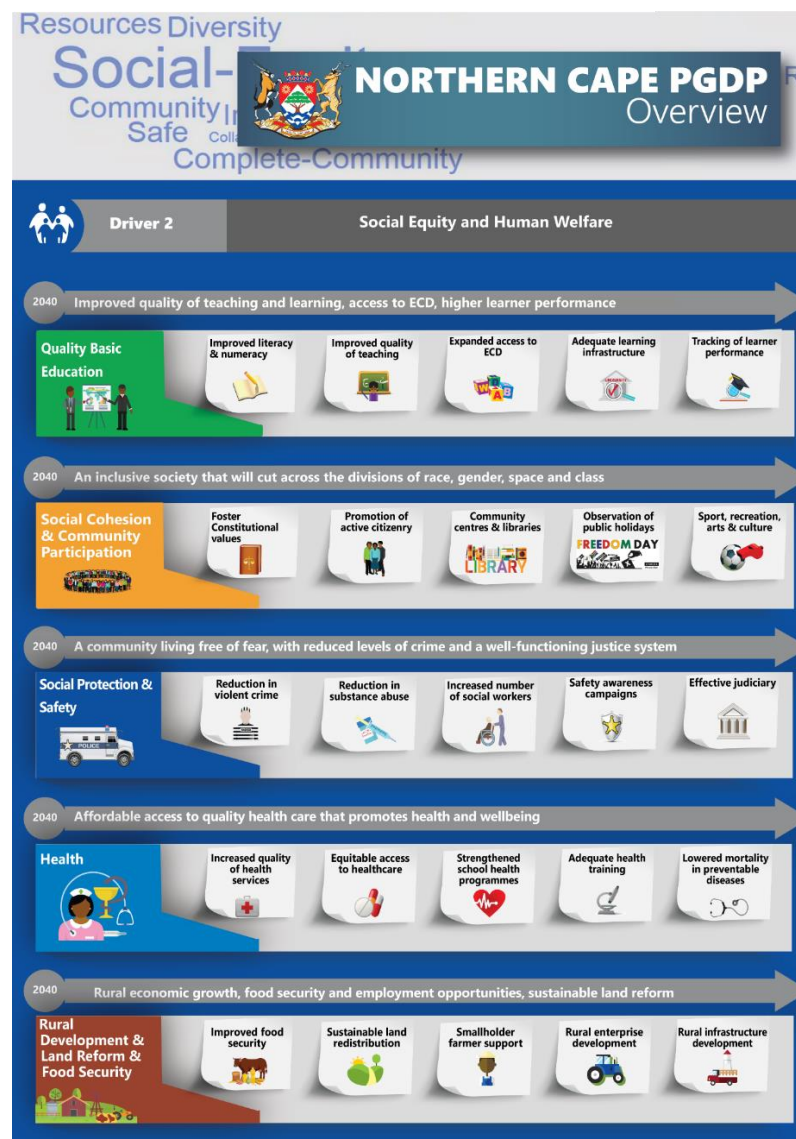


Figure 3: Driver 2 - Social Equity and Human Welfare



Figure 5: Driver 3 – Environmental Sustainability

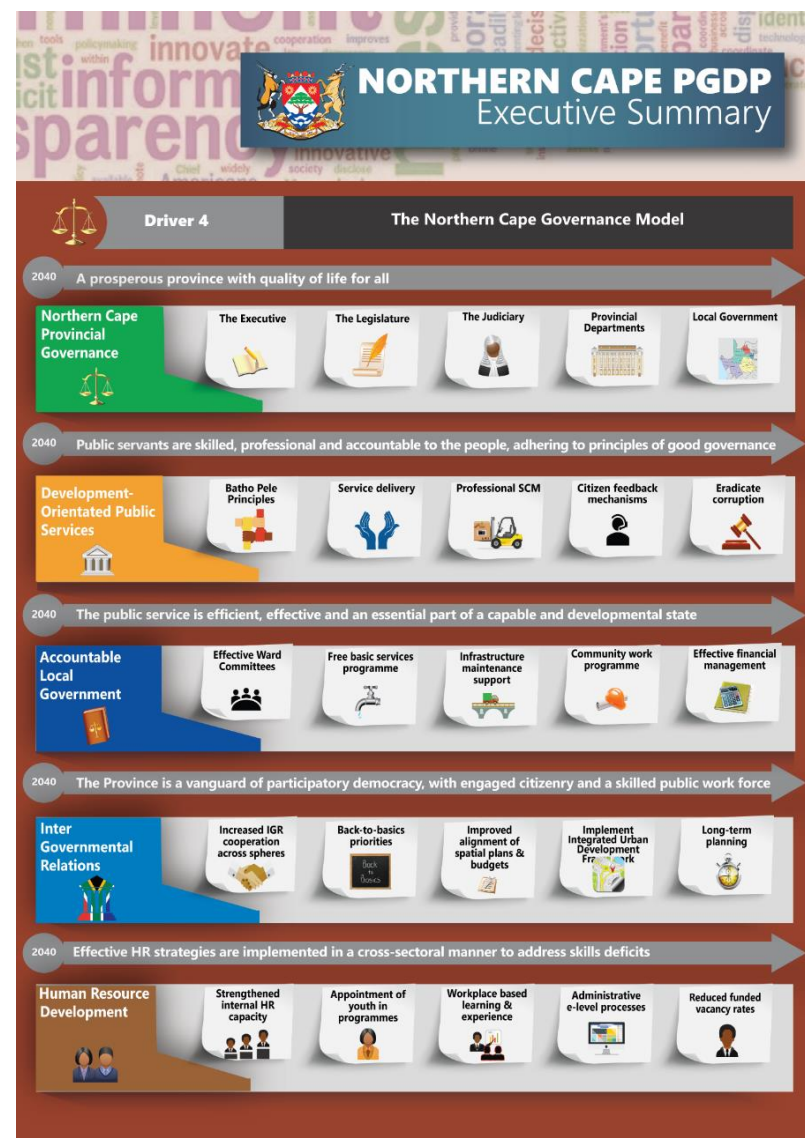


Figure 4: Driver 4 The Northern Cape Governance Model



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Figure 6: Top High Impact Projects (THIP)

Northern Cape District Growth Plan Takeaway

NCPDF will identify areas of spatial prioritisation linked to the spatial transformation logic determined, and link such with programmatic responses required by provincial sector departments per mandates in order to direct investment and prioritisation linked to strategic planning and budgeting processes (e.g. Strategic Plans, Annual Performance Plans, MTEF Budgets, Infrastructure Delivery Management System processes, etc.) which will feed into both the existing NCPDF 2040 as well subsequent review.

Existing Top high-impact Projects (THIP) (listed in Figure 6) are to be spatially referenced and bolstered for joint spatial prioritisation across spheres and sectors as per the districts.



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2.1 KEY DRIVER 1: ECONOMIC TRANSFORMATION, GROWTH AND DEVELOPMENT – TAKEAWAY

2.1.1 PATHS OF PROSPERITY 1.1: AGRICULTURE AND AGRO-PROCESSING

2.1.1.1 Frances Baard District Municipality

- Vaalharts Irrigation Scheme, the largest irrigation scheme in South Africa, can be found in FBDM. This water scheme is the main water source for the agricultural industry and some towns¹.
- Sol Plaatje LM hosts the largest distribution depots for livestock products in the region.

2.1.1.2 Namakwa District Municipality:

- The main agricultural commodities produced in NDM include small stock, lucerne, vegetables, and grapes. Sheep farming is practised on a small scale in NDM from which wool and mutton products are produced².
- Niche opportunities for agro-processing have been identified in the form of high-value aquaculture (such as abalone).

2.1.1.3 Pixley Ka Seme District Municipality:

- Irrigation farming is widely practised along the Orange and Vaal rivers and canal systems for the cultivation of grapes and other fruits, wheat, maize and lucerne. The vast central plateau is most suitable for livestock (mostly sheep) and game farming³.

2.1.1.4 John Taolo Gaetsewe District Municipality:

- Livestock farming, including game, cattle, and sheep, is practised throughout JTGDM. High-quality meat and meat products are produced⁴.

2.1.1.5 ZF Mgcawu District Municipality:

- The Orange River serves as the main water source for irrigation farming in the District⁵.



¹ Frances Baard District Rural Development Sector Plan, 2023

² Namakwa District Rural Development Sector Plan, 2023

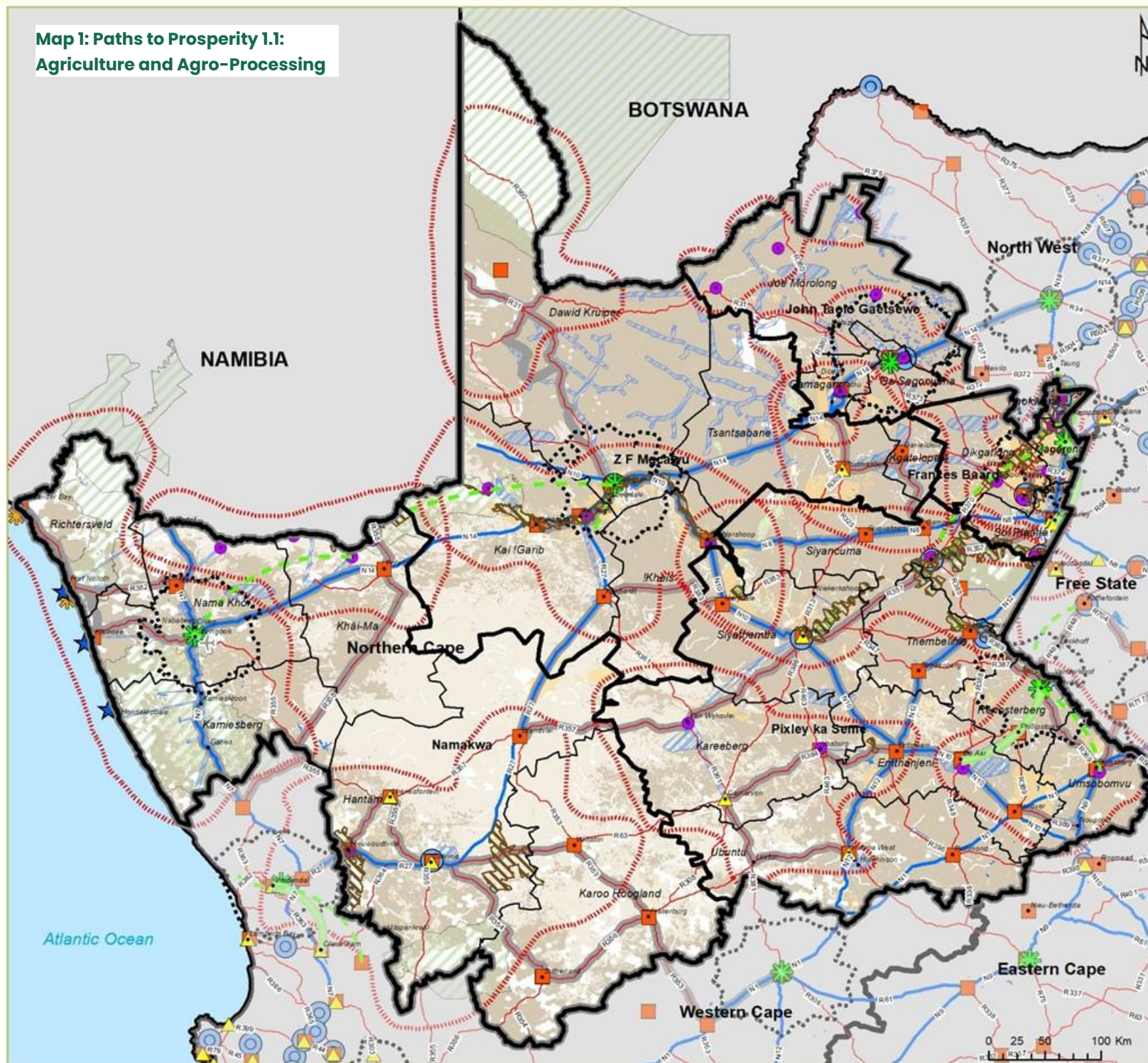
³ Pixley Ka Seme District Rural Development Sector Plan, 2023

⁴ JOHN Taolo Gaetsewe District Rural Development Sector Plan, 2023

⁵ ZF Mgcawu District Rural Development Sector Plan, 2023



**Map 1: Paths to Prosperity 1.1:
Agriculture and Agro-Processing**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
AGRICULTURE AND AGRO-PROCESSING**

Legend

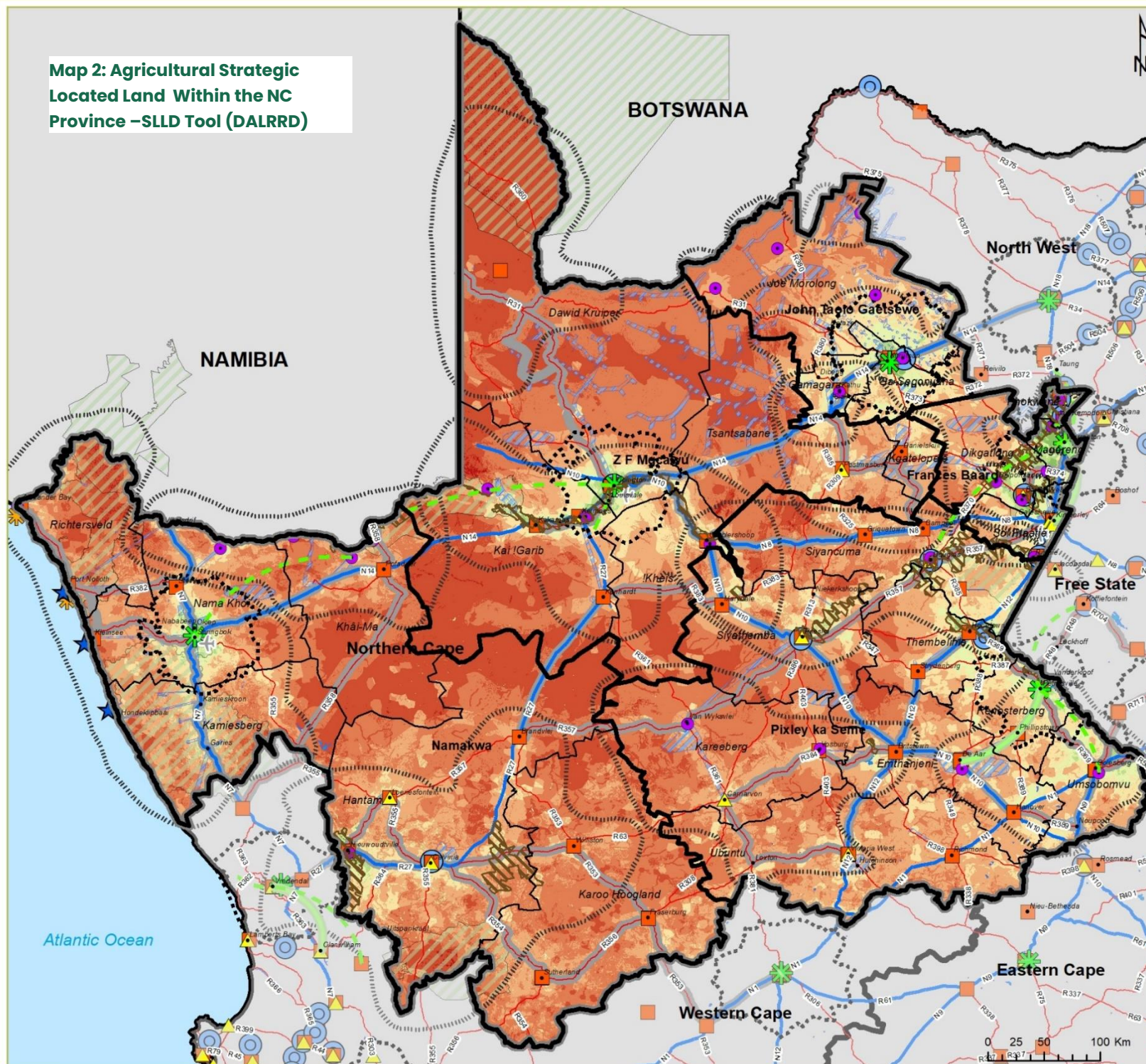
- Town/Settlement
- Farmer Production Support Unit
- ✈ Main Airports
- ▲ Foodmarkets
- Abattoirs
- ★ Aquaculture
- ✴ Harbour
- ✳ Agri Hubs
- ⊙ Silos
- Main Roads
- National Roads
- FPSU to Agri-Hubs
- Agri-Hub to Anchors
- Ring Roads
- ⬢ 60km Agrihub Buffer
- ⬢ Intervention Areas
- Local Municipality
- District Municipality
- ▨ High Potential Agricultural Area
- ▨ Nature Reserve Zones
- ▨ Water Schemes
- ▨ Pivot Irrigation
- ▨ Fruit & Nut Region
- ▨ Poultry Region
- ▨ Sub Protein Region
- ▨ Main Protein Region
- ▨ Dams

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



**Map 2: Agricultural Strategic
Located Land Within the NC
Province –SLLD Tool (DALRRD)**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
AGRICULTURE AND AGRO-PROCESSING**

Legend

- Town/Settlement
- Farmer Production Support Unit
- ✈ Main Airports
- ▲ Foodmarkets
- Abattoirs
- ★ Aquaculture
- ★ Harbour
- ★ Agri Hubs
- Silos
- Main Roads
- National Roads
- FPSU to Agri-Hubs
- Agri-Hub to Anchors
- Ring Roads
- 60km Agrihub Buffer
- Intervention Areas
- Local Municipality
- District Municipality
- High Potential Agricultural Area
- Nature Reserve Zones
- Water Schemes
- Dams

Agricultural Suitability as Per SLLD Tool



Source: Department of Agriculture

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



2.1.3 PATHS TO PROSPERITY 1.2: MINING AND MINERAL BENEFICIATION

Mining contribution per district is presented in the Figure below. John Taolo Gaetsewe District makes the largest contribution to both provincial mining output and employment, whilst Frances Baard District experienced the largest mining employment growth in the past decade.

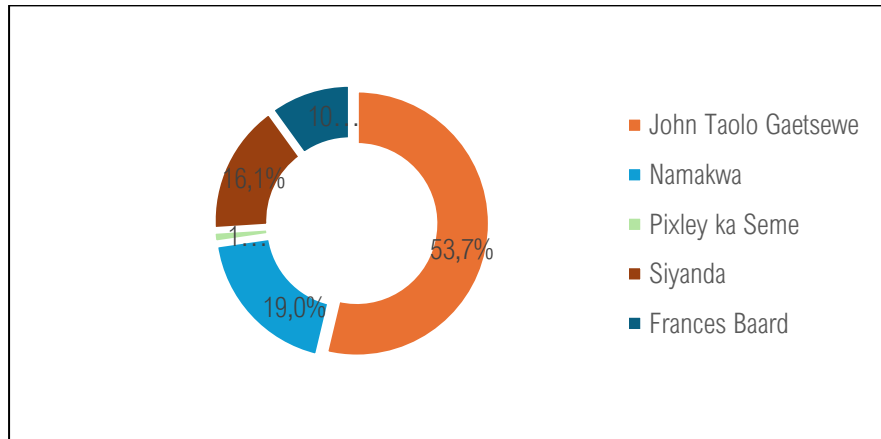
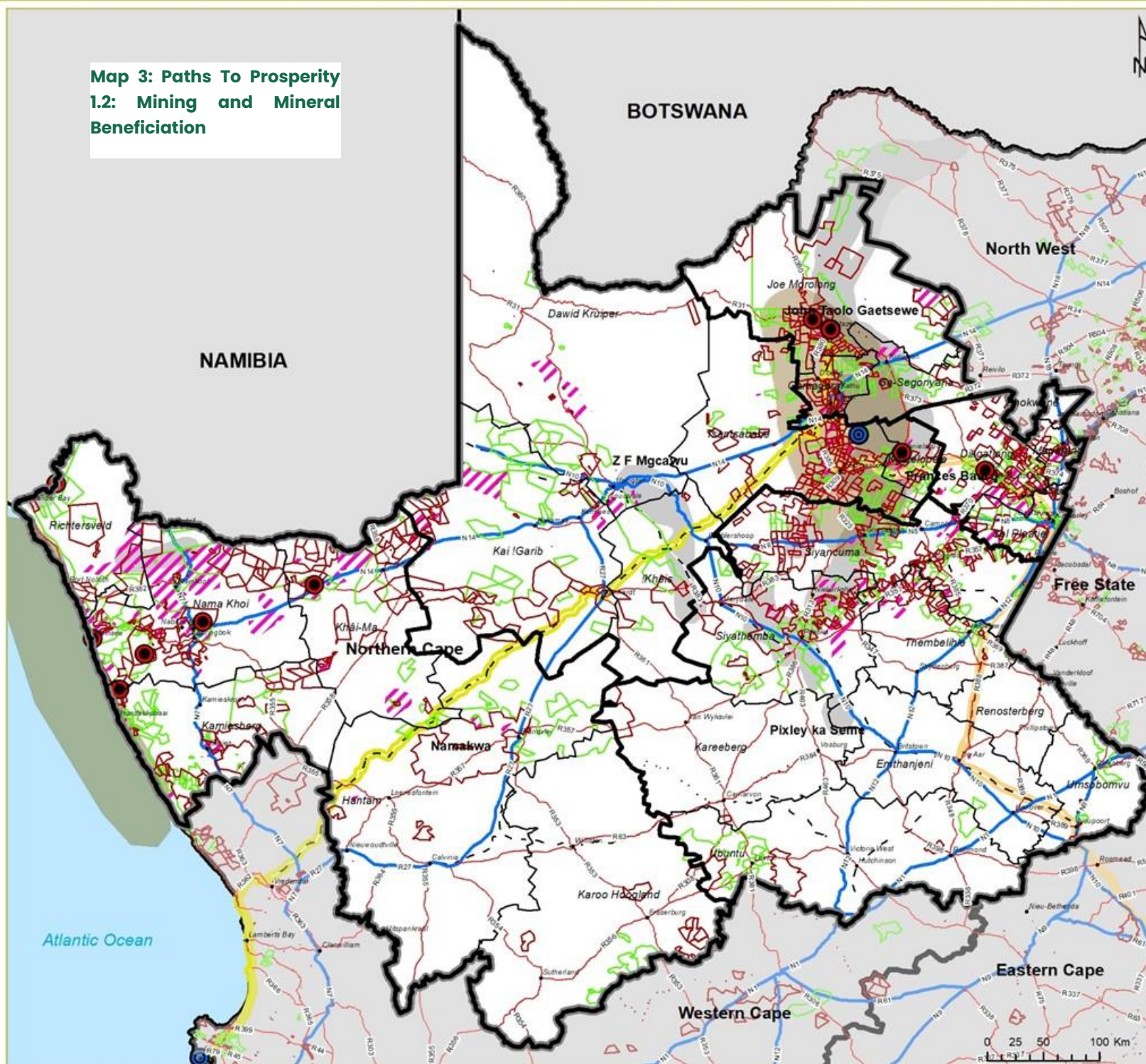


Figure 7: MINING CONTRIBUTION PER DISTRICT (Calculations based on Quantec Easy Data, 2018)



Map 3: Paths To Prosperity
1.2: Mining and Mineral Beneficiation



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
MINING AND MINERAL BENEFICIATION

Legend

- Town/Settlement
- Distressed Mining Towns
- Transnet Terminals
- Main Roads
- National Roads
- - Railway Line
- Manganese Railway Line
- Iron Ore Railway Line
- ▨ Active Mines
- Oil & Gas Exploration
- Gamagara Mining Corridor
- Asbestos Mining
- Local Municipality
- District Municipality
- Mining Application Status**
- ▨ Granted
- ▨ Issued

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



2.1.4 PATHS TO PROSPERITY 1.3: TOURISM MARKET DEVELOPMENT

2.1.4.1 Frances Baard District Municipality Diamond and History Cluster

The Frances Baard DM is the administrative Hub of the Province, Mining, History, Entertainment, Business Tourism, and Strategic Location. Most provincial government departments, corporations and other large companies are situated in the cluster⁶.

This cluster offers cultural, heritage, archaeological and historic tourism offerings as well as entertainment, educational, wildlife and nature reserves, recreation, sport, and medical and retail offerings. The cluster has the busiest airport in the province, and it is ideally located along the N12 – a major tourist arterial. It is also a stopping point for the two most luxurious steam trains in Africa.

1.1.1.1 Namakwa District Municipality – Ocean and Flower Cluster

The Namakwa DM is well known for its spread of wildflowers including many rare, unique, and endangered plants. The cluster offers a diverse range of tourism offerings including an astronomical observatory, 4x4 routes, history and cultural attractions, parks and nature reserves, the only strip of coastline in the province as well as a range of festivals (Ais-Ais, Rehearsed Transfrontier Park has been awarded World Heritage status and is one of only 10 sites in SA).

1.1.1.2 Pixley Ka Seme District Municipality- Space and Culture Cluster

The Pixley Ka Seme DM hosts the space and culture cluster. This cluster is home to the central Karoo which is characterised by desolate valleys between flat-topped hills or Koppies. The cluster contains three of South

Africa's major dams and is also the largest producer of wool in the country. It also offers hunting, hiking, game watching as well as water sports, recreational activities and Khoisan Rock Art, and fossil deposits. Furthermore, the establishment of the SKA has great potential for space tourism in the area⁷.

1.1.1.3 John Taolo Gaetsewe District Mining and Rural Cluster

The John Taolo Gaetsewe DM has a largely underdeveloped tourism industry. Potential tourism assets include The Eye (the biggest natural foundation in the Southern Hemisphere), hunting, caves with San Rock art, cultural and heritage potential, and birding (especially raptor and owl species). Business tourism is also growing as a result of the Sishen Iron-Ore Mine. The outdoor action cluster was identified for this region.

1.1.1.4 ZF Mgcawu District Municipality River and Grapes Tourism Cluster

The ZF Mgcawu DM is positioned as the river and grapes tourism cluster. The cluster boasts with an abundance of water resources which allow for significant farming opportunities. Augrabies Falls is in the region and is the 6th largest waterfall in the world. The cluster offers a range of lifestyle activities ranging from wine cellars to tearooms in the desert as well as luxury province.

2.1.5 PATHS TO PROSPERITY 1.4: DEVELOPMENT OF THE ENERGY SECTOR

The Northern Cape's comparative advantage in energy resources lies in the renewables, specifically solar and wind. The abundance of these renewable energy sources, coupled with the province's large surface area, sparsely populated tracks of land, and limited agricultural potential makes it particularly suitable for electrical power generation from solar.⁸

⁶ Frances Baard District SDF, 2021

⁷ Pixley Ka Seme District SDF, 2022

⁸ DoE, DBSA, and NT, 2022



The potential for solar energy harvesting is widely recognised in the country and in the province, and as a result, many projects have been developed under the Renewable Energy Independent Power Producer Procurement Programme (REI4P).

The daily average solar radiation in most of the province varies between 6.5 and 7.3 kWh/m², which is also the highest in the country.

Coastal regions are in many instances prime locations for wind farms due to high wind speeds generated offshore, as well as constant and less variable sea breezes and land breezes⁹. However, besides the coastal areas, the Northern Cape Province is endowed with high wind energy potential inland.

The potential for hydro energy has already been exploited and opportunities for micro-hydro power are limited due to the highest variation in river flows in the province. Nevertheless, pockets of opportunities along the major rivers in the province exist and this has been proven by the establishment of the kinetic micro hydro power station in ZF Mgcawu, as well as the presence of two utility-scale peaking hydro facilities at Gariep and Vanderkloof Dams.

The potential to harness biomass energy is limited in the province and is more prevalent in the northern parts of the province that face bush encroachment and alien invasive plants.

The Northern Cape does not have any established oil and gas pipelines now; however, gas pipelines developed in phases have been identified as an integral element of developing a gas economy and providing a path to the available market.

The districts of Namakwa and Pixley ka Seme are to host the largest share of the renewable energy capacity established as part of the RE IPPPP. The local municipalities of Siyathemba, Enthanjeni, Khai-ma, Kai! Garib,

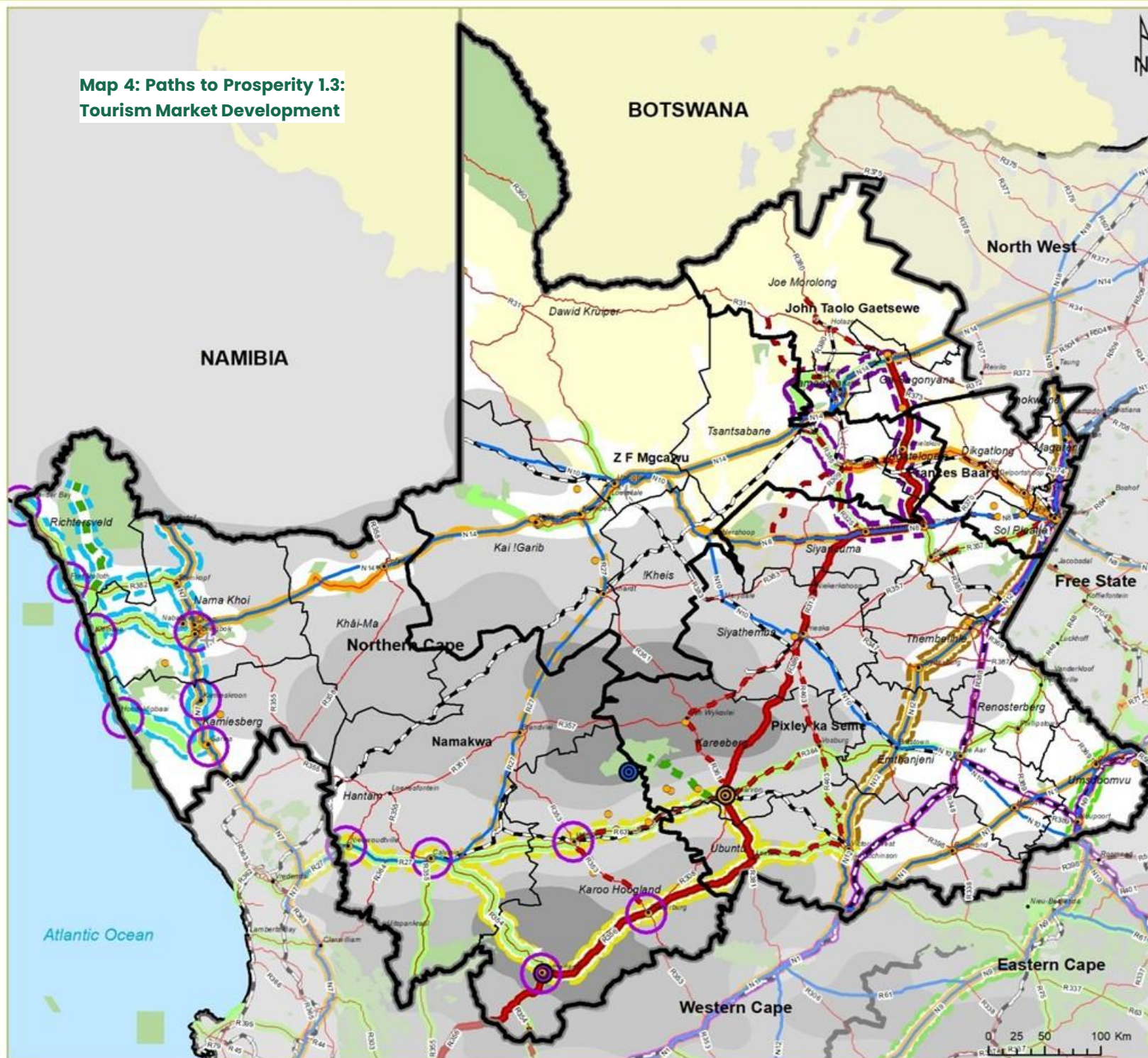
Hantam, Gamagara, and Karoo Hoogland account for the largest established generating capacities.



⁹ Urban-Econ and EScience, 2018



**Map 4: Paths to Prosperity 1.3:
Tourism Market Development**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
TOURISM MARKET DEVELOPMENT**

Legend

- Town/Settlement
- Heritage Sites
- ✈ Main Airports
- Tourism Nodes

Technology Tourism Sites

- Meerkat
- SALT
- SKA

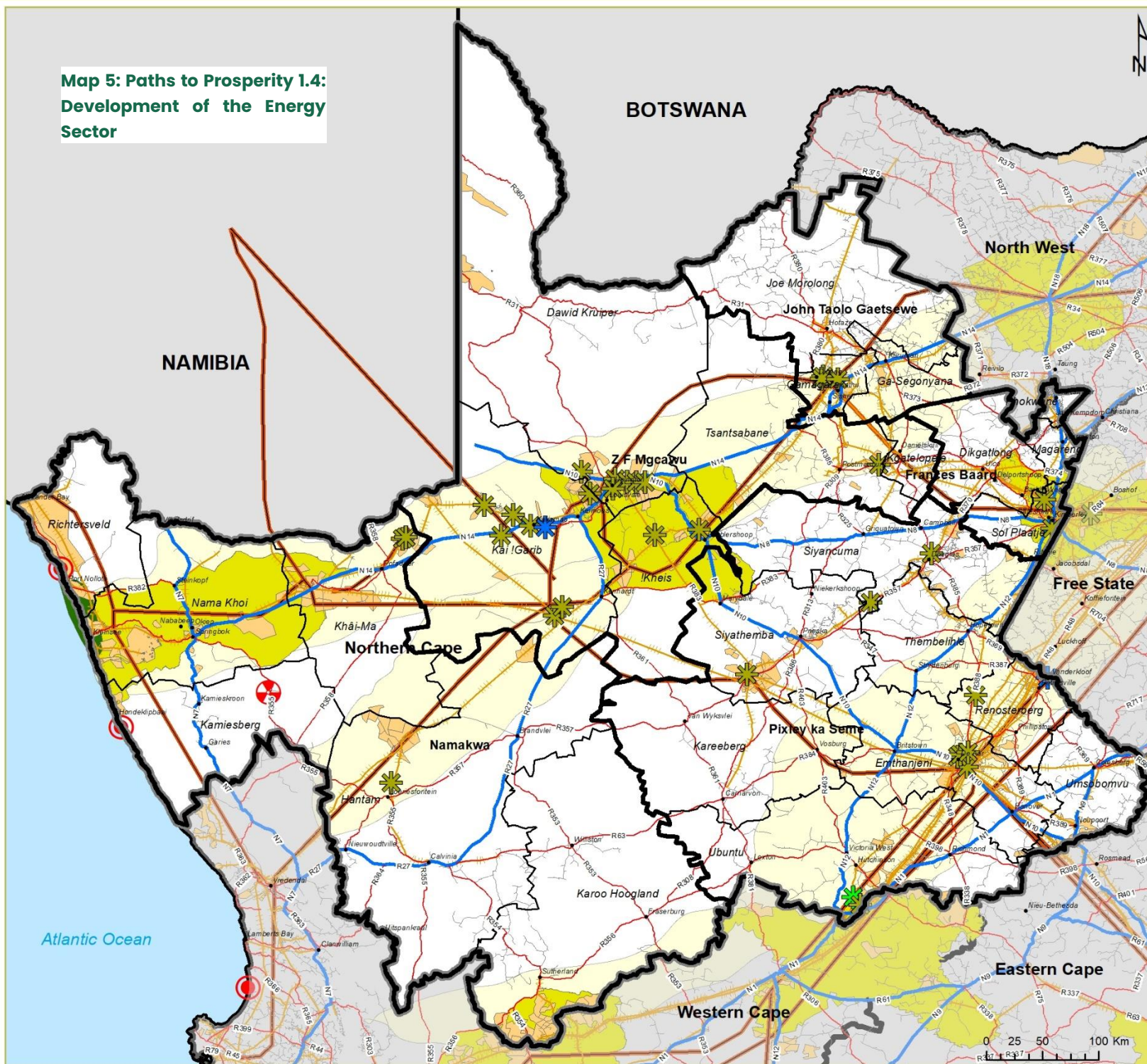
- Railway Lines
- Main Roads
- National Roads
- Camdeboo Route
- Karoo Highlands / Loxton Succulent Garden
- Namakwa Coastal / Richtersveld Route
- Karoo Oasis Route
- Go Ghaap Route
- Inter-Regional Tourism Roads
- Regional Tourism Roads
- Local Tourism Roads
- Passenger and Tourism Rail
- Nature Reserve Access Routes
- The Forgotten Highway
- The Forgotten Highway Side Route
- Protected Areas
- Kalahari Basin
- Clear Night Skies**
 - Highest
 - Medium-High
 - Medium

Source: Northern Cape PSDF 2020, Karoo RSDF

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



**Map 5: Paths to Prosperity 1.4:
Development of the Energy Sector**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY**
DEVELOPMENT OF THE ENERGY SECTOR

Legend

- Town/Settlement
- ★ Hydropower Plant
- ★ Solar Energy Plant
- ★ Wind Energy Plant
- Screened Nuclear Sites
- Nuclear Site
- Main Roads
- National Roads
- Eskom HV Lines
- Eskom MV Lines
- Eskom Expansion Projects
- Eskom Corridors
- Renewable Energy Projects
- Renewable Energy Development Zone
- Wind Energy Generation
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



2.1.6 PATHS TO PROSPERITY 1.5: MANUFACTURING AND TRADE

2.1.6.1 Northern Cape Manufacturing Strategy¹⁰

The purpose of the strategy is to fast-track manufacturing development in the province as well as increase employment based on the comparative advantages of the Northern Cape. The strategy also aims to regionalise the Industrial Policy Action Plan (IPAP2) by aligning provincial and national objectives.

1.1.1.1 Industrial Policy Action Plan

The IPAP supports radical economic transformation by an on-going effort to fundamentally change the structure of the economy. The focus is on patterns of ownership, management and control, with a central emphasis on the manufacturing sector. Sustainable job creation is a key priority. Therefore, an even stronger focus on labour-intensity in key sectors of the productive economy and the integration of primary, manufacturing and service value chain across sectors.

1.1.1.2 Northern Cape Trade and Investment Promotion Strategy (NCTIPS)¹¹

The purpose of the trade and investment promotion strategy is to assist local firms in identifying new markets, both domestically and internationally, promote the Northern Cape to potential investors and attract investment to the province.

1.1.2 PATHS TO PROSPERITY 1.6: COMPETITIVE INFRASTRUCTURE DEVELOPMENT

Modern economic growth and development depend on high-quality infrastructure. There is no getting around it. Infrastructure spans a wide

range of public and private assets, including highways and bridges, airports, ports and inland waterways, electricity plants and transmission lines, information and telecommunication networks and water and sewage facilities.

Energy: The current deficits and uncertainties lie in, firstly the capacity to generate and source electricity to support an increased growth in demand, especially towards the high-growth areas. Secondly, the ability of transmission infrastructure is hindering the expansion of the renewable energy rollout. The energy focus in the province is on lowering the carbon footprint, with an emphasis on renewable and locally generated energy.

Water: The province has limited water resource options for future growth. To address this, increased water conservation and demand management are urgent and necessary, but emphasis needs to be placed on the re-use of water, rather than the exploitation of virgin water sources. The sanitation infrastructure priority is to rehabilitate and upgrade infrastructure assets. However, there is a chronic shortage of capital for water and sanitation projects.

Transport: The province has a well-developed transport network comprising airports, ports, roads public transport, and railway lines. Port expansion and refurbishment are required in Port Nolloth and Boegoeberg Bay in response to local and international markets and as economic catalysts. The provincial paved-road network has good coverage and is generally in good condition, but the gravel network is in poorer condition. However, there is a critical shortage of funding for road rehabilitation and maintenance. Rail freight lines in the province have adequate capacity but suffer from poor performance, due to power and signalling constraints. Passenger rail, particularly in Kimberley, has suffered from historical underinvestment, and rehabilitation and upgrading are a priority. The larger urban areas require investment to unlock broader-reaching public transport systems. As the rail freight routes, which are mainly utilised to

¹⁰ Northern Cape Manufacturing Strategy

¹¹ Northern Cape Trade and Investment Strategy



export mining commodities, have been prioritised within NATMAP and the NSDF and play a crucial role in the attempt to rebalance the road freight–rail freight split and reduce the amount of road maintenance required, due to the negative impact of heavy motor vehicles on road surface quality.

Settlements: The Northern Cape suffers from the apartheid legacy of segregated and spatially inefficient settlements. Within these settlements, the housing backlog is currently estimated at 60 000 households and is expected to increase in the short to medium term. The perpetual challenge of providing affordable housing to low-income households on well-located land is still unsolved. However, there is agreement around the need for more integrated settlements (providing public and social services and livelihood opportunities together with housing) and for densification along transport networks to make urban settlements more ‘liveable’ and efficient. The solid waste challenge differs across the range of settlements in the province. While larger municipalities are grappling with the costs associated with the stringent targets for waste minimisation and alternatives to landfills imposed by legislation, municipalities with smaller urban cores are still battling with basic waste collection and landfill management. The shortage of landfill space is a problem, as is the rising cost of waste transport.

Information and Communication Technology (ICT): Access to mobile communication has increased dramatically, but internet access has been stagnant. new technologies and developments in the province have the potential to dramatically improve the rate of access, and investment in fibre optic cabling is essential to provide the backbone for mobile networks and to enable faster, cheaper, and more reliable communication networks.



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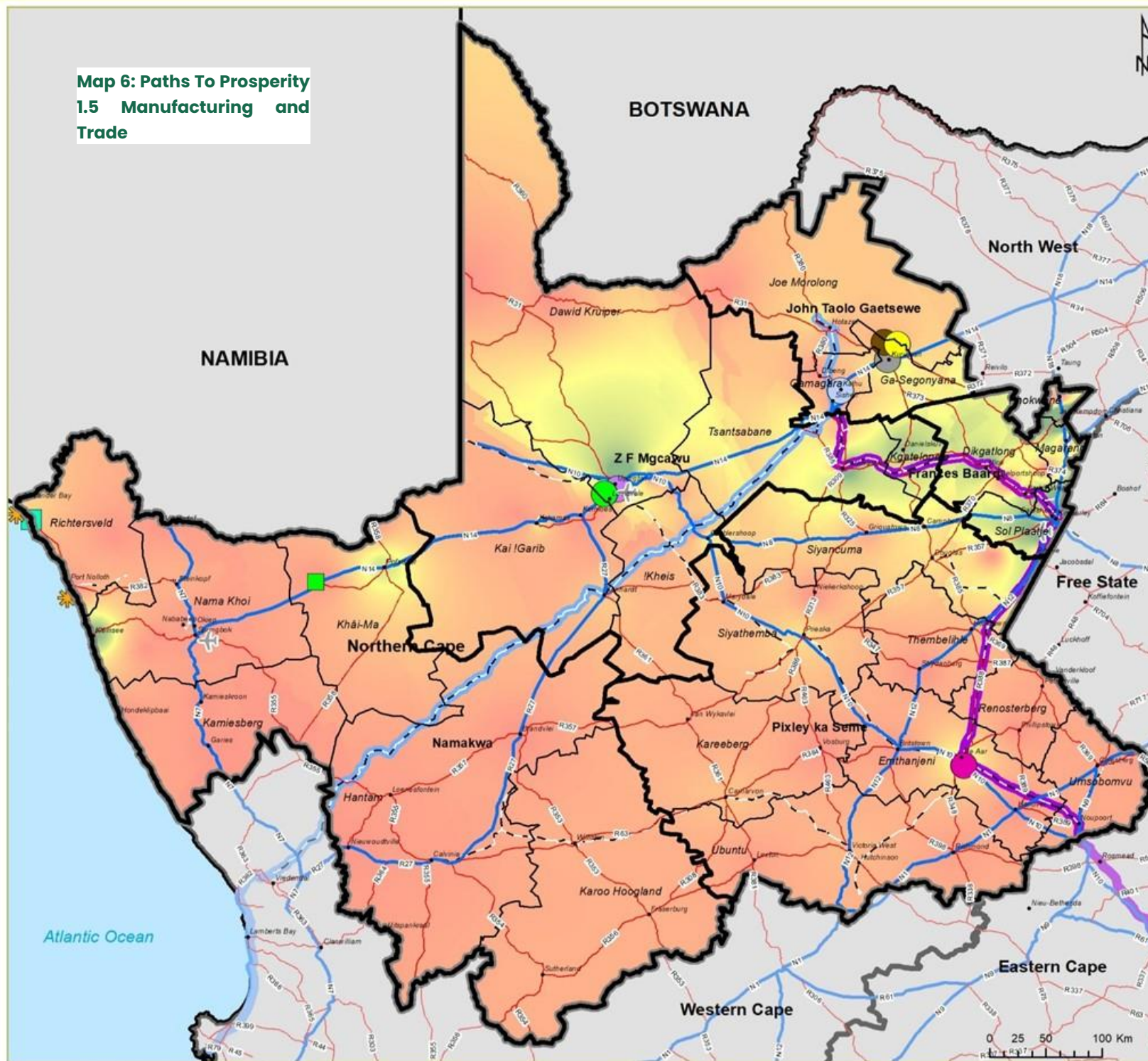


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Map 6: Paths To Prosperity
1.5 Manufacturing and Trade



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
MANUFACTURING AND TRADE

Legend

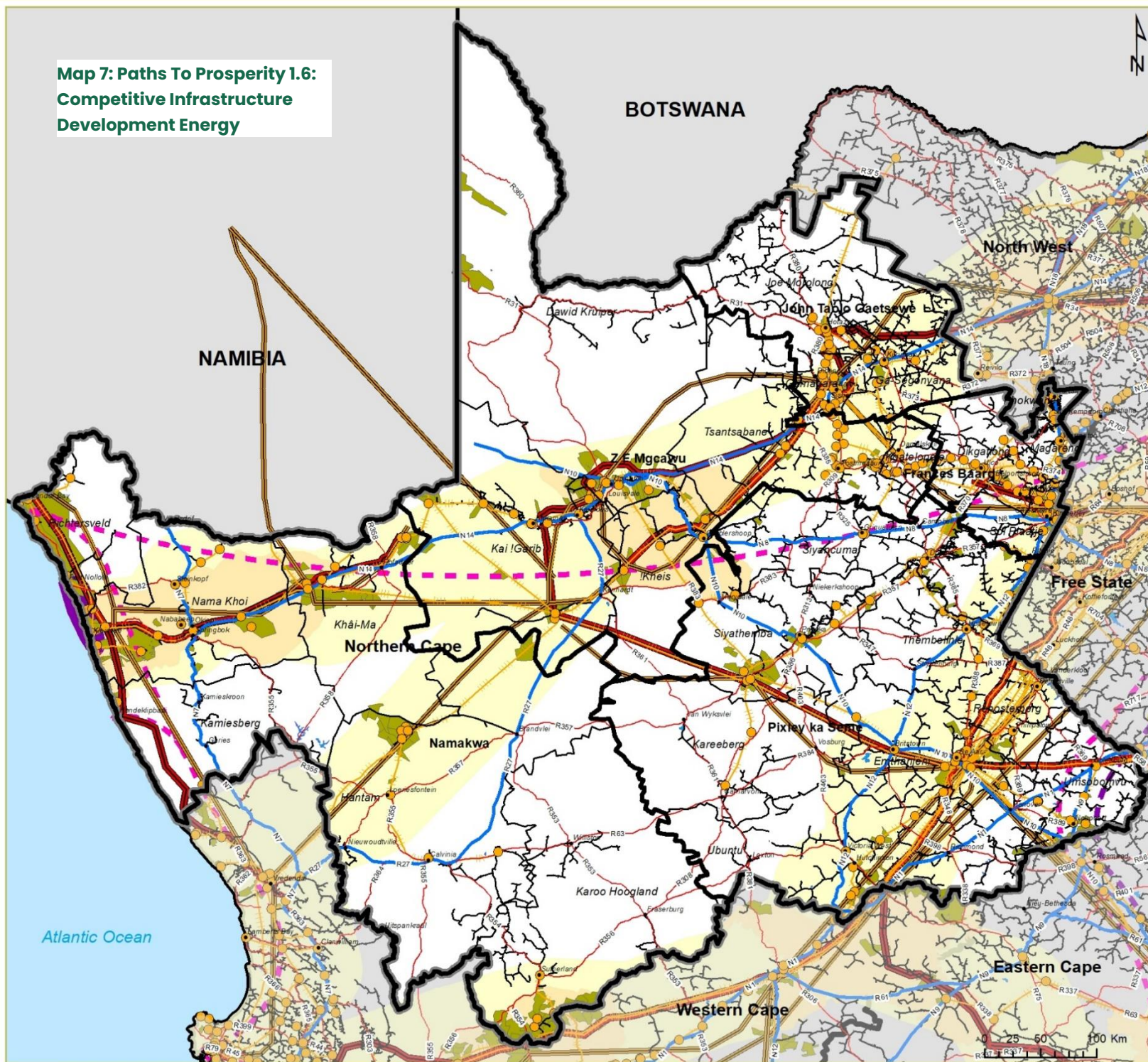
- Town/Settlement
 - ✈ Main Airports
 - ☀ Harbour
 - SEZ
 - Boegoebaai Provincial IDZ
- Manufacturing & Trade Projects**
- Cargo Hub
 - Industrial Hub
 - Logistics and Electronics Hub
 - Mining Textiles Manufacturing
 - Proposed Industrial Park
 - Proposed Metal Fabrication
 - Renewable Energy Manufacturing
- Railway Line
 - Main Roads
 - National Roads
 - Iron Ore Railway Line
 - Manganese Railway Line
 - Local Municipality
 - District Municipality
- Manufacturing & Trade GVA**
- High
- Low

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



**Map 7: Paths To Prosperity 1.6:
Competitive Infrastructure
Development Energy**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
COMPETITIVE INFRASTRUCTURE DEVELOPMENT:
ENERGY**

Legend

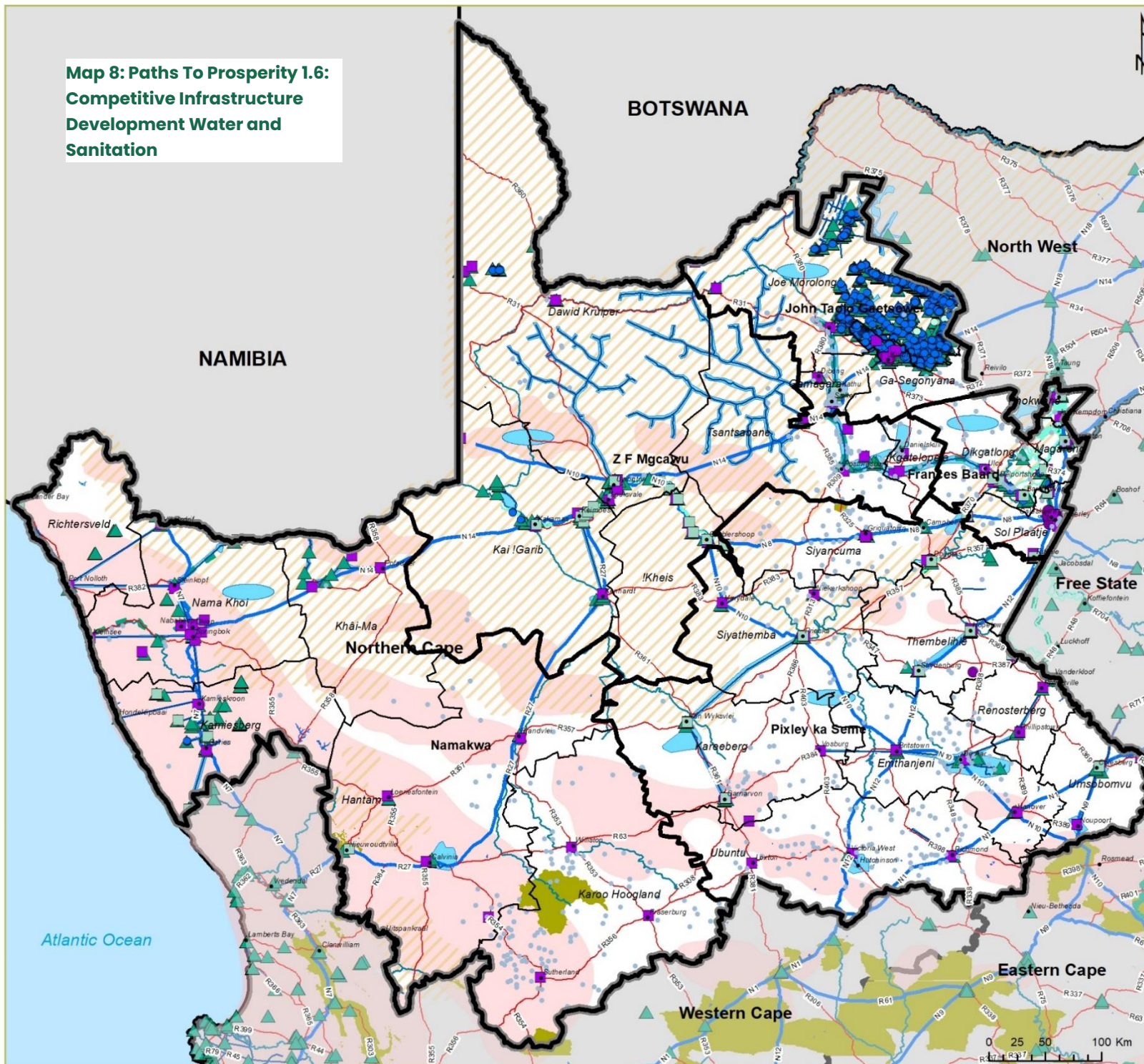
- Town/Settlement
- Substations
- Main Roads
- National Roads
- Eskom HV Lines
- Eskom MV Lines
- Eskom Planned Lines
- Eskom Expansion Projects
- Proposed Gas Pipelines
- Proposed Liquid Fuel Pipeline
- Local Municipality
- District Municipality
- National Renewable Energy Development Zone
- Power Corridors
- Dams
- Renewable Energy Projects
- Wind Energy Generation

Source: Northern Cape PSDF 2020; Karoo RSDF

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



Map 8: Paths To Prosperity 1.6:
Competitive Infrastructure
Development Water and
Sanitation



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
COMPETITIVE INFRASTRUCTURE DEVELOPMENT:
WATER AND SANITATION

Legend

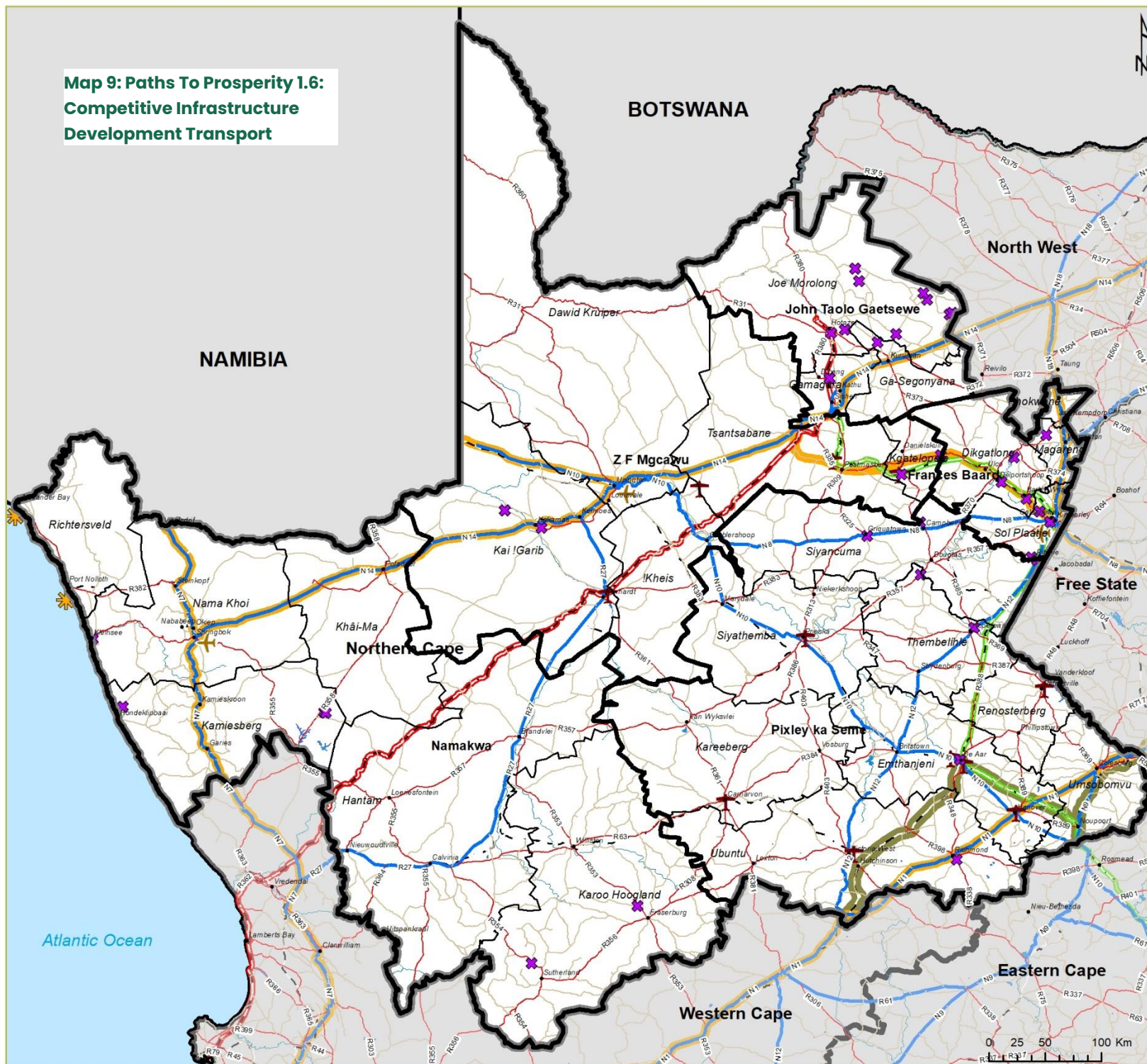
- Licensed Boreholes
- Town/Settlement
- Communal Standpipe
- Prepaid Standpipe
- Sewer Pumpstation
- WTW
- WWTW
- ▲ Reservoirs
- Bulk Water Pipelines
- Canal
- Main Rivers
- Main Roads
- National Roads
- Inter Basin Water Transfers
- Increase in very hot days 2021-2050
- Dams
- Decrease in Annual Rainfall 2021-2050
- Stressed Catchments
- Water Schemes
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020; Karoo RSDf

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



Map 9: Paths To Prosperity 1.6:
Competitive Infrastructure
Development Transport



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
COMPETITIVE INFRASTRUCTURE DEVELOPMENT
TRANSPORT

Legend

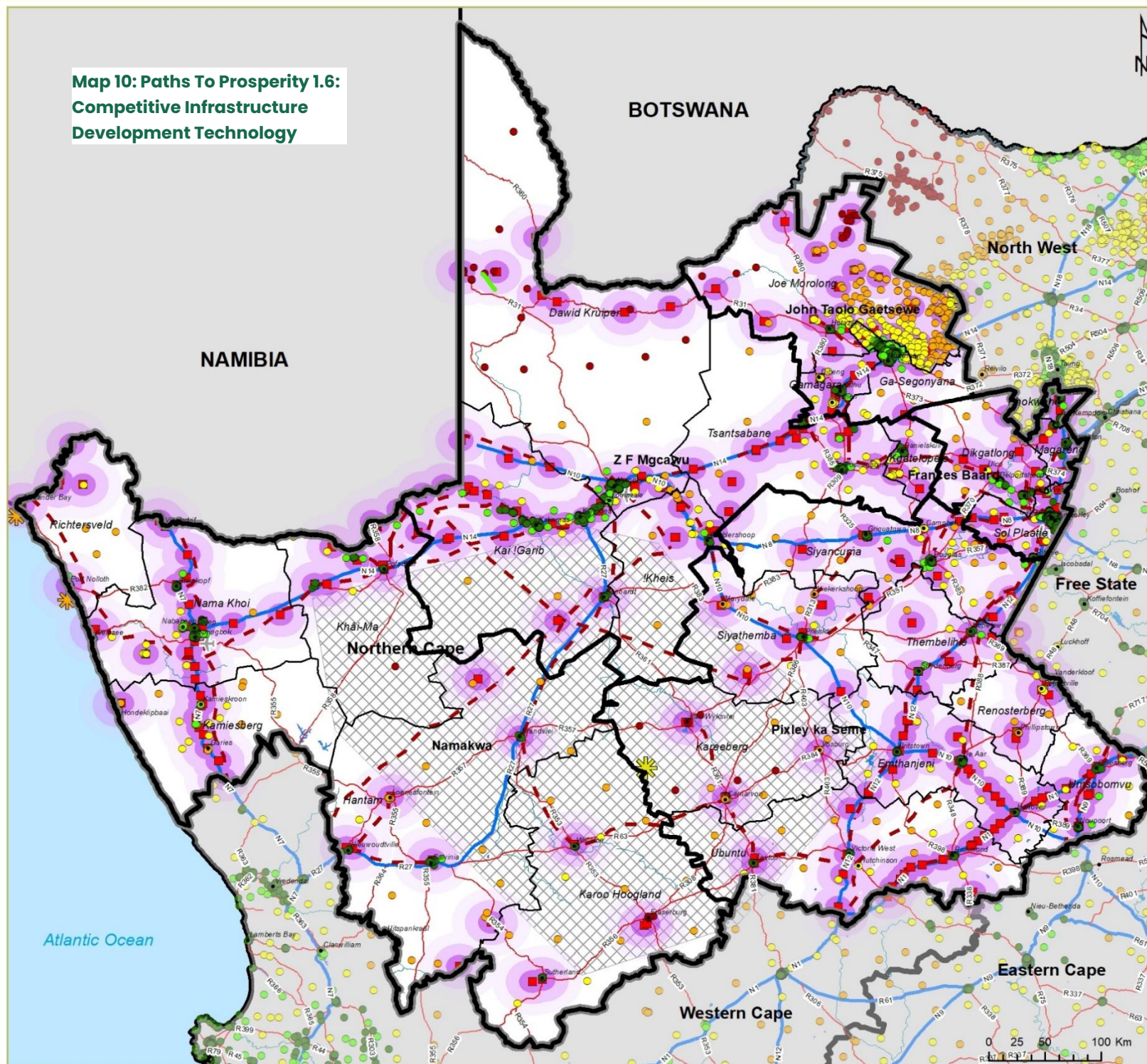
- Town/Settlement
- ✳ 2023/2024 Roads Projects
- ✈ Aero Drome
- ✈ Main Airports
- ✳ Harbour
- Railway Line
- Main Rivers
- Secondary Road
- Main Roads
- National Roads
- Iron Ore Railway Line
- Manganese Railway Line
- Intercape Bus Routes
- PRASA Rail Routes
- Dams
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



Map 10: Paths To Prosperity 1.6:
Competitive Infrastructure
Development Technology



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
COMPETITIVE INFRASTRUCTURE DEVELOPMENT
TECHNOLOGY**

Legend

- Town/Settlement
- Cellphone Towers
- ✈ Main Airports
- ⚓ Harbour
- ★ SKA Core Site

ICT Fibre Connection Distance

Distance (m)

- 1 - 5 000
- 5 001 - 10 000
- 10 001 - 30 000
- 30 001 - 80 000
- 80 001 - 300 000
- Main Roads
- National Roads
- Main Rivers
- Broadband Lines
- 10km Cellphone Towers Radius
- 20km Cellphone Towers Radius
- 30km Cellphone Towers Radius
- Dams
- Bloodhound Initiative
- SKA Area
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020; Karoo RSDF

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



2.1.7 PATHS TO PROSPERITY 1.7: EMPLOYMENT AND SKILLS DEVELOPMENT

The Northern Cape has been struggling to decrease the provincial unemployment rate. Since 2018 the Northern Cape unemployment rate increased from 27.1% to 27.4% in 2024¹². This was a 6-year, consecutive increase in the unemployment rate. This is attributed to poor economic growth and the inability of the economy to create enough job opportunities to stay on par with the rising working-aged population. Moreover, the Northern Cape does not have enough skills development opportunities, teachers, and higher education centres. Which leads to a very high unskilled working population and a drainage of skilled workers to other provinces.

The Northern Cape is well positioned to transform its economy through the realisation of the opportunities presented by the energy-related endowments of the province. Importantly, it may become one of the few provinces in the country that play a prominent role in the transition towards the gas economy, while playing a major role in supplying renewable energy capacities. As the coal-era is left behind, the spatial distribution of energy supply capacities and dynamics are expected to move from the north and north-eastern parts of the country (Limpopo, Mpumalanga, Northern Cape, and Kwa-Zulu-Natal) to south and western parts of the country (Western Cape, Eastern Cape, and the Northern Cape).

2.1.8 PATHS TO PROSPERITY 1.8: INNOVATION AND THE KNOWLEDGE ECONOMY

The KBE is a sector of the economy based on knowledge-intensive activities. It relies significantly on intellectual capital rather than physical inputs. The KBE forms a bridge and broadens the scope from manufacturing goods to knowledge-based innovation in the design, manufacture, and implementation of business ideas.

The Northern Cape Government developed the Northern Cape Information Society Strategy (NCISS) to stimulate economic growth and social development by utilising ICT (Northern Cape Government).

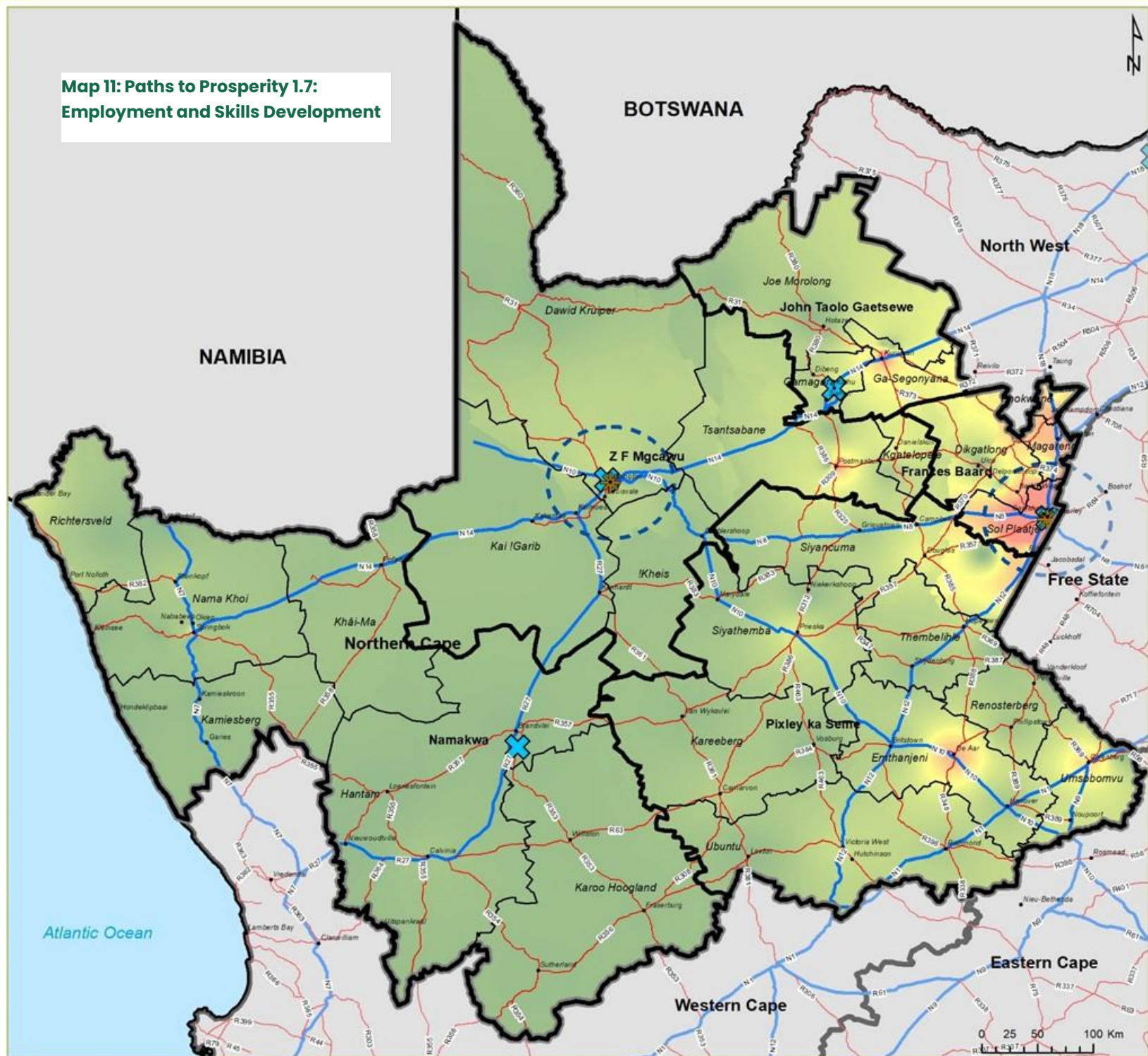
Northern Cape Broadband Roll-Out. The Northern Cape Provincial Broadband Steering Committee has been established through the Department of Economic Development and Tourism, Policy, Research and Innovation Programme's sub-programme on Knowledge Economy and Innovation. The bid adjudication for the appointment of the broadband roll-out service provider is currently underway.



¹² HIS Market data, 2023



Map 11: Paths to Prosperity 1.7: Employment and Skills Development



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
 EMPLOYMENT AND SKILLS DEVELOPMENT

Legend

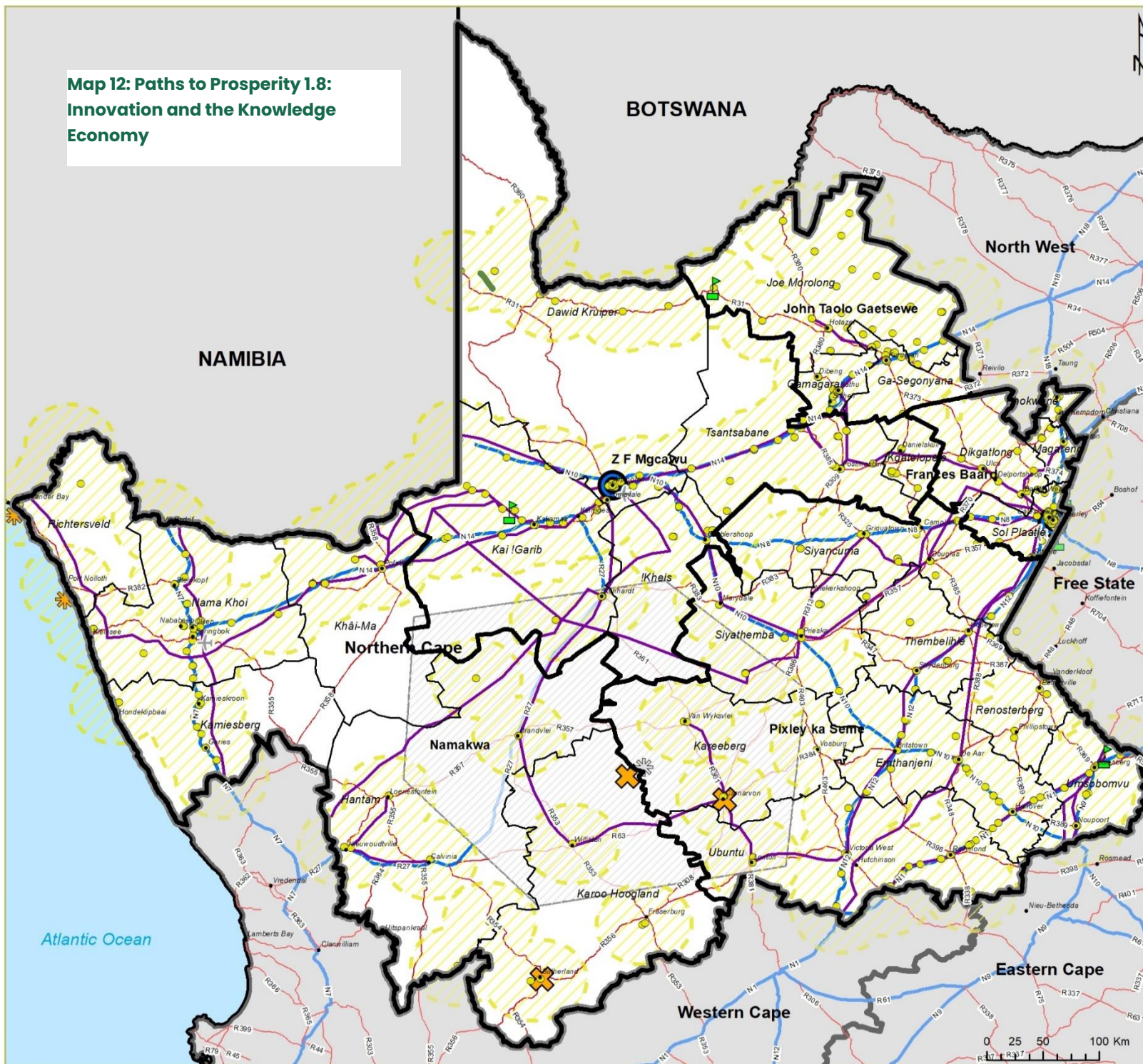
- Town/Settlement
 ✕ TVET Colleges
 ⚙ University
 — Main Roads
 — National Roads
 - - - University 50km Radius
 □ Local Municipality
 □ District Municipality
Unemployment Rate
 High
 Low

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



**Map 12: Paths to Prosperity 1.8:
Innovation and the Knowledge
Economy**



**PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
INNOVATION AND KNOWLEDGE ECONOMY**

Legend

- Town/Settlement
- Cellphone Towers
- ✈ Main Airports
- 🚩 Thusong Centres
- 🌊 Harbour
- 🌟 SKA Core Site
- ✖ Technology Tourism Sites
- 🎯 University
- Broadband Lines
- Main Roads
- National Roads
- ▨ SKA Astronomy Zone
- 📶 Cellphone Tower 30km Radius
- ▭ Local Municipality
- ▭ District Municipality
- 🐾 Bloodhound Initiative

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
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2.1.9 PATHS TO PROSPERITY 1.9: THE COASTAL AND MARINE ECONOMY

The marine economy represents a largely untapped development opportunity for the province. Unlocking such development potential, however, requires a coordinated approach to ensure that benefits accruing is sustainable and localised. The oceans have vast untapped resources but to extract these will require meaningful investment and good policy implementation. If undertaken well, this could result in job creation, new sources of government revenue and limitless opportunities for entrepreneurship.

Blue Flag Beaches is an internationally recognised award granted to beaches that meet requirements of excellence in safety, amenities, cleanliness, environmental information, and management (Wildlife and Environment Society of South Africa, n.d.). Currently, the Northern Cape has no blue-flag beaches. With regards to marine-based mining, De Beers' estimates that up to 95% of its future diamonds will be mined from the seabed along the southwest coast of Africa¹³.

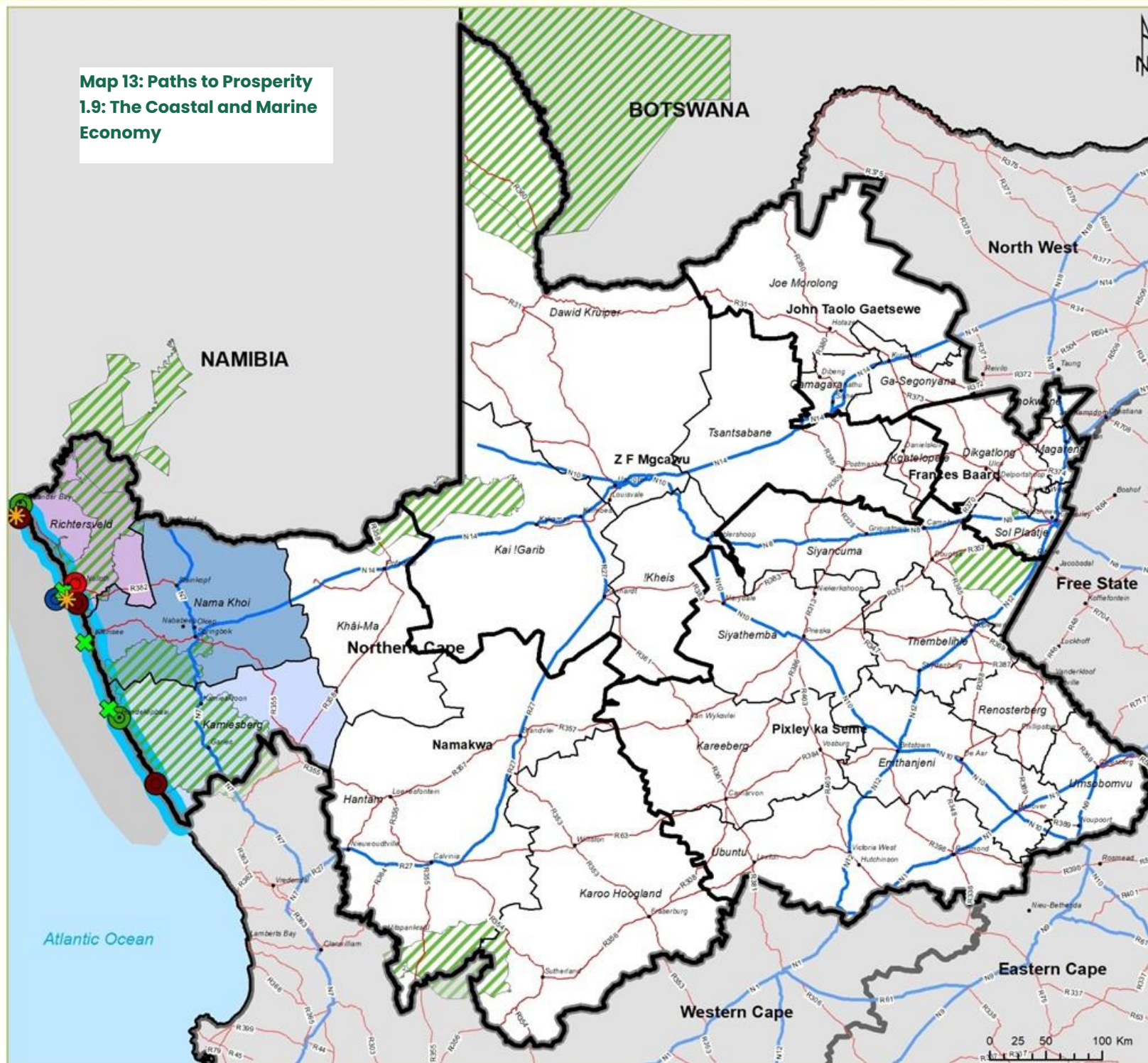
2.1.10 HIGH-IMPACT PROJECTS: DRIVER 1 ECONOMIC TRANSFORMATION, GROWTH AND DEVELOPMENT

Potential high-impact projects that were identified during the compilation of the Northern Cape and currently have been implemented or that are still in development phases. The goals and objectives, strategies, elements, and the possible impact that these projects would have on the agriculture industry in the Northern Cape have been identified and discussed in the PGDP.

¹³ African Business News, 2018



Map 13: Paths to Prosperity
1.9: The Coastal and Marine Economy



PATHS TO PROSPERITY
DRIVER ONE: ECONOMIC GROWTH,
DEVELOPMENT AND PROSPERITY
 MARITIME ECONOMY

Legend

- Town/Settlement
- ☀ Harbour
- ✕ Aquaculture

Marine Tourism Projects

- Boat Based Whale Watching
- Coastal Tourism Nodes
- Lobster Processing Plant
- Marine Environment

- Main Roads
- National Roads
- Local Municipality
- District Municipality
- Oil & Gas Exploration
- Fishing & Mariculture Corridor
- ▨ Nature Reserve Zones

Coastal Municipalities

- Kamiesberg
- Nama Khoi
- Richtersveld

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



2.2 DRIVER 2: SPECIAL EQUITY & HUMAN WELFARE

2.2.1 PATHS TO PROSPERITY 2.1: QUALITY BASIC EDUCATION

2.2.1.1 Frances Baard District Municipality

The capital of the province, Kimberley, is in this district and accommodates 38.3% of the total provincial population.

The district has 118 public ordinary schools as per 2023 Department of Education Infrastructure Asset Management Plan¹⁴, with 90 498 learners and 2 817 educators (L: E- 32; L: S- 766). A large percentage of the school infrastructure in the district is considered acceptable.

1.1.1.1 Namakwa District Municipality:

This district is located on the boundary of the Western Cape with Springbok as its capital. The district has the lowest unemployment rate at 16,8%. According to the Infrastructure Asset Management Plan, 2023 survey 72 ordinary schools are operating in the district accommodating 21 926 learners and 759 educators (L: E- 29; L: S- 305).

This district is the largest per square kilometre area however it is home to the lowest population. Most schools in this district are remotely located and many of them have under-utilised infrastructure assets. This district also has the largest number of school hostels in the province, due to its geographical size. Asbestos structures are also prominent in the district and are in the process of being replaced.

1.1.1.2 Pixley Ka Seme District Municipality:

As per the Infrastructure Asset Management Plan, 2023, the total number of public ordinary schools in this district is 88. The district has 45 825 learners and 1

410 educators (L: E- 33; L: S- 521). The capital of the district is De Aar. This district is vast and has the second least number of people. The towns are far from each other and thus school infrastructure assets are under-utilised.

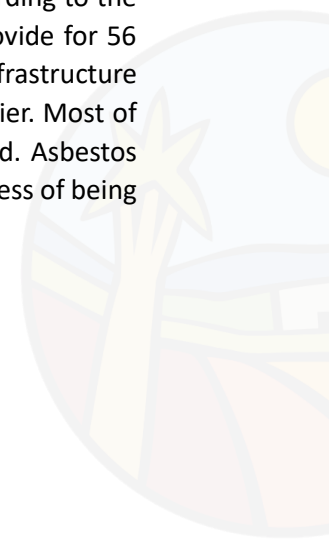
1.1.1.3 John Taolo Gaetsewe District Municipality:

Kuruman is the capital of this district. The district has the highest number of schools with 170 public ordinary schools recorded in the Infrastructure Asset Management Plan, 2023, 72 789 learners and 2 227 educators (L: E- 33; L: S- 428). The social, political, and economic history of this district renders it the district with the largest number of extremely disadvantaged schools. Asbestos structures are also prominent in the district and are in the process of being replaced.

1.1.1.4 ZF Mgcawu District Municipality:

The district has the youngest population in the province with 36% of the population being between the ages of 15 - 34. The capital of the district is Upington, and 98 ordinary schools operate in the district according to the Infrastructure Asset Management Plan, 2023. The schools provide for 56 372 learners and 1 792 educators (L: E- 31; L: S- 575). School infrastructure in the district is well utilised except for the remote areas of Mier. Most of the school infrastructure in the district is also well-maintained. Asbestos structures are also prominent in the district and are in the process of being replaced.

¹⁴ Department of Education Infrastructure Asset Management Plan, 2023



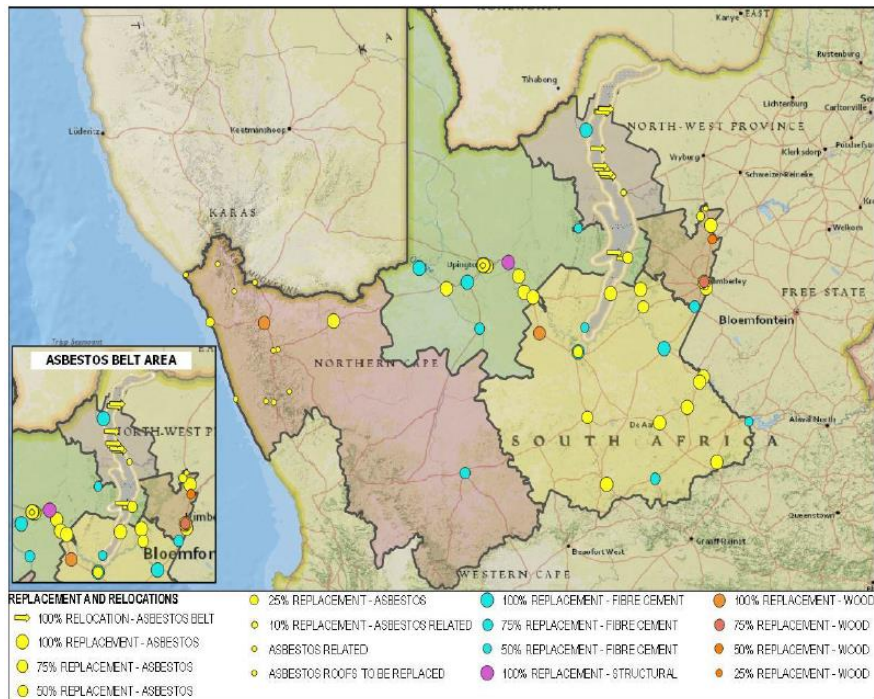


Figure 8: Asbestos Belt and Inappropriate Structures



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info@ncpg.gov.za

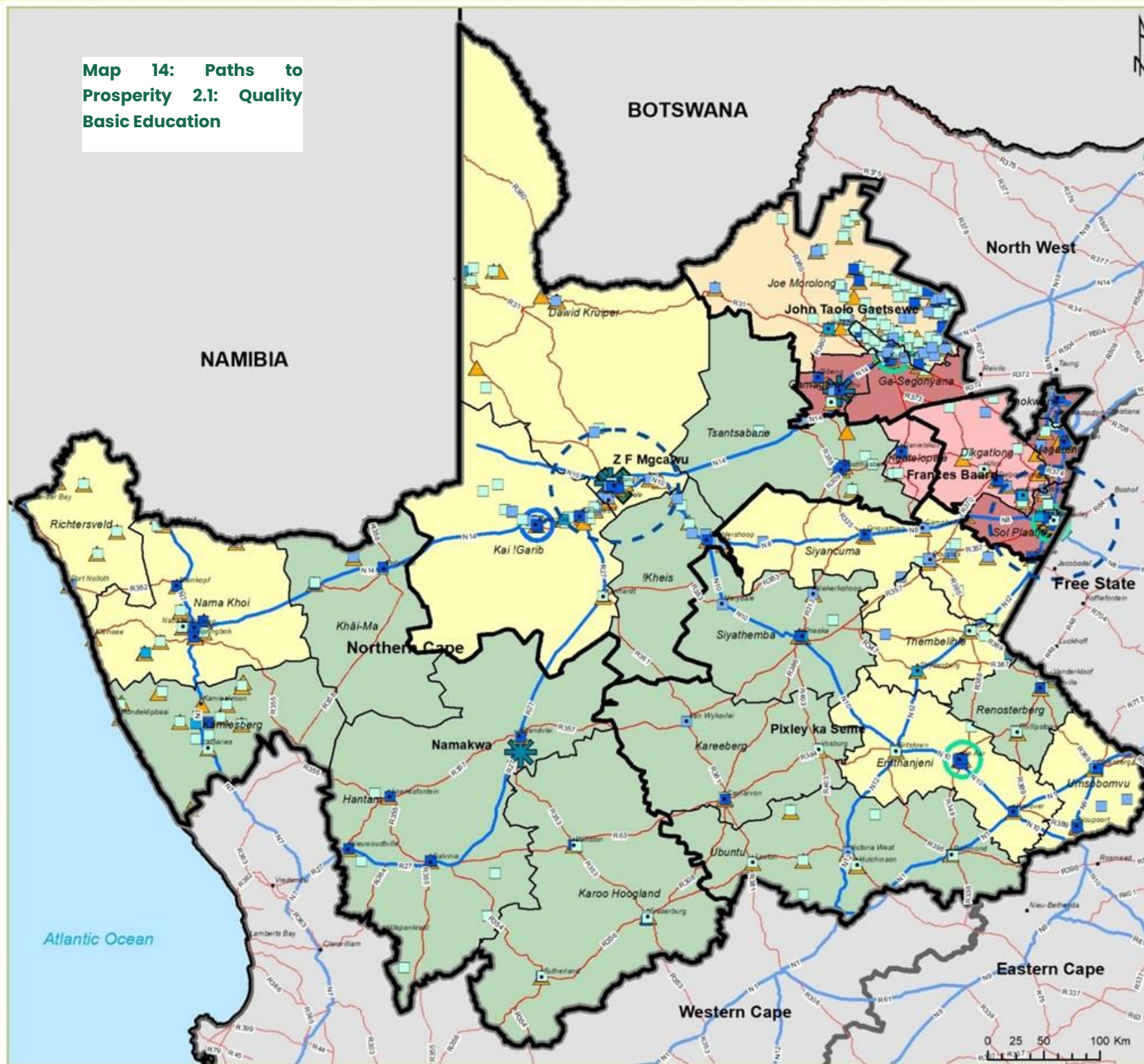


<http://www.northern-cape.gov.za>



T&I Building, 69 Memorial Road, Monuments Heights, Kimberley

Map 14: Paths to Prosperity 2.1: Quality Basic Education



**PATHS TO PROSPERITY
DRIVER TWO: SOCIAL EQUITY
AND HUMAN WELFARE**
QUALITY EDUCATION

Legend

- Town/Settlement
- ▲ Library
- Combined School
- Primary School
- Intermediate School
- Secondary School
- Agricultural School
- Technical School
- ✕ University
- ★ TVET Colleges
- Main Roads
- National Roads
- - - Tertiary Education 50km Buffer
- Local Municipality
- District Municipality

Population Density Per Km Squared

- 0 - 2,5
- 2,51 - 5
- 5,1 - 7,5
- 7,51 - 10
- > 10

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
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2.2.2 PATHS TO PROSPERITY 2.2: SOCIAL COHESION AND COMMUNITY PARTICIPATION

The provincial department responsible for social cohesion and community participation officially lies with the Provincial Department of Sport, Arts and Culture but other departments such as the Provincial Department of Social Development have implemented social cohesion programmes.

The Provincial Department of Sports, Arts and Culture has been tasked by the National Department to oversee social cohesion and nation-building as one of its numerous portfolios. While this department is focused on three different portfolios, it is well-positioned to integrate social cohesion and nation-building into society at large. The Department has also specifically included social cohesion in its mission statement and views social cohesion as a result of the Department's programmes and activities.¹⁵

1.1.1 PATHS TO PROSPERITY 2.3: SOCIAL PROTECTION AND SAFETY

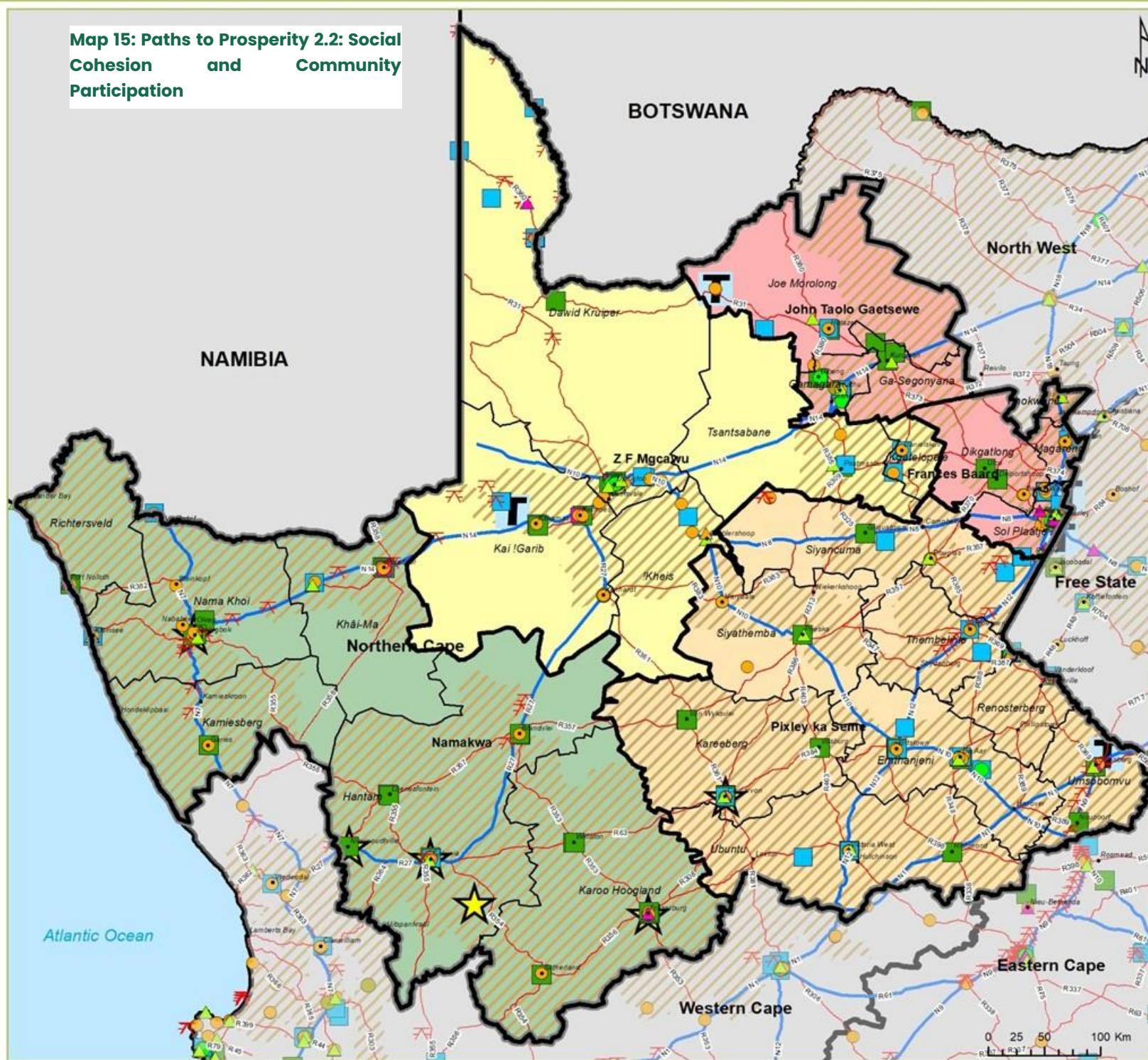
There are currently 91 police stations in the Northern Cape with the majority of these in the Namakwa and Pixley ka Seme District Municipalities. Policing such a large province is particularly difficult and it is likely that the larger the area the more stations would be needed to cover the vast area. The Strategic Plan¹⁶ also indicates that a new police station in Riemvasmaak was being planned and potentially executed in 2017/2018 while repairs and upgrades were planned for Hartswater Police Station. New mobile units were also planned for Belmont, Loxton, Niekerkshoop, Novalspoint, Phillipstown, Port Nolloth, Strydenburg and Victoria West.

¹⁵ Northern Cape Department: Sports, Arts and Culture Annual Report 2022/2023

¹⁶ South African Police Service, Strategic Plan, 2014-2019



Map 15: Paths to Prosperity 2.2: Social Cohesion and Community Participation



PATHS TO PROSPERITY DRIVER TWO: SOCIAL EQUITY AND HUMAN WELFARE

SOCIAL COHESION & COMMUNITY PARTICIPATION

Legend

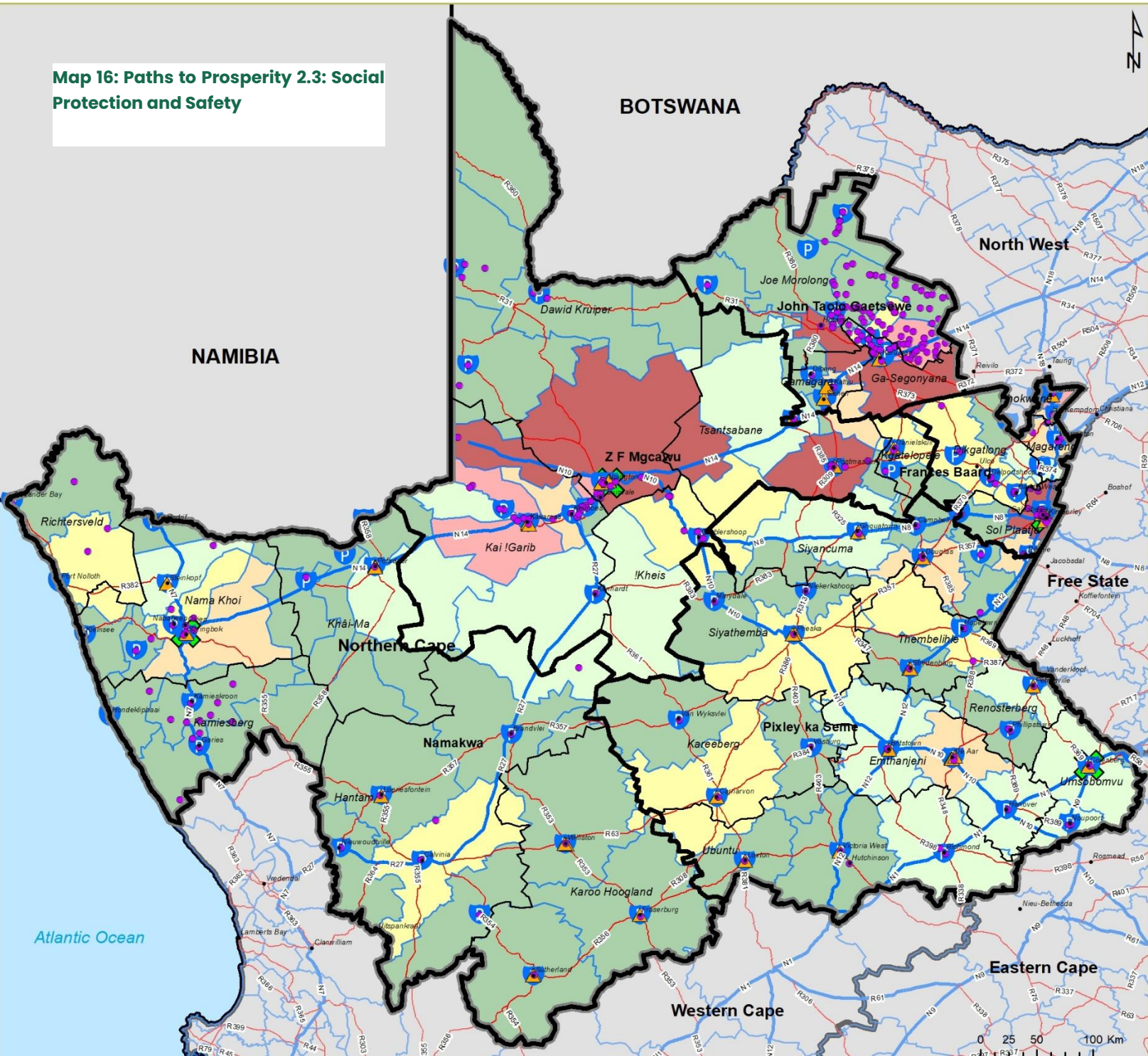
- Town/Settlement
- Community Social Facility**
 - ▲ Community Centre
 - ▲ Golf Course
 - ▲ Museum
 - Park
 - ▲ Picnic Site
 - Pitch
 - Playground
 - Sports Centre
 - Stadium
 - Swimming Pool
- ★ Festival
- T Thusong Centres
- Main Roads
- National Roads
- ▨ Poverty Pockets
- Local Municipality
- ▭ District Municipality
- Population Living on Lower Bound Poverty Line**
 - 0% - 25%
 - 25,1% - 30%
 - 30,1% - 35%
 - 35,1% - 40%
 - > 40%

Source: Northern Cape PSDF 2020

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Map 16: Paths to Prosperity 2.3: Social Protection and Safety



PATHS TO PROSPERITY DRIVER TWO: SOCIAL EQUITY AND HUMAN WELFARE

SOCIAL PROTECTION AND SAFETY

Legend

- Town/Settlement
- SASSA Paypoints
- ▲ Old Age Homes
- ✕ Weighbridges
- P Police Station
- Main Roads
- National Roads
- Police Boundaries
- Local Municipality
- District Municipality

Total Crime Incidents 2022/23



Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
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2.2.3 PATHS TO PROSPERITY 2.4: HEALTH

The market composition of the health sector may contribute to understanding the unique health care needs of the provincial population and informs the qualitative and quantitative characteristics of the health sector, particularly with regard to resource requirements for successful health provision. The following section provides an overview of the provincial and district healthcare services in the Northern Cape.

Medical Scheme Coverage - The Namakwa District Municipality leads the other provincial districts with 18.7% medical scheme coverage, followed by the Frances Baard District Municipality (16.1%). Three districts are, however, below the national and provincial scheme coverage average, including ZF Mgcawu District Municipality (15.6%), JT Gaetsewe District Municipality (14.5%), and Pixley ka Seme District Municipality (14.3%).

Patient Expenditure – The Northern Cape has an average per patient day expenditure of R2 503, behind Limpopo (R2 993), Northern Cape (R2 902), KwaZulu-Natal (R2 566), and the Free State (R2 538). The most efficient district in the Northern Cape in terms of expenditure per patient day is the ZF Mgcawu District Municipality, with R1 690. In addition, expenditure per patient day in JT Gaetsewe District Municipality (R2 225) and Namakwa District Municipality (R2 533) is below the national average of R2 558, eclipsed slightly by Pixley ka Seme District Municipality (R2 755).

Provincial dispersion of health services – Ward-based community outreach teams and clinics are the predominant health facilities in the Northern Cape. JT Gaetsewe District Municipality has 32 ward outreach teams and 43 clinics, most of the provincial districts, while ZF Mgcawu District Municipality has 18 ward outreach teams and 44 clinics, the least facilities of the districts.

There are severely limited central/tertiary and regional hospitals in the province, with one tertiary hospital in Frances Baard District Municipality and one regional hospital in ZF Mgcawu District Municipality. Furthermore, there is a limited amount of private health facilities in the Northern Cape,

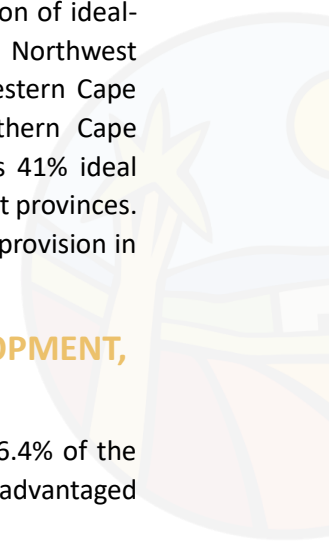
with 8 private clinics/hospitals located in Frances Baard District Municipality, 2 in JT Gaetsewe District Municipality, 1 private clinic/hospital located in Namakwa District Municipality and ZF Mgcawu District Municipality, while there are 3 private clinics/hospitals in Pixley ka Seme District Municipality.

Human resource availability – Community health workers are the most prominent health professionals in the Northern Cape, totalling approximately 2 500 members, most of which are situated in Frances Baard District Municipality (803 professionals) and JT Gaetsewe District Municipality (733 professionals). In addition, nursing assistants and professional nurses are prominent health professionals in the province. It is, however, evident that there is a limited number of medical practitioners (approximately 500 professionals), pharmacists, dental practitioners, occupational therapists, physiotherapists, and speech therapists in the Northern Cape.

Ideal Clinic Status – The Northern Cape has a higher proportion of ideal-status public health care facilities than the Free State (35%), Northwest Province (29%), Mpumalanga (23%), Eastern Cape (18%), Western Cape (15%), and Limpopo Province (11%). Evidently, while Northern Cape facilities trail Northern Cape Province and KwaZulu-Natal, its 41% ideal status rating is above the national average and higher than most provinces. This is illustrative of the comparative quality of health service provision in the Northern Cape.

2.2.4 PATHS TO PROSPERITY 2.5: RURAL DEVELOPMENT, LAND REFORM AND FOOD SECURITY

A recent land audit performed by AgriSA indicates that only 6.4% of the provincial agricultural land is in the possession of previously disadvantaged



individuals or the Government¹⁷. This creates income disparity and high-poverty regions in rural areas as residents survive on government grants and seasonal agricultural employment.

Development interventions are required in order to contribute to the sustainable growth of; access to basic infrastructure, rural community development, land redistribution to previously disadvantaged individuals, and the alleviation of poverty through food security.

By comparing the accessibility of the basic services available to the various district municipalities, the development priority can be measured. It was determined that the following municipalities require more extensive interventions based on the average availability of basic services:

- ZF Mgcau District Municipality
- Frances Baard District Municipality
- John Taolo Gaetsewe District Municipality

The MTSF envision the development of rural areas to ensure spatial, social, and economic integration by 2040. This integration will include economic growth, food security and employment opportunities because of agrarian transformation and infrastructure development programmes to improve accessibility to, basic services, health care and quality education.

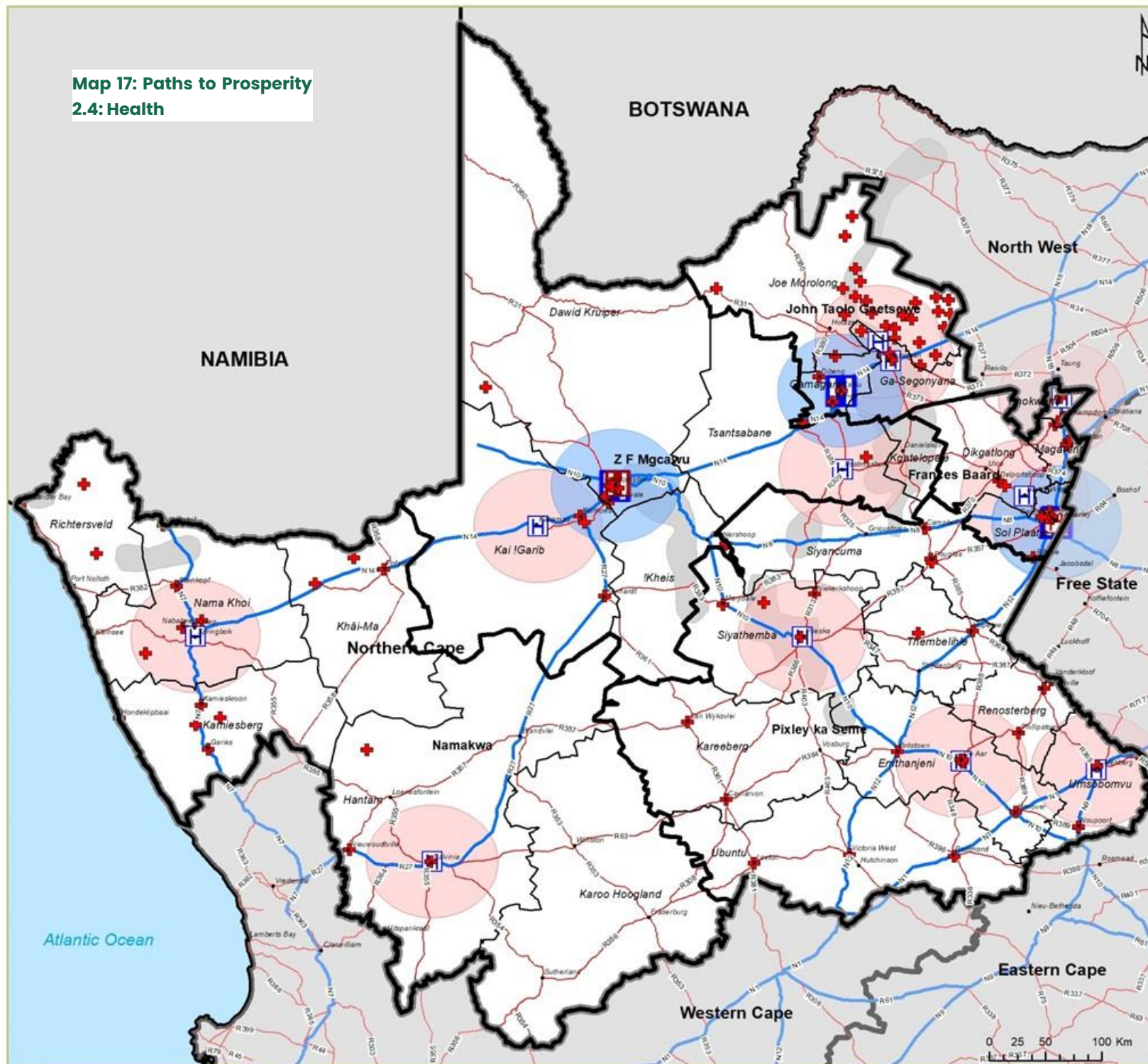
2.2.5 HIGH-IMPACT PROJECTS: DRIVER 2

Potential high-impact projects that were identified during the compilation of the Northern Cape and currently have been implemented or that are still in development phases. The goals and objectives, strategies, elements, and the possible impact that these projects would have on the agriculture industry in the Northern Cape have been identified and discussed in the PGDP.

¹⁷ Land Centre of Excellence Land Audit: A Transactions Approach, 2018



Map 17: Paths to Prosperity
2.4: Health



PATHS TO PROSPERITY
DRIVER TWO: SOCIAL EQUITY
AND HUMAN WELFARE
 HEALTH

Legend

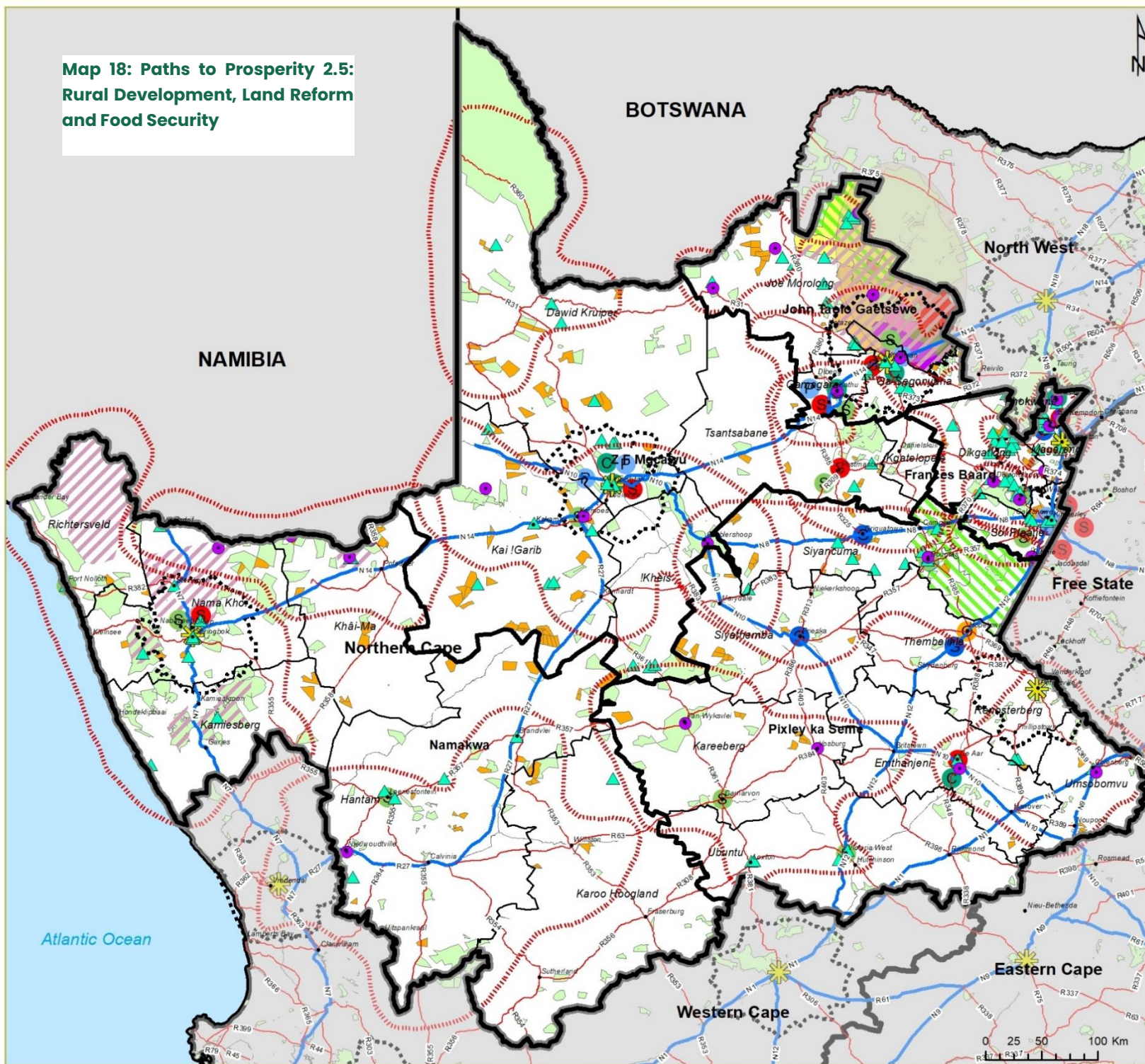
- Town/Settlement
- Health Facility**
- ✚ Clinic
- ⌚ District Hospital
- ⌚ Provincial Tertiary Hospital
- ⌚ Regional Hospital
- ⌚ Private Hospital
- Main Roads
- National Roads
- ⬢ District Hospital 50km Buffer
- ⬢ Private Hospital 50km Buffer
- Asbestos Mine
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
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**Map 18: Paths to Prosperity 2.5:
Rural Development, Land Reform
and Food Security**



PATHS TO PROSPERITY DRIVER TWO: SOCIAL EQUITY AND HUMAN WELFARE

RURAL DEVELOPMENT

Legend

- Town/Settlement
- ▲ DALRRD Projects
- Farmer Production Support Unit
- ✱ Agri Hubs

Northern Cape Markets

- Checkers
- GWK
- OVK
- Pick n Pay
- Shoprite
- Spar

- Main Roads
- National Roads
- ⬢ 60km Agrihub Buffer
- ⬢ Intervention Areas
- ⬢ Local Municipality
- ⬢ District Municipality
- ⬢ Transcra Area
- ⬢ CRDP Site
- ⬢ Land Reform Farm
- ⬢ State Owned Land
- ⬢ Rural Regeneration Zone

Traditional Authorities

Chief's Names:

- Diako S
- Jantjie K E
- Kemokotile S
- Leburu E W
- Mahuru B V
- Motswarakgole M
- Phethlu P E
- Taganyane M G
- Toto K P

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



2.3 DRIVER3: ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE

2.3.1 PATHS TO PROSPERITY 3.1: IMPROVE ENVIRONMENTAL SUSTAINABILITY

Chapter Six of the Northern Cape Spatial Development Framework (NCSDF) has delineated various environmental issues, including, but not limited to the biosphere, habitat change, biodiversity protection, local biome, centres of endemism, land transformation, alien invasive species, unsustainable use of resources, overgrazing, harvesting of natural resources, predator control, critical biodiversity areas, environmentally sensitive areas, land cover, atmospheric conditions and pollution levels, climate change, fire risk day increases, solar energy potential and risks, hydrosphere and marine protected areas, geohazards such as sinkholes and erosion, minerals and mining, water, water rights, tourism and vulnerability within the Northern Cape.

All District Municipalities recognise that climate change poses a threat to the environment, its residents, and future development. Actions are required to mitigate and adapt these identified threats in the district. The District Municipality is therefore currently prioritising the development of a Climate Change Vulnerability Assessment and Climate Change Response Plan. Through this programme, crucial climate change vulnerability indicators were identified. These indicators are indicative of where the District Municipalities may be at risk of the impacts of climate change. A summary of the key vulnerability indicators relating to biodiversity environment and water is provided in the NGSDP Additional indicators such as human health, agriculture and human settlements, infrastructure and disaster management are covered in the PGDP diagnostic report (Northern

Cape District Municipality Climate Change Response Plan, 2016)¹⁸ These indicators are summarised below:

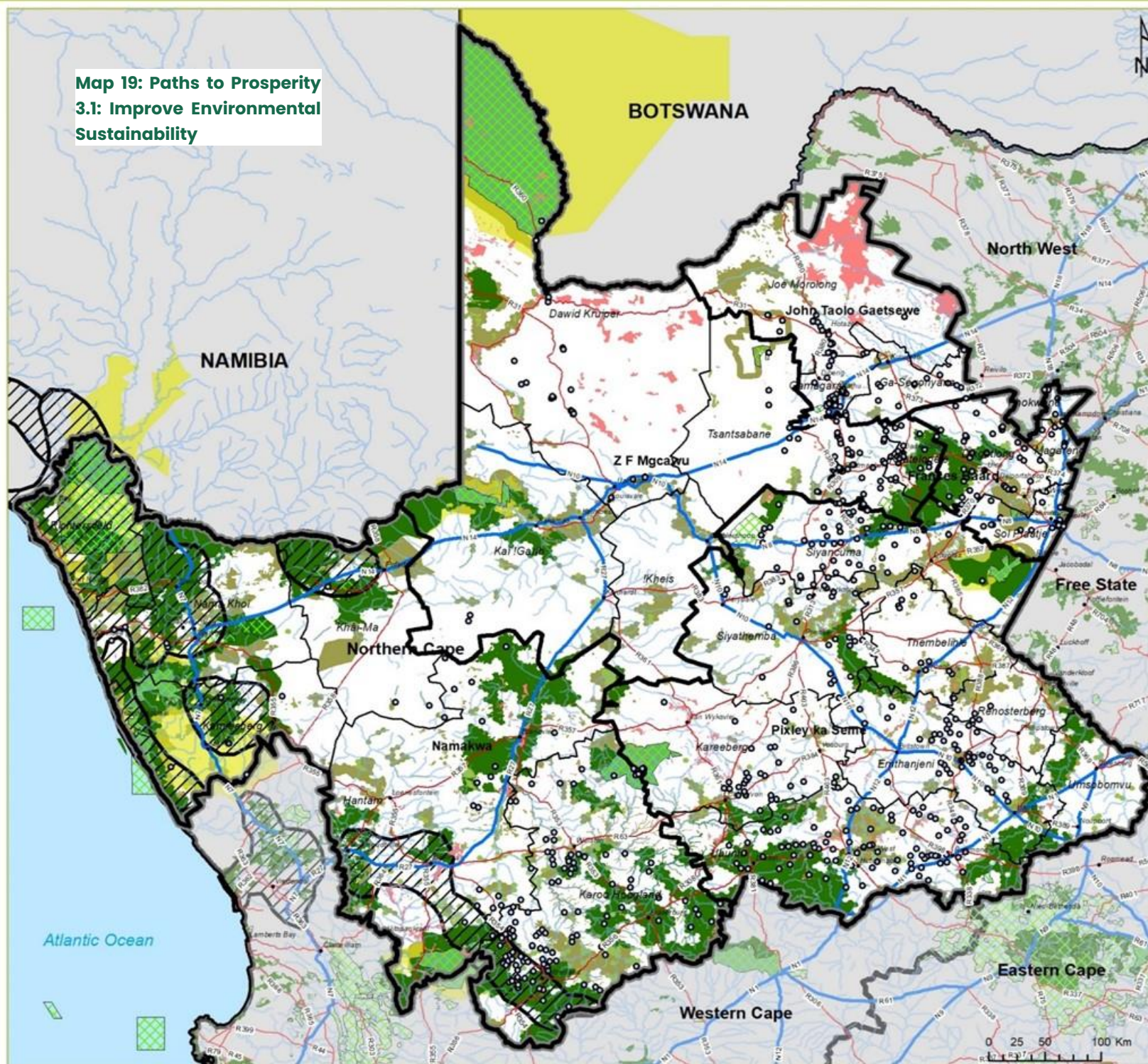
- Increased impacts on environment due to land-use change.
- Decreased quality of drinking water.
- Decreased water quality in ecosystem due to floods and droughts.
- Less water available for irrigation and drinking, less groundwater availability.
- Loss of High Priority Biomes.
- Priority Wetlands and River ecosystems.
- Increased impacts of flooding from litter blocking storm water and sewer systems.



¹⁸ Climate Change Response Plan, 2023



Map 19: Paths to Prosperity
3.1: Improve Environmental Sustainability



PATHS TO PROSPERITY
DRIVER THREE: ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE
 ENVIRONMENTAL SUSTAINABILITY

Legend

- Town/Settlement
 - Licensed Boreholes
 - River Corridors
 - Main Roads
 - National Roads
 - Degraded Land
 - NPAES Focus Areas
 - National Park
 - Nature Reserve Buffers
 - National Protected Areas
 - SKEP Geographic Priorities
 - Local Municipality
 - District Municipality
- Critical Biodiversity Areas**
- Critical Biodiversity Area One
 - Critical Biodiversity Area Two

Source: Northern Cape PSDF 2020

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2.3.1.1 Sustainable Human Settlements

Equitable human settlement refers to developments in both urban and rural settings that address the poverty traps that were created in the location of settlements in the past. Challenges are experienced in the more traditional rural areas that are and could pose challenges towards the sustainable provision of housing. This has not been an easy ideal to achieve given the historical issues related to land availability and the slow progress, almost a stalemate, on land reform in the province.

Much is still to be done to facilitate the existence of racially and culturally integrated human settlements, which are also promoting citizens to pursue their social, cultural, political, and economic goals. This requires communities and their members to be at the centre of the scaling-up of service delivery through their involvement in the planning and implementation of programmes either as part of a voluntary self-provisioning system or as paid-up community members.

The provision of decent housing in the urban setting has taken the mode of in-situ upgrading as well as the provision of new sites. However, there are land-related constraints relating to tenure, as well as the suitability of sites for safe, sustainable, and efficient development. The province must ensure that housing programmes address the needs of all citizens, ensuring a mixed approach in terms of tenure and products in support of the National focus on mega-projects and incorporating the Integrated Development Housing Programme.

Besides urban initiatives, there are challenges related to the provision of human settlements with all the elements of sustainability in rural areas. The spatial integration, and where possible, densification of human settlements are recommended to enable equitable provision of basic water, sanitation, and electricity.

Provincial statistics mask very different housing conditions and significant shifts at the district and local municipality levels. The data indicates that shacks not in backyards tend to be concentrated in key municipalities. A

large percentage of households living in shacks not in backyards in the Northern Cape are concentrated within five local municipalities within the province.

2.3.2 HIGH-IMPACT PROJECTS: DRIVER 3 ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE

Potential high-impact projects that were identified during the compilation of the Northern Cape and currently have been implemented or that are still in development phases. The goals and objectives, strategies, elements, and the possible impact that these projects would have on the agriculture industry in the Northern Cape have been identified and discussed in the PGDP.

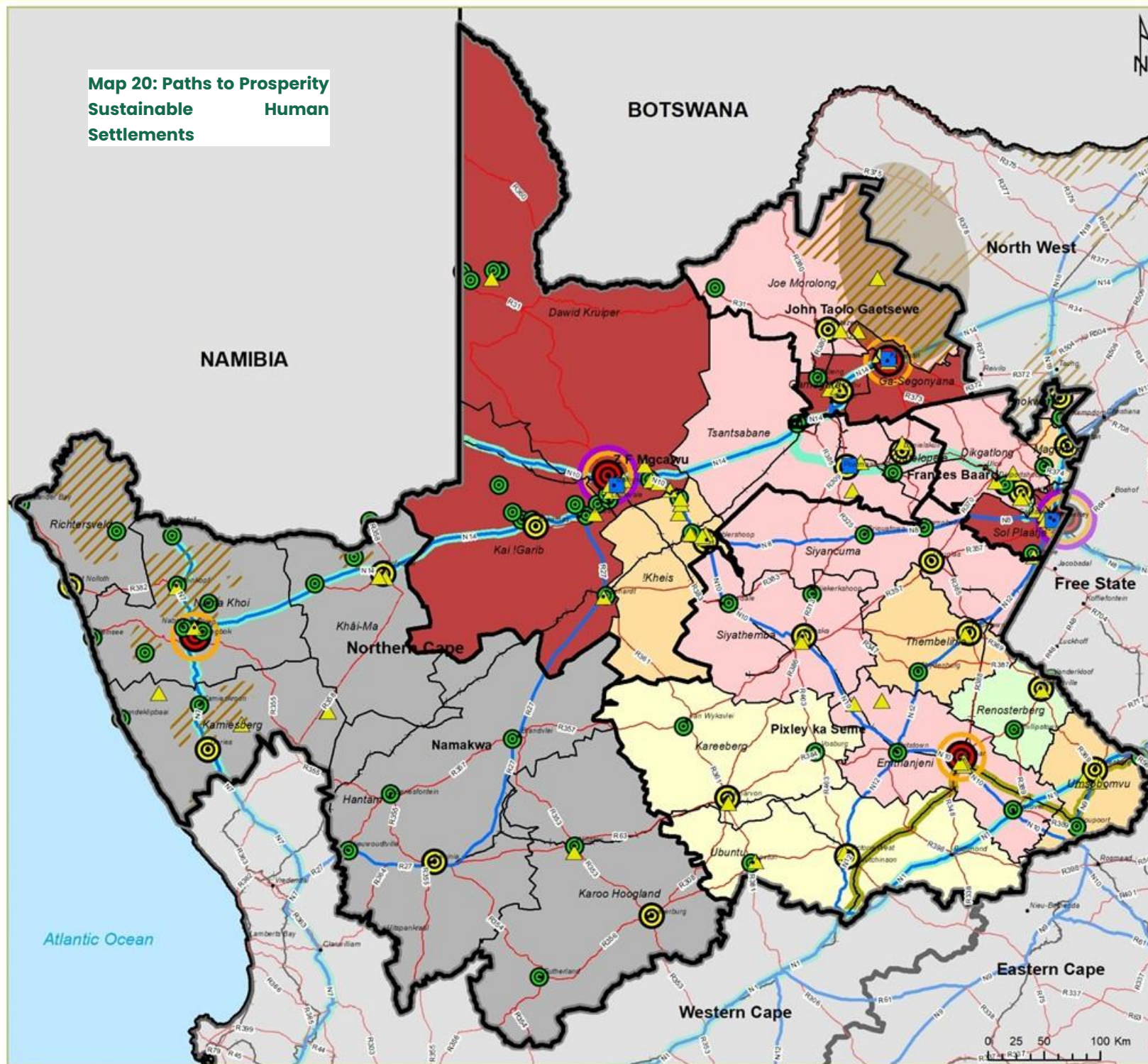
Takeaway:

NCPSDF will identify areas of spatial prioritisation linked to the spatial transformation logic determined, and link such with programmatic responses required by provincial sector departments per mandates in order to direct investment and prioritisation linked to strategic planning and budgeting processes (e.g. Strategic Plans, Annual Performance Plans, MTEF Budgets, Infrastructure Delivery Management System processes, etc.) which will feed into both the existing NCGDP 2040 as well subsequent review.

Existing NCGDP 2040 Projects are to be spatially referenced and bolstered for joint spatial prioritisation across spheres and sectors as per the districts including the above projects.



Map 20: Paths to Prosperity
Sustainable Human Settlements



PATHS TO PROSPERITY
DRIVER THREE: ENVIRONMENTAL
SUSTAINABILITY AND RESILIENCE
SUSTAINABLE HUMAN SETTLEMENTS

Legend

- Town/Settlement
 - ▲ 2023/2024 Human Settlements Projects
 - Mega Housing Projects
 - Compact Cities
 - IUUF Priority Town
 - Rural Settlement
 - Local Town
 - Main Town
 - Railway Lines
 - Main Roads
 - National Roads
 - Intercap Bus Routes
 - PRASA Rail Routes
 - ▨ Rural Areas
 - ▨ Title Deed Restoration Target Area
 - Local Municipality
 - District Municipality
- Housing Backlog**
- No Data
 - 0 - 500
 - 501 - 1 000
 - 1 001 - 2 500
 - 2 501 - 5 000
 - > 5 000

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL
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2.4 DRIVER 4: ACCOUNTABLE AND EFFECTIVE GOVERNANCE

Spatial Governance includes policy and practice-oriented research, centred on land use planning, social-ecological resilience, public policy, and community engagement (Geddes Institute for Urban Research, 2016). Research is concerned with developing appropriate planning theory and practice in the formulation and realisation of policy outcomes in the context of changing state-market-civil relations at international, national, and local scales. In order to effectively govern investment and development within the Northern Cape it is crucial to establish an effective spatial governance system. The current governance model as indicated by Figure 8, requires strengthening and stronger collaboration between the spheres of government. The figure indicates the ideal application of the spatial governance system. The key challenges faced with regard to spatial governance and the alignment of spatial strategies can be summarised as follows:

- A plethora of plans with spatial development implications exists across spheres and functional sectors, creating a complex environment in terms of alignment.
- Varying quality of policy documents and plans, as some plans were well-written and had good quality maps, while other policies were of poor quality.
- Along with the varying quality, the documents were drafted at different times, where some strategies are completely out of touch with the current realities faced within the province and may contradict the latest approved policies and strategies.
- Due to various visions, objectives and allocated timeframes for implementation, the plans or policies do not mutually support one another.

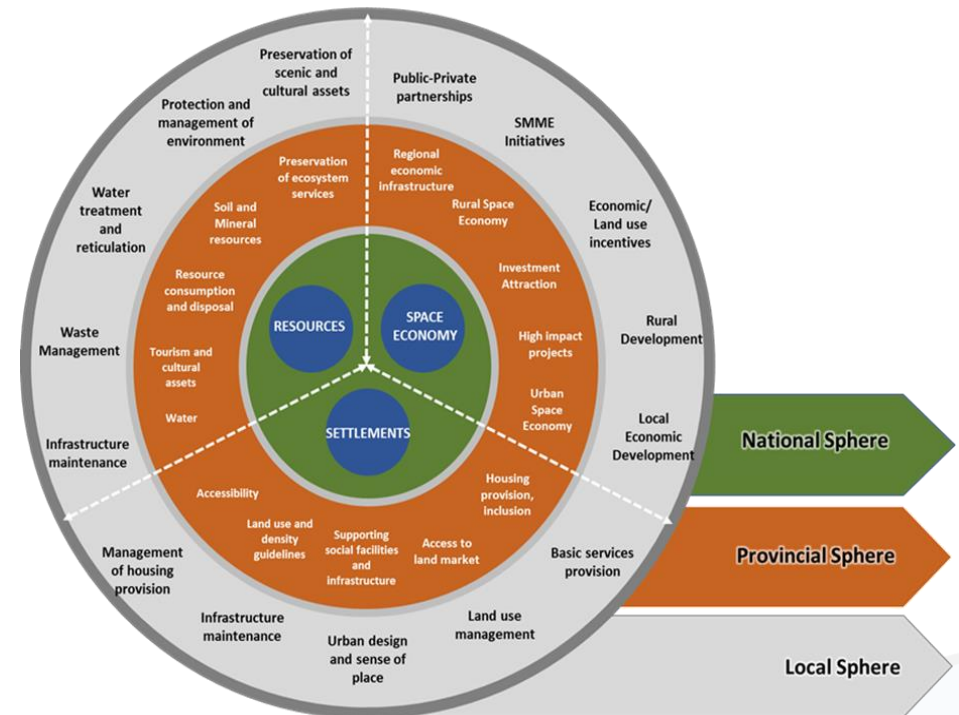


Figure 9: Governance Model

2.4.1 INTEGRATED DEVELOPMENT PLANNING

As part of improving coordination and alignment, integrated development planning in the province is needed and the Northern Cape PSDF must be implemented through a single window of coordination towards spatial development and spatial management. For this to happen, all municipalities must support the Northern Cape PSDF provisions in their respective IDPs, SDF's and development strategies, they must ensure coherence of spatial development policy across the province, implement their growth management policy and communicate the spatial focus of SDBIP's effectively. The provincial sphere must ensure that consideration is given to the spatial implications of long-term plans, ensure alignment between annual plans, budgets and the provincial spatial logic, contribute and support the development of new strategies and policies with spatial



implications for the province, and monitor municipal compliance in terms of SPLUMA.

On the other hand, the PSDF provisions must also guide the national government's spatial development interventions within the province. The provincial government must work together with the national government on the implementation of the National Spatial Development framework, the National Development Plan and the Integrated Urban Development Framework within the Province. Integrated development planning attempts, in principle, are to involve all those who are affected by it. Thus, integrated planning is in essence based on the principle of inclusivity. With regards to spatial governance, integrated development attempts to consolidate and include all stakeholders and affected parties into the planning process, in order to approach development holistically. Integrated planning requires the synchronisation of various policy, legislative and strategic processes of all government spheres, as indicated by the table and figures below.

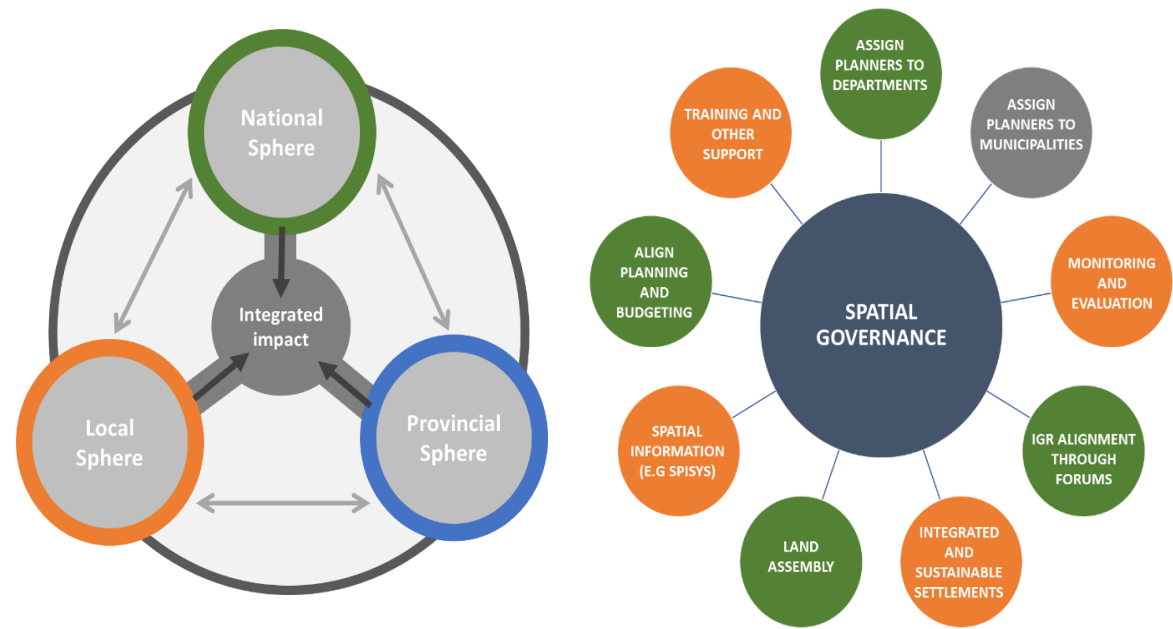


Figure 10: The elements required for achieving a transversal spatial governance system and Integrated impact between Spheres of Government



Table 2: Integrated development planning responsibilities

	WHO	WHAT	HOW
Plan	Province	<ul style="list-style-type: none"> • PGDP • PSDF • RSDF • Inter-provincial spatial plans 	<ul style="list-style-type: none"> • Constitution. • Transversal spatial plans compiled in terms of SPLUMA. • Qualified and Registered planners.
Regulate	Province Municipalities	<ul style="list-style-type: none"> • Provincial spatial planning system • Provincial land use management system • Use of provincial spatial assets • Risk mitigation & adaption. • Municipal Planning 	<ul style="list-style-type: none"> • SPLUMA • IUDF • Bylaws and Regulation • Provincial policies • Integrated Development Planning (IDP) • Qualified and Registered planners
Support	Municipalities	<ul style="list-style-type: none"> • Urban development • Rural development • Municipal planning • Transversal spatial systems • Spatial information 	<ul style="list-style-type: none"> • Rural development support programme • Other municipal support
Monitor	Provincial Departments Municipalities	<ul style="list-style-type: none"> • Spatial transitions • Urban • Rural • Resource use/substitution/replacement • Spatial alignment • Adherence to national norms & standards 	<ul style="list-style-type: none"> • Indicator-based provincial performance management systems. • Guidelines for municipal performance management system. • Qualified and Registered planners.
Align/ coordinate	Provincial Departments Municipalities	<ul style="list-style-type: none"> • National policies and programmes • Departmental spatial plans & capital investments • Municipal spatial plans & capital investments • Inter provincial spatial initiatives 	<ul style="list-style-type: none"> • Provincial spatial and fiscal framework • All Sector Plans need to be aligned to Municipal SDFs (Local Municipalities are the authority of first instance – SPLUMA)

As the Provincial Government does not have jurisdiction over all dimensions of spatial development (e.g. water affairs and rural development are national competencies), the PSDF serves as a tool to build a common spatial agenda between the different spheres of government as well as state-owned enterprises (SOE's). The objective is to facilitate transversal spatial planning, prioritisation, budgeting and integrated delivery between a range of institutions.

2.4.2 INTEGRATED DEVELOPMENT PLATFORMS

IDP Indabas, IDP assessments and MINMAY Techs create the platform to introduce a spatial logic into IDP's, thereby improving the financial viability of municipalities through the adoption of sound planning processes. To this end, Municipal SDF's, Human Settlement/Housing Plans and Infrastructure Master Plans need to be consolidated into one spatial plan for the municipal area. Government departments and SOE's should be requested



to contextualise their capital programmes in terms of the municipality's spatial agenda. IDP Assessments should be used to monitor the extent of alignment and consistency with the PSDF, DSDF and MSDF.

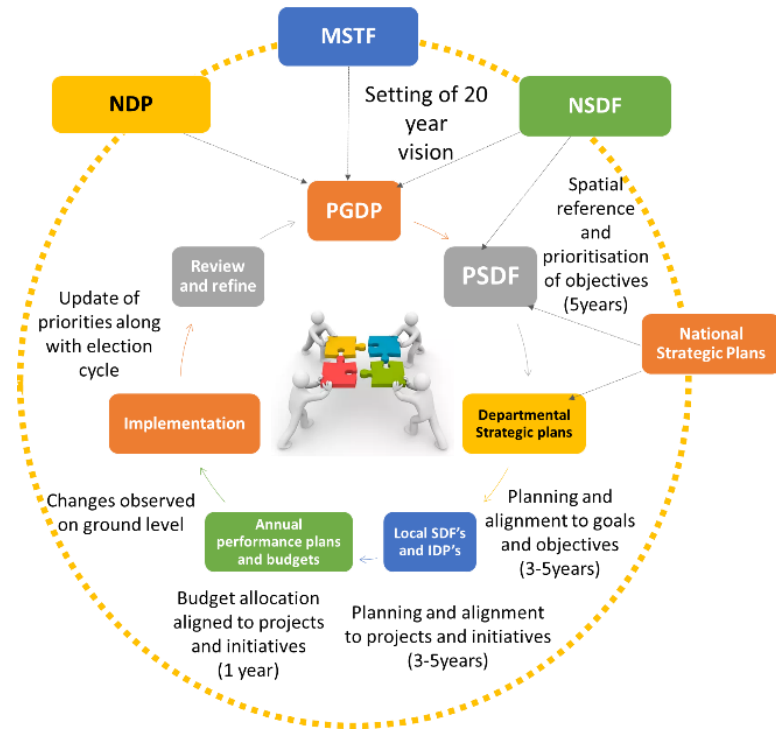


Figure 11: Policy Alignment Process

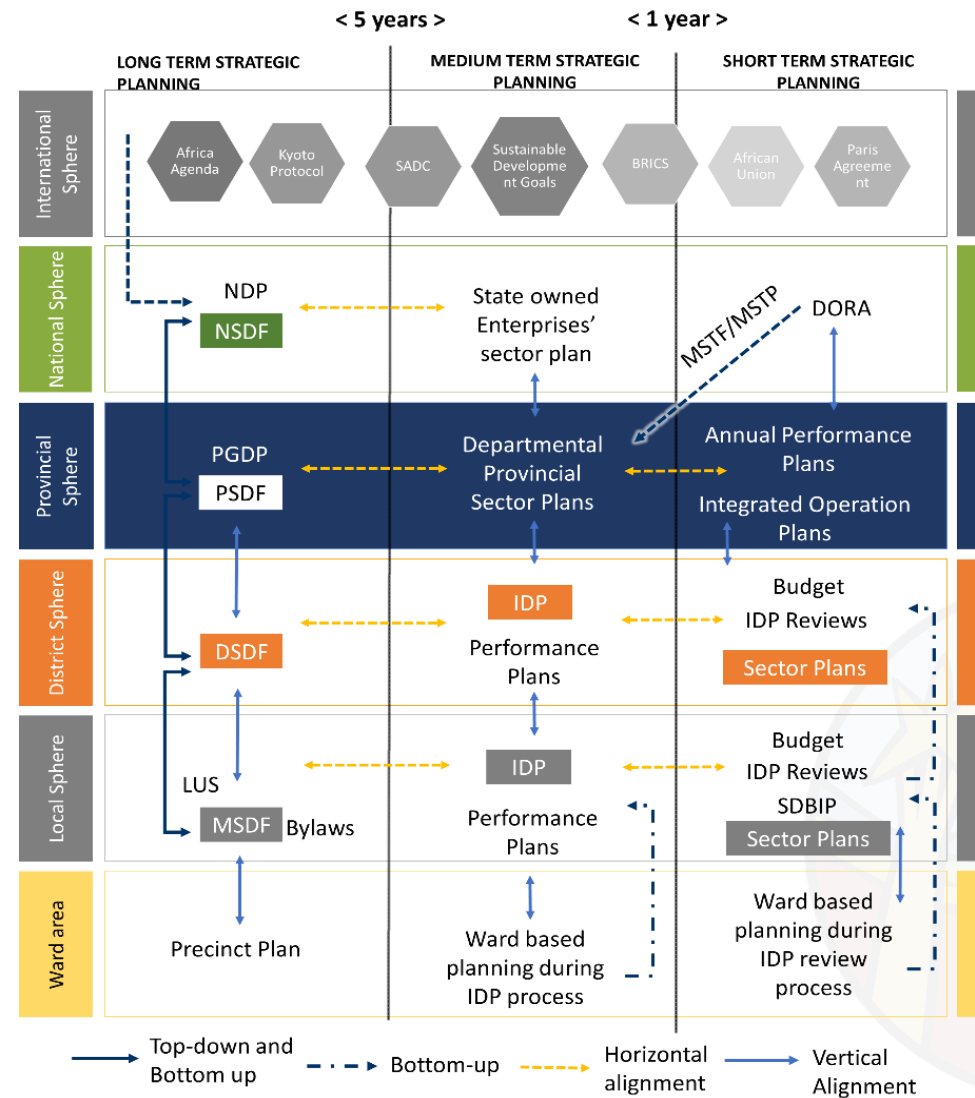





Figure 12: Policy Alignment Process



2.4.3 INSTITUTIONALISATION

In order for the Provincial Spatial Development Framework and Provincial Growth and Development Plan to be institutionalised throughout the spheres of government, the most prominent land use management mechanism within the PSDF, namely the Spatial Planning Categories (SPC's) provide a clear indication of which fields the various stakeholders of development are associated with. The Provincial Spatial Planning and Land Use Forum¹⁹ provides the enabling mechanisms to coordinate the roles and functions as indicated in table 4 below:

Table 3: Institutionalisation of the Spatial Planning Categories


SPC	FUNCTION	DEVELOPMENT PARTNERS ²⁰
A: Core 	Protection of ecosystems and the services it provides.	<ul style="list-style-type: none"> • Dept. Environment and Nature Conservation • SANParks • SANBI
B: Buffer 	Protection of ecological infrastructure within urban areas, and sensitive regions.	<ul style="list-style-type: none"> • Dept. Environment and Nature Conservation • Local and District Municipalities • Dept. Agriculture, Rural Development and Land Reform
C: Agriculture areas 	Protection of high potential and highly productive agricultural land	<ul style="list-style-type: none"> • Dept. Agriculture, Land Reform and Rural Development • National Dept. Agriculture Land Reform and Rural Development.

¹⁹ Refers to Section (6), Chapter 3 of the Northern Cape Spatial Planning and Land Use Management Bill.

SPC	FUNCTION	DEVELOPMENT PARTNERS ²⁰
	to ensure food security.	<ul style="list-style-type: none"> • Local and district municipalities • Tribal authorities
D: Urban and rural settlements 	Management and control of land use within urban and rural settlements.	<ul style="list-style-type: none"> • Dept. Cooperative governance, human settlements and traditional affairs. • Dept. Sports, arts and culture • Dept. of Education • Dept. of Health • Dept. of Transport and Safety liaison. • National Dept. of Water and Sanitation • Dept. Environment and Nature Conservation • Department of Economic development and tourism • Dept. of Social Development • Local and district municipalities • Tribal authorities
E: Industrial areas 	Light to heavy industries with high economic potential and	<ul style="list-style-type: none"> • Dept. Environment and Nature Conservation

²⁰ It is recommended that the Northern Cape Office of the Premier take ownership to coordinate all the development partners, this is clearly outlined in Section (8) of the Northern Cape SPLUMB.



SPC	FUNCTION	DEVELOPMENT PARTNERS ²⁰
	value are typically associated with pollution and potential exposure to hazardous substances.	<ul style="list-style-type: none"> • Department of Economic development and tourism • Industrial Development Corporation • Mining houses • Dept. of Minerals • Dept. Agriculture, rural development and Land reform • National Dept. of Rural Development and Land Reform • Local and district municipalities
F: Surface infrastructure and buildings  F SURFACE INFRASTRUCTURE & BUILDINGS	Bulk infrastructure planning, development, implementation and maintenance thereof	<ul style="list-style-type: none"> • Eskom • SANRAL • Transnet • PRASA • Independent Power Providers • Dept. Roads and Public works • Department of Transport and Safety Liaison • National Dept. of Water and Sanitation • Department of Economic development and Tourism • Dept. Cooperative governance, human

SPC	FUNCTION	DEVELOPMENT PARTNERS ²⁰
		settlements and traditional affairs. <ul style="list-style-type: none"> • SARAO

2.4.3.1 Spatial Intelligence

The spatial data base compiled as part of the PSDF should be maintained, implemented and monitored on a GIS web-based tool (such as ArcGIS or a similar platform), and the data should be updated regularly (to be facilitated by the Office of the Premier, Northern Cape Province). The PSDF proposes that the Provincial Spatial Planning tool / Platform to be expanded, to become an integrated and regularly updated spatial information system which will track growth (and the type of growth) regularly. This information base will guide and inform sectoral project planning and responses. It will also contain a mechanism to more accurately project the growth of each town in terms of physical quantities as these are essential for infrastructure and facilities planning. This system will therefore inform both sector planning at the provincial level but also at the local municipal level. The system will be used in conjunction with provincial standards/parameters for facilities as developed and updated by the Office of the Premier.

By its very nature, a transversal spatial governance system is dependent on the availability of spatial information to inform decision-making. The more accessible, accurate and up to data the spatial data informing the system is, the more responsive and relevant the system becomes. In order to meet the system's requirements, it is necessary to the structure spatial data on technical and organisational levels. In this regard the complete centralisation of the data management function on an organisation level is impractical.

In contrast, the principles of data custodianship by an authoritative source could provide a workable alternative. This involves a centralised or

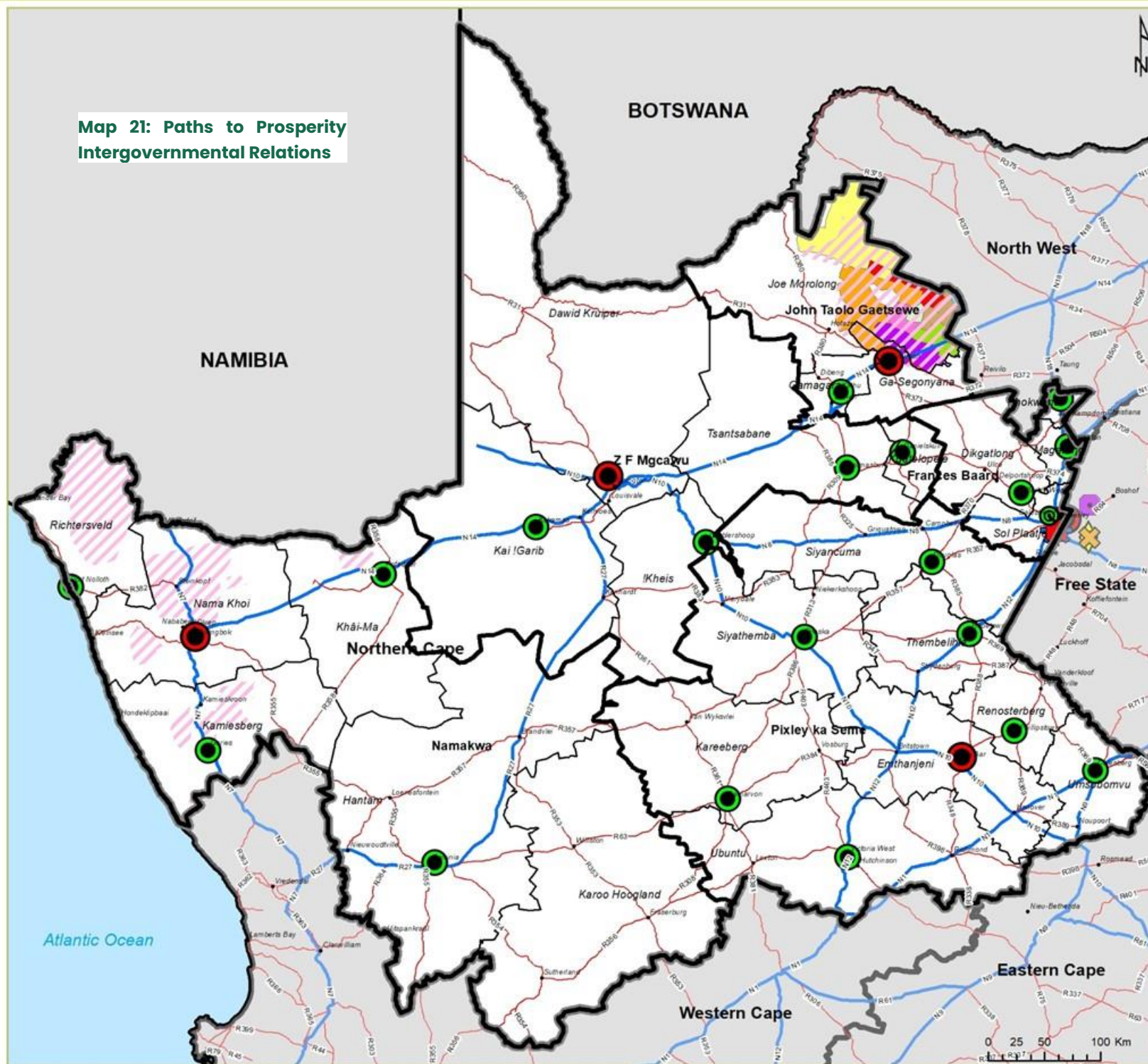


“Coordinating Custodian²¹” which provides the meta-framework within which various data custodians manage their data. Amongst others, the focus of the Coordinating Custodian would be to support and strengthen the ability of the various data custodians to manage the data for which they are responsible. Within the framework of a transversal spatial governance system, the Coordinating Custodian will focus on the overall integration and analysis of the datasets generated by the respective custodians in order to satisfy the decision-making requirements of the system. The focus of the Coordinating Custodian is therefore not just the management and structuring of data for data’s sake, but rather to generate information from the data (generated by the Data Custodians) which needs to feed into the system. In this regard the information input requirements of the system (i.e. to make decisions) should be the departure point - what are the key questions that the system needs answered and what data/information is required to answer these questions?

²¹ To be facilitated by the Office of the Premier (Policy and Planning).



**Map 21: Paths to Prosperity
Intergovernmental Relations**



**PATHS TO PROSPERITY
DRIVER FOUR: THE NORTHERN CAPE
GOVERNANCE MODEL**

INTERGOVERNMENTAL RELATIONS

Legend

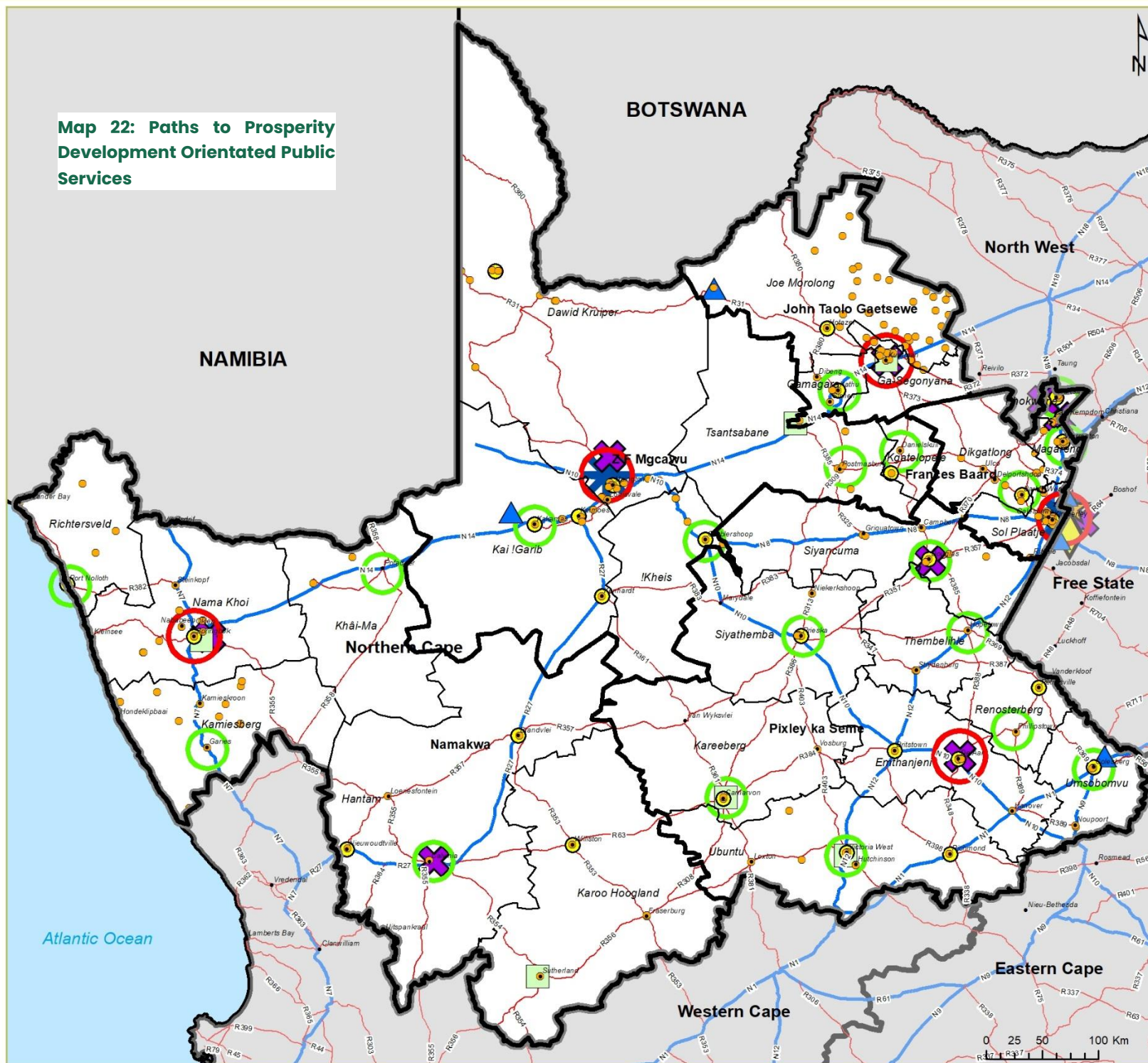
- Town/Settlement
- Public Services Offices**
 - COGHSTA
 - Office of the Premier
 - Department of Education
 - Department of Environmental Affairs
 - Department of Health
 - Department of Roads & Public Works
 - Department of Social Development
 - Department of Sports, Arts & Culture
- Local Municipal Seat
- Local Municipal Seat/ District Municipal Seat
- Main Roads
- National Roads
- Local Municipality
- District Municipality
- Trancraa Area
- Traditional Authorities**
- Chief's Names:**
 - Diako S
 - Jantjie K E
 - Kemokotile S
 - Leburu E W
 - Mahuru B V
 - Motswarakgole M
 - Phethlu P E
 - Taganyane M G
 - Toto K P

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



**Map 22: Paths to Prosperity
Development Orientated Public
Services**



PATHS TO PROSPERITY DRIVER FOUR: THE NORTHERN CAPE GOVERNANCE MODEL

DEVELOPMENT ORIENTATED PUBLIC SERVICES

Legend

- Town/Settlement
- Libraries
- Post Office
- Local Municipal Seat
- Local Municipal Seat/ District Municipal Seat
- Thusong Centres
- Provincial Legislature
- High Court
- Home Affairs
- SARS
- Magistrate Court
- Main Roads
- National Roads
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



3 POLICIES AND STRATEGIES

3.1 CLIMATE CHANGE

3.1.1 NORTHERN CAPE CLIMATE CHANGE RESPONSE PLAN, 2023

The purpose of this report is to outline a climate change strategy for the Northern Cape Province that outlines actions to be taken to adapt to the projected impacts of climate change in the province and reduce the contribution to greenhouse gas emissions by the province.



Figure 14: climate change elements.



Figure 13: climate change goals



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The goals and actions proposed in the strategy are summarised below. Additional information on each action, its timeframe the responsible organisations are detailed in the report.

CLIMATE CHANGE - TAKEAWAY

South Africa must submit regular reports (Nationally Determined Contributions) outlining how greenhouse gas emissions will be reduced in response to climate change (DEA 2018).

Achieving these targets requires the support of all spheres of government and economic sectors. South Africa has also adopted a National Climate Change Adaptation Strategy (NCCAS), as required by the Paris Agreement (DEFF 2020).

To meet its international commitment to reduce greenhouse gas emissions, the support of subnational government at the local, district and provincial levels is required. The Northern Cape province has developed several policy documents that support the national commitment to tackle climate change.



The Greenbook supports the government in South Africa with adapting settlements to the impacts of climate change by providing an online repository of downscaled, baseline and future, municipal climate risk data and insights as well as adaptation information to be integrated into broader settlement planning.

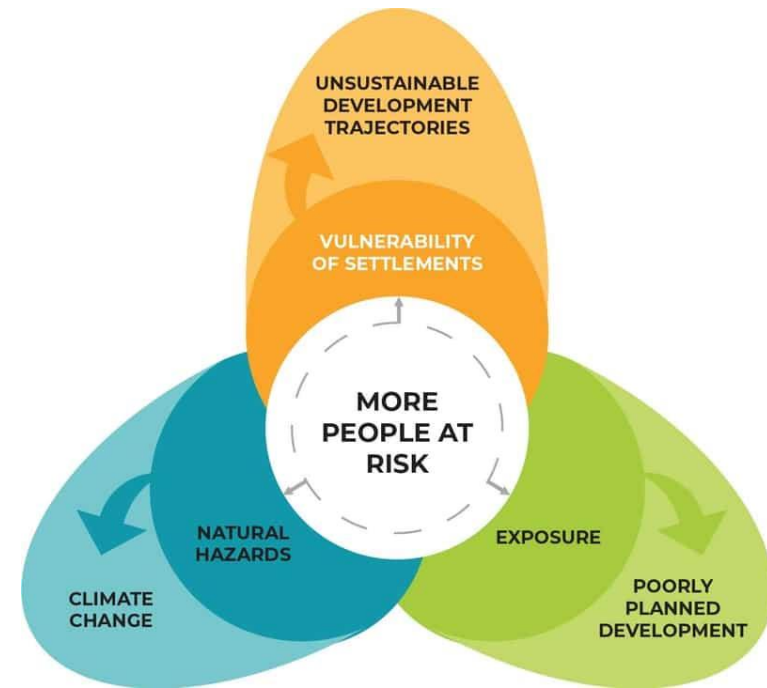


Figure 15: Components That Increase Risk

NATIONAL OVERVIEW

A series of interactive web apps highlights national trends and projected changes for coastal flooding, floods, wildfires, drought, settlement vulnerability, urban growth, climate change, economic outlook, agriculture, forestry and fisheries, surface water and groundwater. Users can browse information and maps to learn more about key national findings and recommendations, as well as to access technical research reports.



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An interactive tool that grounds the adaptation process in the scientific evidence of the climate risks each local

municipality in South Africa is likely to face under a changing climate by 2050. The Municipal Risk Profile Tool provides temporally dynamic risk profiles, including information on vulnerabilities, population projections, exposure to climate hazards, and the impacts of climate change on some key municipal resources for each municipality and its settlements.

The Adaptation Actions Tool supports adaptation planning and decision-making within local government. The Tool provides a range of settlement planning and design actions that can be undertaken by local governments to adapt to the impacts of climate change, reduce exposure to hazards, build long-term resilience, and exploit opportunities for sustainable development.



Figure 16: ADAPTIVE Actions



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3.2 TOURISM

3.2.1 NC DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM STRATEGIC PLAN 2020 – 2025 DEDAT

The strategy aims to develop multi-stakeholder relationships, to promote, grow and modernize the provincial industry(s), with the development of local capacity, which would serve to expand the resource base from which the Province could encourage inclusive economic development.

The department seeks to implement the strategy through an intervention that:

- Compact densify and diversified urban growth in the Kimberley Urban Core is well connected with a national network of resilient urban cores.
- Consolidate and expand provincial competitive advantages supporting the national competitive advantages.
- Utilise the benefits of urbanisation to enhance the potential of young people through; human capital development and opening-up of urban economies to enable and support a multiplicity of livelihood options.
- Maintain and strengthen internal trade, port, transportation, through-routes and related infrastructure in order to support international and national competitiveness.
- Support diversification of economies, tourism, the knowledge economy, the entertainment industry, the green economy and alternative energy-related enterprise development.
- Focus on green economy solutions.

The development of small, micro and medium enterprises has been identified as key to fostering economic growth in the province. SMMEs and

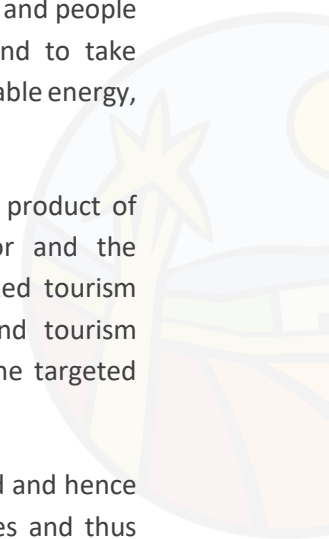
Cooperatives have been identified as the “lifeblood of economic development” in the Province.

The Province recognises the need to turn inward and reduce dependence on trade. It highlights that this is the opportune time to drive the "proudly South African", "Shot Left" and "Buy Local" Initiatives to grow the economy. SMMEs and Cooperatives need to be strengthened to support diversified economic development which will protect existing jobs while simultaneously providing opportunities to existing and new local manufacturers and entrepreneurs to take advantage of the value chain to enter the mainstream economy.

Although mega-projects act as catalysts for growth, it is the development of sustainable SMMEs and Cooperatives that are the mainstay of sustainable economic growth in all sectors. The youth, women and people with disabilities must be developed to establish SMMEs and to take advantage of the value chains in mining, manufacturing, renewable energy, agriculture, tourism and the knowledge economy.

The Province stated its determination to elevate the tourist product of SMMEs through the development of a tourism incubator and the development of a skilled tourism industry through specialized tourism interventions that actively look to increase bed nights and tourism spending in the province. These interventions will include the targeted groups i.e. women, youth and people with disabilities.

The development corridors of the province we also considered and hence interventions designed to maximise the economic advantages and thus eradicate poverty and inequality and the projection of the integrity of the environment.



3.2.1.1 Programme: Integrated Economic Development Services

The integrated Economic Development Services programme is largely concerned with the promotion of small enterprise development and the programme consists of three sub-programmes:

1. Enterprise Development	Enterprise Development consists of two units i.e. Enterprise Development and Corporate Development. The strategic intent of Enterprise Development is to create an enabling environment in which SMMEs and Cooperatives can be developed and flourish through financial and non-financial support. The sub-programme also addresses the informal business sector to help them to 'migrate' towards sustainability and formalisation.
2. Economic Empowerment	The focus of the Economic Empowerment unit is the provision of support to HDIs to enable them to participate in the mainstream economy. The sub-programme promotes and supports these HDIs through business intelligence, skills development and enterprise development.
3. Economic Empowerment	The focus of the Economic Empowerment unit is the provision of support to HDIs to enable them to participate in the mainstream economy. The sub-programme promotes and supports these HID's through business intelligence, skills development and enterprise development

3.3 INFRASTRUCTURE

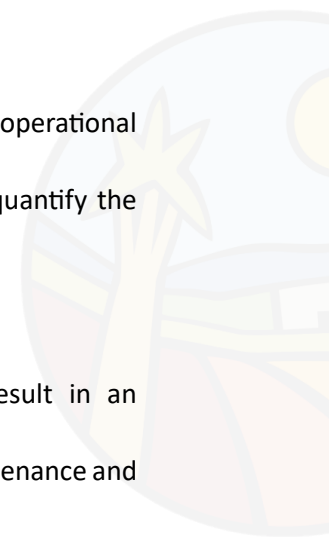
3.3.1 PROVINCIAL BULK WATER AND SANITATION MASTER PLAN NORTHERN CAPE, 2024

In order to facilitate and accelerate progress towards the attainment of a water-secure future for South Africa, the NW&SMP deliberately maintains a tight focus that is based on twelve elements which reflect the key programmes that have been identified as necessary to operationalise a new water and sanitation sector paradigm in the country.

During the development of the 5-year Reliable Water Services Delivery Implementation Plans, various functionality, resource and governance-related challenges and interventions as well as new infrastructure to be developed were identified that were universal across all five District Municipalities.

3.3.1.1 Functionality

- Install and calibrate flow meters in order to verify the operational capacity of all supply systems.
- Develop and implement a comprehensive O&M Plan to quantify the full resource (tools, equipment, staff and funds).
- Carry out scheduled maintenance.
- Remove illegal connections.
- Develop and Implement Infrastructure.
- Asset management Strategies and Plans that would result in an improved asset register too.
- Develop and implement water services infrastructure maintenance and rehabilitation programme.



3.3.1.2 Water Security

- Implementation of monitoring programmes with sufficient samples based on population size as outlined in SANS 241:2015 and provided to the Regulator through IRIS.
- Implement a Water Conservation and Water Demand Management plan.
- Prepare a water resource viability and water security plan.
- Develop and Implement a Leak detection and Repair Programme.
- Prevention of wasteful water uses to control consumption and utilisation of available water sources to their full potential.
- Continuation of the water meter replacement programme.
- Implementation of a groundwater quality programme.
- Review water use licenses for the groundwater as part of the groundwater management system.
- Prevention of wasteful water uses to control consumption and utilisation of available water sources to their full potential.
- Continuation of the water meter replacement programme.
- Implementation of a groundwater quality programme.
- Develop and implement a groundwater management system that includes the prevention of wasteful water use to control consumption and utilisation of available water sources to their full potential.

3.3.1.3 Governance

- Appointment of suitably qualified staff and/or training of existing staff (supervisors, process controllers and maintenance teams) to ensure adequate alignment to set criteria.
- Development and implementation of Water Safety Plans as per SANS 241:2015 and WHO guidelines.
- Increase the capacity of the technical support team (i.e. engineering services) in the water supply schemes.
- Improve resource quality monitoring processes.
- Improve Green Drop status and obtain Green Drop certification.

- Improve Blue Drop status and obtain Blue Drop certification
- Implementation of the credit control and debt collection policy.
- Implement financial controls to ensure improved audit options
- Develop and implement a comprehensive O&M Plan to quantify the full resource (tools, equipment, staff and funds)
- Carry out scheduled maintenance.
- Remove illegal connections.

3.3.1.4 New Infrastructure

- Replacement of old infrastructure and distribution networks (15% of existing pipelines in the next 5 years).
- Submit WCWDM-related business plans to facilitate AC pipe replacement.
- Refurbish and recommission of boreholes that are not in use
- Implement infrastructure extensions to new housing developments.
- Various source development, storage augmentation and reticulation extensions are required.

Provincial Bulk Water and Sanitation Master Plan: Northern Cape - Takeaway

Most of the local municipality's services are already at maximum capacity with an ever-growing demand for services.

Potential high-impact projects that were identified during the compilation of the Northern Cape and currently have been implemented or that are still in development phases.

3.3.2 INTEGRATED TRANSPORT MASTER PLAN IPMP, 2023

As part of its Provincial interventions aiming towards economic inclusion and growth, the department fared well during 2021/22 financial year will ensure it responds to the growing and transforming infrastructure sector



and empowers designated groups through the implementation of sub-contracting conditions of a minimum of 30% for procurement of goods & services above R30 million, where visible, as well as 30% set aside on goods & services procured.

To promote accessibility and the safe, affordable movement of people, goods and services through the delivery and maintenance of transport infrastructure that is sustainable, integrated and environmentally sensitive, and which supports and facilitates social empowerment and economic growth.

The Transport Infrastructure will strive to deliver a reliable network to all areas within the Northern Cape Province, with the following goals and objectives, inter alia:

- To improve the mobility of people, freight and services in the province.
- To improve vehicle accessibility to all areas of the province.
- To support economic, social, cultural and heritage developmental goals specified in the Provincial Growth and Development Plan.
- To assist in the improvement of skills in affected communities.
- To support government macro-economic objectives, and
- To provide access to economic and social opportunities to the historically disadvantaged and rural communities.

3.3.3 GREEN HYDROGEN STRATEGY, 2021

Hydrogen (H₂) is the most abundant element in the universe and holds the key to the world achieving the climate change commitments made at the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in the form of the 2015.

Paris Agreement. As a signatory to the Paris Agreement, South Africa has committed to a net zero carbon economy by 2050. Hydrogen will be a critical part of the country's transition to a low-carbon economy. Due to its

energy density and ability to produce an emissions-free version of hydrogen using abundant and cheap renewable energy to split water.

through electrolysis and green hydrogen, it is a front-runner in the race to decarbonise traditionally 'hard-to-abate' sectors.

These are sectors which are difficult to decarbonise using renewable energy and direct electrification such as heavy-duty transport and industries like cement, steel, ammonia, plastics manufacturing and aviation.

The Northern Cape is one of South Africa's nine provinces. It is situated at the north west corner of the country and is a hub for renewable energy generation and mining. It is the location for the majority of South Africa's renewable energy projects as it has a superior endowment of solar irradiation and wind speeds.

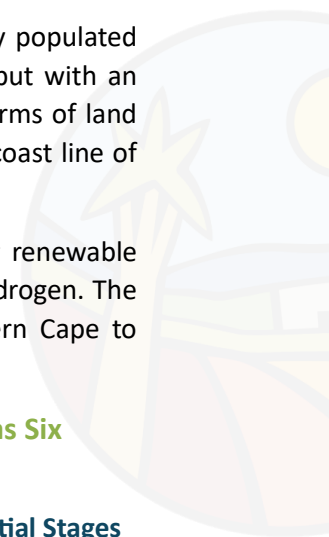
The Northern Cape is South Africa's largest and most sparsely populated province with large tracts of land with little alternative use but with an ample biodiversity endowment which will be protected. In terms of land mass, the province is slightly larger than Germany and has a coast line of approximately 300 km.

The Northern Cape's natural endowments make it a hub for renewable energy generation and potentially the production of green hydrogen. The potential that green hydrogen holds in enabling the Northern Cape to realise its industrialisation ambitions is immense.

3.3.3.1 The Northern Cape Green Hydrogen Strategy Has Six Objectives:

3.3.3.1.1 The Strategy is Export – Market Focused on the Initial Stages

- To position the Northern Cape as a future leader in green hydrogen production and export.



- To enable the province's green hydrogen potential through the development of catalytic infrastructure in the form of the planned Boegoebaai port and rail project, and adjacent green hydrogen Special Economic Zone (SEZ), storage infrastructure, transmission grids and pipelines.
- To have 5 GW of electrolysis capacity supported by 10 GW of renewable energy generation under construction in the Northern Cape by 2025 – 2026.
- To maximise the job creation, skills development, youth employment and investment attraction potential of green hydrogen. This will be done through the strategic localisation and reindustrialisation of manufacturing aimed at green hydrogen and renewable energy components and products including attracting a tier-1 solar photovoltaic (PV) panel and wind turbine manufacturers to the Northern Cape by 2025.
- To utilise the Northern Cape's green hydrogen generation capacity to support the accelerated decarbonisation of the South African economy, especially the large, carbon-intensive industrial base and to attract heavy industry wishing to go green to relocate to South Africa, and
- To utilise green hydrogen and concessional development finance to support a Just Energy Transition in South Africa.

3.3.3.1.2 Action Items and Key Policy Initiatives

The Northern Cape Provincial Government makes the following 14 commitments in order to position itself as a green hydrogen production and distribution hub:

- To create a conducive legislative and regulatory environment which promotes the accelerated development of a commercially viable, green hydrogen sector in South Africa.

- To utilise the legislative mechanisms available to fast-track the permitting decisions for catalytic and strategic green hydrogen projects.
- To expand the Namakwa SEZ to include green hydrogen, export-focused SEZ adjacent to the planned Boegoebaai port and to develop enabling export infrastructure while the Boegoebaai port is being developed.
- To mobilise and support investment to ensure 5 GW of electrolyser capacity is under construction in the Northern Cape by 2025 - 2026 and fully deployed by 2030.
- To package 240 000 hectares of land which is well irradiated or has a strong wind potential and is also well positioned, permitted and licenced for renewable energy deployment to support the long-term, expected electrolyser power supply.
- To promote the Northern Cape's green hydrogen and renewable energy component manufacturing potential centred around the province SEZ and industrial park network and to attract tier-1 solar photovoltaics (PV) panel and wind turbine manufacturers to the Northern Cape by 2025.
- To consolidate green hydrogen-based product supply, generated across the Northern Cape solar and wind belts, for export via an aggregator network anchored at the Boegoebaai SEZ.
- To partner with the private sector to build a green hydrogen pipeline system connecting projects across the Northern Cape solar belt into the Boegoebaai SEZ and the inland, industrial heartland by 2030 based on secured demand.
- To partner with Transnet and the private sector to deploy dedicated specialist rail infrastructure linking green hydrogen producers to both Boegoebaai and the wider national port system by 2030.
- To transition the full Northern Cape electrical grid to one that enables the maximisation of renewable energy utilisation, centred on green hydrogen, solar photovoltaics (PV) and wind by 2030.



- To lead and drive Southern African collaboration (including with Namibia) to position the region as a globally competitive export hub of renewable electricity and green hydrogen and its derivatives. The regional collaboration could leverage, for example, economies of scale on procurement and offtake, infrastructure integration, shared skills, development hubs, etc.
- To advocate for the adoption of green hydrogen and fuel cell-powered heavy mine trucks by the mining sector in the Northern Cape and to utilise the excess green hydrogen produced to enable a transition of 50% of the Province's vehicle fleet to green hydrogen-powered fuel cell electric vehicles (FCEVs) and battery electric vehicles (BEVs) by 2025.
- To partner with the private sector and existing institutions of higher learning to develop a green hydrogen training academy in the Northern Cape to ensure the development of the necessary skills to support this nascent sub-sector, and
- To advocate for the introduction of government incentives to support the development of the nascent, green hydrogen, sub-sector and to maximise the sector's potential for localisation while being cognisant of the country's fiscal constraints.

This would be done in conjunction with mobilising concessionary development finance in line with the Paris Agreement to enable a Just Energy Transition.

GREEN HYDROGEN STRATEGY, 2021 TAKEAWAY

One of the first green hydrogen lighthouse projects that will be developed in South Africa is the Boegoebaai green hydrogen SEZ, adjacent to the planned Boegoebaai port in the northwest corner of the Northern Cape.

3.3.4 PIONEERING THE GREEN ECONOMY, 2023

The Northern Cape Provincial Growth and Development Plan recognises the importance of tourism and its contribution to the growth of the provincial economy and job creation. The provincial priorities identified for tourism growth include among others: effective marketing, transformation of the tourism industry and SMME development, tourism infrastructure development, tourism incentives and funding and unlocking the Oceans Economy.

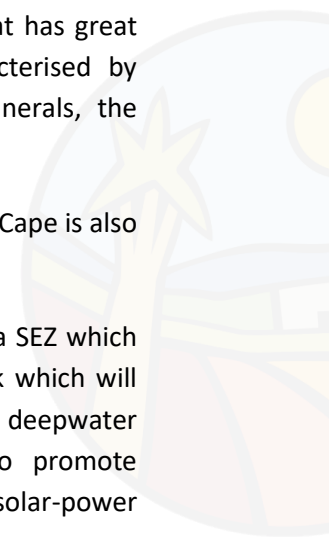
Investing in the supply side of our tourism economy is a critical part of achieving the socio-economic benefits to be derived from tourism, such as increased market share of tourist arrivals, tourism competitiveness and the consequent increase in employment opportunities.

The Northern Cape is one of the South African provinces that has great mining potential for economic development. It is characterised by diamonds, iron ore and manganese. Apart from these minerals, the province is rich in new technology

minerals such as zinc, nickel, copper and cobalt. The Northern Cape is also home to most of South Africa's renewable projects.

Industrial clusters in the Northern Cape include the Namakwa SEZ which will promote mineral beneficiation, the Kathu Industrial Park which will promote a large range of business opportunities as well as the deepwater port at Boegoebaai and the Upington Industrial Park to promote manufacturing, particularly the manufacturing of solar-power components.

Therefore, there is a renewed call for mines to use their social licences to increase economic development and address issues including housing,



skills, local enterprises and services in the areas in which they operate in order to grow the local economies.

3.3.4.1 SECTORAL CLUSTERS

3.3.4.1.1 De Aar Renewable Energy

South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) has seen more than R200-billion committed to renewable energy projects. It aims to add some 13 225MW by 2025. Fully 60% of the projects so far allocated have been in the nation's sunniest province.

The biggest solar farm so far in South Africa is Solar Capital's 175MW project at De Aar. Formerly famous as the railway junction, De Aar is becoming better known as a renewable energy hub.

3.3.4.1.2 Square Kilometre Array

The SKA will be the world's largest radio telescope, made up of thousands of antennae throughout Australia and Africa, centred on the area around Carnarvon in the Northern Cape. South Africa's own 64-dish MeerKAT telescope, which will form part of the SKA, started coming on line in 2016. The town of Sutherland already hosts an array of telescopes with a long history of providing scientists with excellent data in clear skies above the flat and dry Karoo.

3.3.4.1.3 Gamagara Corridor

Mining contributes 23.4% to the Northern Cape economy and makes up nearly 7% of South Africa's total mining value. The mineral resources of the province are wide-ranging and impressive with significant deposits of iron ore, manganese, zinc, copper, lead, titanium, pig iron, zircon and gypsum.

The overwhelming majority of the world's manganese comes from the Postmasburg and Kalahari regions. The province is responsible for 25% of the world's exports of the mineral. The Northern Cape produces more than 84% of South Africa's iron ore and has two major iron belts, from Postmasburg to Hotazel, and running through Sishen and Kathu. Sishen is the most important iron-ore mine in South Africa, where operations include extraction and four beneficiation plants. The availability of natural resources, labour and infrastructure (including the Sishen-Saldanha railway line) make Sishen the ideal location.

3.3.4.1.4 Boegoebaai Bulk Corridor

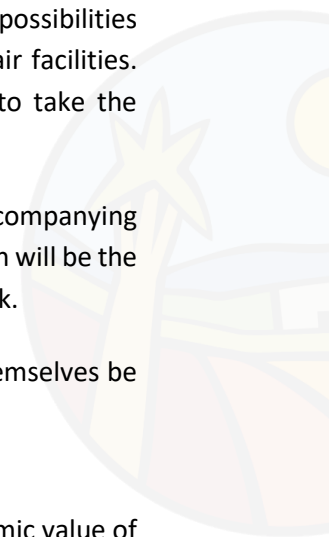
Big plans are underway to develop a deepwater port capable of receiving large vessels at Boegoebaai. Preliminary research indicates that the project could generate an income of R2.1 billion annually by handling bulk cargoes and minerals such as manganese and iron ore. There would be possibilities for linking the port to the gas fields and developing ship-repair facilities. The intention is to find a private investor or a consortium to take the project forward.

If the harbour project gets the green light, then the accompanying infrastructure will follow. The best route to connect to Upington will be the subject of further studies, as will the feasibility of a new rail link.

The construction requirements of a project this size would themselves be a boost to the economy of the Province.

3.3.4.1.5 Northern Cape Coastline

The Northern Cape boasts a coastline of 313km but the economic value of this asset has barely been touched, despite a growth in the abalone industry and some fishing and lobster operations.



Plans to boost the maritime economy in the province form part of two broader national programmes. Operation Phakisa is an initiative of the South African government to fast-track parts of the National Development Plan. The focus is on delivery and results, with strict timelines. “Phakisa” means “hurry up” in Sotho. One of the focus areas within Phakisa is the Oceans Economy programme. Three Northern Cape harbours feature in the list of harbours that will be further developed: Port Nolloth, Boegoe Baai and Hondeklip Bay. The last-named port has already received investment in the aquaculture sector.

3.3.4.1.6 Namakwa Special Economic Zone

The Namakwa SEZ development is “the game changer” for minerals beneficiation in South Africa and the Northern Cape province's key solution” to industrialisation.

3.3.4.1.7 Kathu Industrial Park (KIP)

The town of Kathu in the Gamagara Local Municipality (GLM) is the preferred location due to its proximity to the Postmansburg-Hotazel iron-ore/manganese belt and various established and pending projects. It is

envisaged that the KIP serve as a catalyst for accelerated growth and other economic sectors.

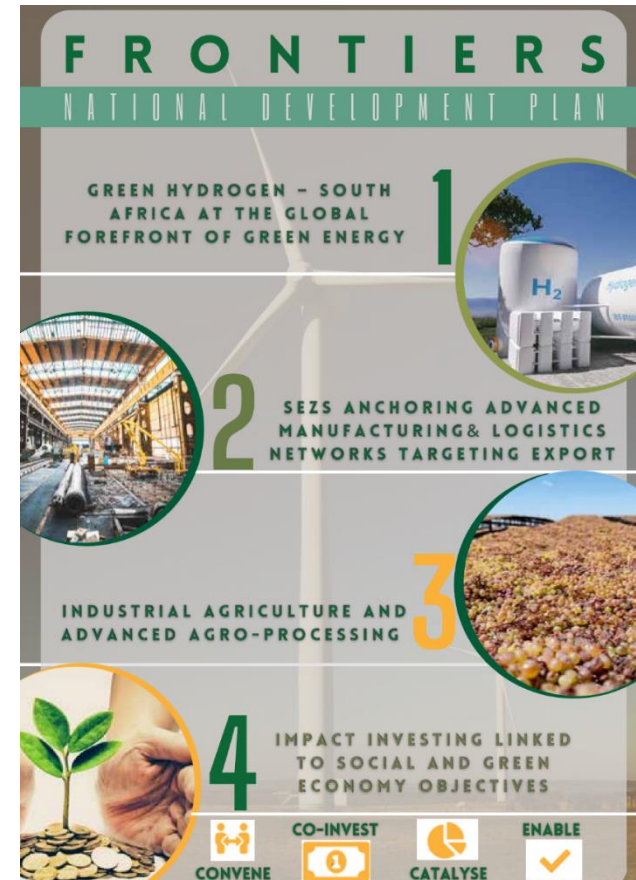


Figure 17: NATIONAL DEVELOPMENT PLAN FRONTIER



3.4 INDUSTRY AND MANUFACTURING

3.4.1 SEZ ZONE IN THE NORTHERN CAPE

Special Economic Zones that were identified (SEZs), where feasible, to boost manufacturing, increase exports and employment, and add momentum towards turning the NCSEZ into a single, multitier and integrated SEZ.

SEZs “are geographically designated areas set aside for specifically targeted economic activities to promote national economic growth and exports by using support measures to attract foreign and domestic investments and technology”.

The Special Economic Zones Programme is set to play a critical role in the implementation of not only Northern Cape but also South Africa’s economic reconstruction and recovery plan. This is due to the SEZ Programme being at the core of the reimagined industrial strategy, which is purposefully structured to stimulate local and foreign direct investments.

3.4.1.1 Namakwa Special Economic Zone (NSEZ)

The value proposition of the Namakwa SEZ is based on the existence of the Gamsberg Zinc Mine and the proposed building of Zinc International. These would be the anchor tenants of the SEZ. It is proposed that a smelter be built to treat zinc concentrate Gamsberg. The zinc concentrate produced at the existing concentrator plant will be treated in the smelter using the conventional electrowinning (R-L-E) process.

The full process would involve the treatment of 680 000/tpa of zinc concentrate to produce 300 000/tpa of high-grade zinc i.

Various wastes and by-products will be generated by the smelter that could be useful to investors. Waste includes iron cake staff fluent treatment plant cake (dry); evaporation pond salts (dry); and cell house sludge (dry).

The SEZ designation application is in its final stages where it is envisaged that the final and complete designation application will follow certain critical milestones that are progressing well.



SEZ: Takeaway

The Namakwa SEZ development is “the game changer” for minerals beneficiation in South Africa and the Northern Cape province’s key solution” to industrialisation.

NCGDP 2040 to contextualize and prioritise the existing and proposed SEZs in the broader Provincial context.

3.4.2 ENTERPRISE DEVELOPMENT STRATEGY, 2023-2028

The Northern Cape Enterprise Development Strategy aims to set out the strategic direction in terms of the development interventions and support programmes required to enable enterprise growth and development for the period 2023 to 2028. This Strategy is seen as a critical vehicle to support the Northern Cape’s commitments to economic growth and development under various frameworks and the delivery of a capable state as envisioned in the 2030 National Development Plan (NDP).

The Strategy takes into cognisance both the provincial and enterprise sector developmental context including the challenges and opportunities towards actualising the 2030 development agenda. Notably, the Strategy



has been formulated against the backdrop of a challenging economic environment exacerbated by the COVID-19 pandemic. The current state of development indicates persisting socio-economic challenges which include a high unemployment rate, poverty, and inequality. To overcome these challenges and attain an economically inclusive enterprise sector, the Strategy will introduce mitigation measures, support program

The theme for this Strategy is “**Economic Inclusion for Improved Livelihoods**”. The strategic focus of this strategy is SMMEs, Co-operatives, Informal Traders, and the Township and Rural Economy.

Table 4: Enterprise Development Model

Type of support	Project
Financial support to enterprises	<ul style="list-style-type: none"> → EGDF → Informal businesses (NIBUS, IMEDP)
Non-financial support to enterprises	<ul style="list-style-type: none"> → Business Advice; Information sharing; Coaching; Outreach programmes; CIPC Services
Economic empowerment: Financial and non-financial support for target groups	<ul style="list-style-type: none"> → Training for SMMEs in the clothing and textile industry (COVID-19 intervention) → Entrepreneurship training → Cleaning and Hygiene training → Verification training → Enterprise and supplier development training

The proposed outcome of this Strategy is to assist the Northern Cape Department of Economic Development and Tourism (DEDaT), its policy partners and various enterprise support agencies to understand and address the dynamics that are fuelling the poor economic performance of enterprises in the Northern Cape. This information will be used to inform

the recommended support programmes on how to combat the poor growth of enterprises in the province.



Figure 18: Key Elements of Enterprise Development

ENTERPRISE DEVELOPMENT STRATEGY TAKEAWAY:

- Enabling a Legal Framework at the Local Municipality Level that will enable SMMEs to thrive.
- Legal/ Spatial Planning (Rezoning etc.).
- Access by SMMEs to unused municipal/ provincial infrastructure for business use.
- Exemption of SMMEs especially Informal Traders to stringent By-Laws (this is the exception of Liquor businesses and gambling).
- Technical assistance directed at building the institutional landscape and facilitating capacity upgrades within the province.
- Opportunities for positive change- Areas with potential for transforming SMME industries landscape.
- Exploring business opportunities in innovation by:
- Build an online networking platform.
- Partner with innovation-driven institutions to support and promote SMEs with innovative ideas/products/services.



- Ideation and skills development (call for demand open driven solutions-hackathons).
- Facilitating financing to build the SMEs Industries in the province.

Ecosystem support for trade associations, multi-sector awareness, and capacity building:

- Ecosystem Interventions.
- Incentivise special projects as part of the support for the ecosystem.

Supportive Role for the Department in building SMME Sector/Industries in the Province:

- Build strategic partnerships to serve as a catalyst.
- Facilitate Alternative finance options- approach and partner with Venture funds, institutions offering grants, etc.
- Build a knowledge base.
- Establish an industry advocacy programme.



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3.5 HUMAN SETTLEMENTS

3.5.1 DEPT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT AND TRADITIONAL AFFAIRS – STRATEGIC PLAN 2020-2025

The Department of Cooperative Governance, Human Settlements & Traditional Affairs is required to implement and coordinate interventions aimed at achieving an efficient, effective and development-oriented state, as envisioned in the National Development Plan (NDP) 2030 through the achievement of good governance; integrated and sustainable human settlements; as well as accountable, responsive and participatory democracy within 31 municipalities of the province. This includes supporting and promoting traditional leadership institutions, traditions, customs and culture, through implementing regulations of Section 81 and a co-ordinated District Development Model.

The Department strives to achieve sustainable human settlements and improved quality of household life that will culminate in the establishment of viable, socially and economically integrated communities that are located in areas that allow convenient access to economic opportunities as well as health, educational and social amenities.

COGHTA, 2020-2025: TAKEAWAY

Outline short-, medium- and longer-term human settlement interventions that respond to the spatial rationale of National, Provincial, and specifically local government (in terms of the exclusive constitutional mandate of “municipal planning”).

Beyond only reflecting upon spatial alignment of priorities the feasibility of proposed human settlement interventions should also be linked to bulk infrastructure capacity as a key component of feasibility.

Although a list of projects with the main purpose of eradicating informal settlements and improving the quality of living environments are implemented and outlined in the MIG summary most current implementation status shows inadequate funding.

3.6 RURAL DEVELOPMENT

3.6.1 RURAL DEVELOPMENT STRATEGY FOR THE NORTHERN CAPE, 2023

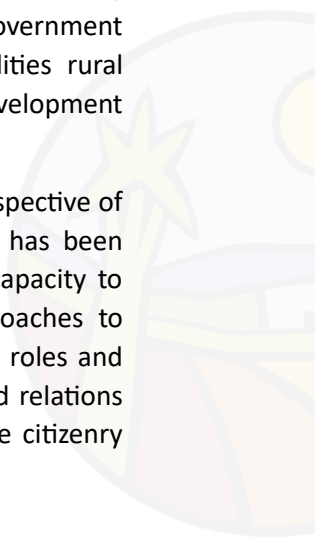
Rural development, local economic development and integrated development planning have largely developed in parallel with one another since 1994.

The main distinction has been that rural development has been promoted and implemented as a result of national and provincial policy initiatives, while LED and IDPs have tended to have been local government interventions. Despite the creation of wall-to-wall municipalities rural development has only recently started to feature on their development agenda.

Ultimately rural development approaches and frameworks, irrespective of their theoretical sophistication or the extent to which there has been participation in their development, are only as good as the capacity to implement them. This recognition has seen numerous approaches to develop appropriate institutional arrangements and clarify the roles and relationships between the arms and functions of the State and relations between it and rural people, the private sector, NGOs and the citizenry more broadly.

The main focus of this sector plan is:

- ➔ Economic transformation and job creation and
- ➔ A capable, ethical and developmental state



Key to the pursuit of these priorities is to ensure that rural communities, women and the youth become important role payers in this sector.

The concept has strength because of its ability to connect different sectors and disciplines, enable collaboration and combine professional and local knowledge. However, it also presents significant obstacles in that effective rural development initiatives depend heavily on shared institutional ownership and knowledge systems and require programmatic alignment across different spatial scales which are notoriously difficult to manage and implement.

3.6.1.1 Mining and Mineral Processing

The Northern Cape has been extensively explored but in geological terms remains an interesting exploration target for large-scale mining interests.

The role of the provincial government should be to market the province as an exploration target and to make the general non-geological environment as attractive as possible to investors.

The Northern Cape contains a variety of deposits that lend themselves to small-scale mining activities the development of which is often hindered by a lack of technical and financial resources.

It is proposed that the provincial government should work with stakeholders to enhance logistics for minerals development, for example, through the upgrading of the iron-ore and manganese export railway lines.

3.6.1.2 Fishing and Mariculture

The coastal areas of Namaqualand in the Northern Cape lie adjacent to one of the world's richest and most prolific marine ecosystems, sustained by the cold, nutrient-rich upwelling Benguela current. This gives rise to enormous potential for the development of fishing and mariculture industries. Northern Cape Tourism Growth Strategy.

The provincial government sees promoting investment in the fishing and mariculture sectors as a means to mitigate the negative impact of diamond mining downscaling. This industry could create at least 2 500 jobs over 10 years. A set of strategic interventions and a portfolio of specific project opportunities that could form the basis of a public sector-led, private sector-driven sector development strategy for the fishing and mariculture sectors in the Northern Cape.

3.6.1.3 A.) Sectoral Interventions:

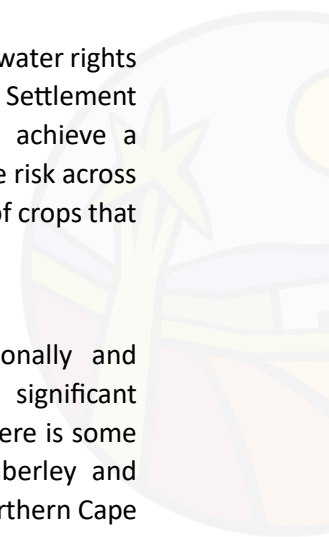
3.6.1.3.1 Agriculture and Agro-Processing

The land that lies alongside the Orange and Vaal Rivers is used to produce table grapes for export, and Karoo lamb, ostrich, and beef and is of excellent quality. The Northern Cape is also known for the production of wool, mohair and karakul pelts, as well as dates, citrus products, wine and raisins.

The Department of Water Affairs has allocated 4 000ha of new water rights for emerging black farmers through the Orange River Farmer Settlement Programme. The irrigated agricultural sub-sector needs to achieve a greater level of diversification, not only to spread the aggregate risk across the irrigation subsector but also to promote the development of crops that have a high affinity for agro-processing.

3.6.1.3.2 Manufacturing

Manufacturing in the Northern Cape is small both nationally and provincially, but manufacturing enterprises do make a significant contribution to the local economy in those localities where there is some concentration of manufacturing activity, mainly in the Kimberley and Upington areas. Most manufacturing that takes place in the Northern Cape involves value-addition to the province's mineral and agricultural raw material output, or, the manufacture of intermediate products used in those industries. There is significant scope for growth in certain economic



sub-sectors, particularly if conditions conducive to increased investment in manufacturing can be created through institutional support and reform

3.6.1.4 B.) Spatial Interventions:

3.6.1.4.1 Focusing On Established Growth Centres

The major established growth centres located in the Kimberley-Postmasburg sub-region are likely to remain the main economic driving force for the foreseeable future. Typically these areas are a major reception area for rural to urban migrants but often this influx exceeds formal sector growth rates resulting in an increasing number of people seeking livelihoods in the informal sector. In addition, population growth often exceeds the rate of growth in service provision raising backlogs in these areas.

3.6.1.4.2 Focusing On Emerging Growth Centres

Agriculture and mining activities in the areas around Upington and Springbok have been the sources of new economic growth. A key strategic issue here is how to maintain growth in the face of copper mining downscaling in the Springbok vicinity and deteriorating terms of trade for the export grape industry around Upington.

It is probable in both the Namakwa and ZF Mgcawu Districts that there will be a significant rural-urban shift with some stepwise (inward and outward) migration to other major centres both inside and outside the province. This will place a greater demand for services on local authorities

3.6.1.4.3 Focusing On Stagnating Small Towns

There are several towns, mainly in the Pixley ka Seme and Namakwa Districts, where the erosion of the economic base of the area has resulted in severe contraction of the local economies. Inevitably, these areas have been the source of out-migration to other centres in the Northern Cape and other parts of South Africa. Nevertheless, a significant number of people continue to reside in these towns and typically these populations have

shown an increasing dependence on remittances and social grants. that will have to consider more explicitly the spatial distribution of service provision.

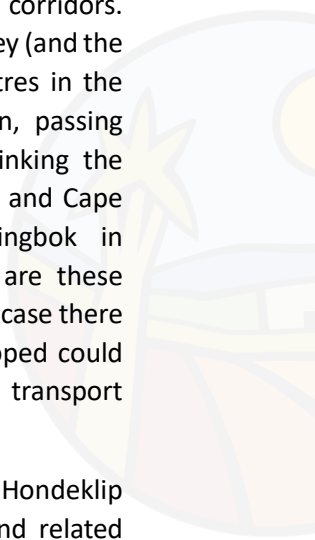
3.6.1.4.4 Land Reform Areas

The Northern Cape has a number of land restitution and land redistribution cases that have been settled where people have moved back onto ancestral and other land. In addition, land tenure and ownership arrangements have changed in the former Act 9 areas. In most cases, this has led to the need to provide services in previously under or non-serviced areas. From a spatial development perspective, the locality of these areas will be a critical determinant of their future viability.

3.6.1.4.5 Development Corridors and Special Resource Areas

The provincial government will take into consideration the existing network of development/ transport corridors and special resource areas. Within the province, there are four discernible development/ transport corridors. Firstly, the corridor from Springbok through Upington to Kimberley (and the Free State and Northern Cape) links the major economic centres in the province. Secondly, the corridor linking Namibia to Upington, passing through De Aar to the Eastern Cape. Thirdly, the corridor linking the Northern Cape through the North West province to Kimberley and Cape Town. A fourth corridor links Cape Town through Springbok in Namaqualand to Namibia and potentially Angola. Not only are these corridors vital lifelines from a transport point of view but in each case there are areas of relatively high economic potential which if developed could benefit enormously from their proximity to established transport infrastructure.

Along the west coast in the area between Alexander Bay and Hondeklip Bay, there is clear and significant potential for mariculture and related industry development based on the adjacent marine resources.



The second special resource area is the area along the Orange River where the expansion of irrigated agricultural production based on new water allocations is possible.

Rural Development Strategy for The Northern Cape 2021-2025- Takeaways

- A capable, ethical and developmental state
- Economic transformation and job creation
- Spatial integration, human settlements, and local government communities

3.7 SUMMARY OF KEY POLICY OBJECTIVES

As part of the analysis of the various policy frameworks, the relevant principles, directives, or policy statements set out in each document were extracted and grouped under certain themes, namely:

- Connectivity
- Urban form
- Space Economy
- Human Settlements
- Infrastructure
- Natural Resources
- Joint Planning

An analysis was then done to determine the frequency with which various principles/directives appeared in different policies.

The top ten policy directives that emanate from the policy analysis are:

- 1.** Improve rural access and mobility to urban areas and markets through inter alia public transport.
- 2.** Invest in public transport to improve access to social and economic opportunities.

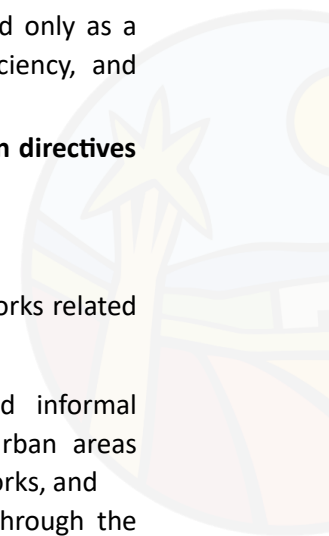
- 3.** Promote high-density and mixed-use development around priority and public transport nodes and corridors.
- 4.** Revitalise township economies through the development of economic hubs and mixed-use development and by strengthening their link to the wider economy.
- 5.** Focus on urban renewal, clustering, densification, and infill development.
- 6.** Improved support for and renewal of secondary cities and smaller towns as focal areas in rural development.
- 7.** Integrate housing with public transport systems and economic and social infrastructure.
- 8.** Promote the use of green energy, buildings, and infrastructure.
- 9.** Protect high-potential agricultural land by limiting development on agricultural land; and
- 10.** Limits develop of human settlements to well-located land only as a matter of optimising access to urban opportunity, efficiency, and sustainability.

The section below provides a summary narrative of the main directives from national and provincial policies.

3.7.1 CONNECTIVITY

National and provincial plans, policies, strategies and frameworks related to connectivity focus mainly on the following two focus areas:

- Improving accessibility of rural towns, townships and informal settlements to social and economic opportunities in urban areas mainly through the development of public transport networks, and
- Improving accessibility to the wider national economy through the development of logistics and industrial corridors (e.g. the logistics and industrial corridor.



3.7.2 URBAN FORM

The following four key policy statements relate to urban form:

- Directing an equitable, efficient and sustainable urban form by focusing development on strategically targeted nodes and corridors where high-density, mixed-use developments are promoted in conjunction with an integrated public transport system.
- Focusing on urban renewal, clustering, densification and infill development in conjunction with an urban development boundary in order to limit sprawl and create densities that support effective public transport systems.
- Support and renew secondary cities and smaller towns which will in turn support rural development, and
- Prevent development in sensitive areas, discourage development in peripheral locations and promote development in central and strategic areas such as the 'Urban Development Zones' and 'Industrial Development Zones' as identified in the Northern Cape Environmental Framework, 2021.

3.7.3 SPACE ECONOMY

With regard to the space economy, the following key focus areas have been identified:

- Develop the comparative and competitive advantages of key localities through the clustering of key economic sector developments in identified development corridors or zones,
- Revitalising township economies through the development of economic hubs and mixed-use development and by strengthening their link to the wider economy,
- Promote agro-processing, tourism and small enterprise and trade development in order to support rural livelihoods improve food security, and
- Prioritise the regeneration.

3.7.4 HUMAN SETTLEMENTS

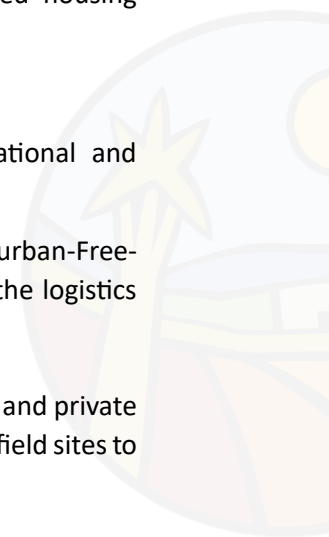
Development of quality living environments that ensure access to socio-economic urban opportunity in well-located areas which calls for:

- A variety of affordable housing and tenure opportunities in activity nodes and corridors.
- Revitalisation and upgrading of townships and informal settlements with a focus on mixed-use economic development.
- Development of new human settlements and new cities exclusively on well-located land as part of urban consolidation, and
- Integration of housing with public transport systems and economic and social infrastructure and
- Due consideration of access to regional and localised bulk infrastructure capacities as a non-negotiable factor in the determination of feasibility and prioritisation of proposed housing development or land acquisition.

3.7.5 INFRASTRUCTURE

With regard to infrastructure, the main focus areas of national and provincial legislation are:

- Developing logistics and industrial corridors (e.g. the Durban-Free-State-Northern Cape logistics and industrial corridor and the logistics corridor between Mpumalanga and Northern Cape).
- Providing quality basic services in rural areas.
- Using spatial prioritisation of municipalities to guide public and private infrastructure investment (e.g. private developers on greenfield sites to provide infrastructure and social facilities).
- Promoting infrastructure investment and
- Using smart, resource-efficient infrastructure in new developments and maintaining and retrofitting older infrastructure.



3.7.6 NATURAL RESOURCES

National and provincial plans, strategies and frameworks related to the development and protection of natural resources centre predominantly around the following three focus areas:

- Curbing carbon emissions through the development of a more sustainable electricity supply, more energy-efficient industrial, commercial and mining operations and buildings, and expansion of public transport systems to curb individual vehicle usage,
- Protecting and managing the viable land-based water resources through the implementation of water supply interventions, addressing water leakages by focussing on infrastructure maintenance, diversifying the water supply mix and protecting wetlands and flood-prone areas from development, and
- Protection and enhancement of conservation areas and agricultural land with a focus on food security by protecting these areas from urban expansion, the development of adaptation strategies for the protection of rural livelihoods, investment in new agricultural technologies and expansion of commercial agriculture. The Northern Cape Environmental Management Framework, 2021 includes detailed maps indicating desirable and undesirable uses land uses in the Northern Cape, which the review of the NCSDF will incorporate.

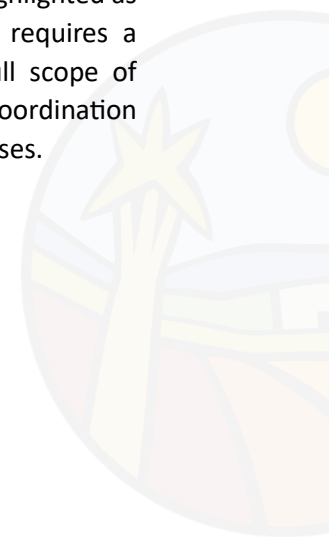
3.7.7 JOINT PLANNING

The notion of joint planning practice has grown substantially beyond being put forward as best practice in various policy prerogatives to specific interventions being included in various sets of regulatory reform linked to strategic planning, resource planning, budgeting, and prioritisation as well as practical considerations as part of planning processes in the built environment and related infrastructure planning at regional and localised levels. Some notable implications for joint planning, pertinently linked to

spatial prioritisation as per SDFs across various scales and mandates, are now contained in:

Division of Revenue Act spatially informed grant conditions (National, Provincial & Municipal)

- Strategic plans/ annual performance plans (Nat&Prov).
- Guidelines for Mid-Term Expenditure Frameworks (Nat&Prov).
- Framework for Infrastructure Delivery and Procurement Management (FIDPM) and related implementation of Infrastructure Delivery Management System (IDMS) and subsequent Integrated Asset Management Plans, Business Cases and Integrated Project Implementation Plans.
- Cities' Infrastructure Delivery and Management System (CIDMS) informed by Capital Expenditure Framework (CEF).
- The District Development Model approach is specifically highlighted as the most prominent joint planning-related reform that requires a spatialised focus on longer-term planning across the full scope of possible parties and stakeholders that will enhance coordination between the myriad of existing prescribed planning processes.



4 DISTRICT SPATIAL DEVELOPMENT FRAMEWORK

The Spatial Development Framework of a town/city should direct and arrange the development activities and the built form in such a way that it can accommodate the ideas and desires of people without compromising the natural environment and the way services are rendered. Therefore, the Spatial Development Framework should provide general direction to guide decision-making and action over a multi-year period aiming at the creation of integrated and habitable cities, towns, and rural areas.

As part of the analysis done on the various District SDF's, relevant objectives and development priorities set out in each framework were

extracted and grouped under the following themes. These themes are based on the developmental key drivers of the **Northern Cape Vision 2040**.

The following is a brief overview of each District SDF within the Northern Cape province. This analysis was done in order to determine the frequency in which the various principles appeared in different policies and to see if there is some alignment between the various District SDF's and Provinces.

The figure depicts the alignment of the SPLUMA Pillars to the Spatial Planning Categories.

BIOPHISICAL		SOCIO ECONOMIC		BUILT ENVIRONMENT	
Agriculture Land Transformation Climate Change Geology & Topography Biodiversity & Ecosystems Landscapes And Sense Of Place		Regional Space Economy Demographics & Social Conditions Cultural Heritage & Tourism Employment Local Economy & Business Key Economic Sectors Rural Development		Settlement Pat Settlement Rol Spatial Structure & Form Built Heritage Transport & Movement Networks Housing	
A Core B Buffer C Agricultural Areas		D Urban Related		D Urban Related E INDUSTRIAL AREAS F SURFACE INDUSTRIAL BUILDINGS	
A.a Statutory Protected Areas B.a Non-Statutory Conservation Areas B.b Ecological Corridors B.c Urban Green Areas C.a Extensive Agricultural Areas C.b Intensive Agricultural Areas		D.f Institutional Areas D.g Authority Areas D.i Business Areas D.j Service Related Business D.k Special Business D.l SMME Incubation D.m Mixed Use Development Areas D.q Resorts & Tourism Related Areas		D.a Main Towns D.b Local Towns D.c Rural Settlements D.d Tribal Authority Settlements D.e Communal Settlements D.h Residential Areas D.n Cemeteries D.o Sports Fields & Infrastructure D.p Airport & Infrastructure D.r Farmsteads & Outbuildings E.a Agricultural Industry E.b Industrial Development Zone E.c Light Industry E.d Heavy Industry E.e Extractive Industry F.a National Roads F.b Main Roads F.c Minor Roads F.d Public Streets F.e Heavy Vehicle Overnight Facilities F.f Railway Lines F.g Power Lines F.h Telecommunication Infrastructure F.i Renewable Energy Structures F.j Dams & Reservoirs F.k Canals F.l Sewerage Plants & Refuse Areas F.m Mixed Use Development Areas	

Figure 19: SPATIAL PLANNING CATEGORIES



4.1 FRANCES BAARD DISTRICT MUNICIPALITY



4.1.1 BIOPHYSICAL FRAMEWORK

The Biophysical Framework is aimed at proposing sustainable development in the natural environment, further addressing the impacts of climate change. The components of the Biophysical Framework are as follows:

4.1.1.1 Spatial Planning Categories A: Core Conservation Area

Preserving nature is essential to the survival of economic activities such as fishing and agriculture and food security in general. Many communities rely primarily on natural medicines for their health care. Degradation of nature

is therefore not purely an environmental issue. It spans economics, health, social justice, and human rights.

Spatial development and human land uses should be planned and managed so as not to disrupt or destroy critical biodiversity areas.

4.1.1.2 Spatial Planning Categories B: Natural Buffer Areas

Conservation corridors are stretches of land that link protected areas to ensure healthy, connected landscapes and habitats that support and are supported by local communities.

The district contains a large number of Critical Biodiversity areas scattered throughout the district. These include areas surrounding Barkly West, Windsorton, Kamfersdam to the north of Kimberley and areas on and surrounding the Ghaap Plato.

Ghaap Mountain and Ghaap Plateau: Formal conservation areas are located within the district surrounding the Longlands to the south of Delpotshoop in Dikgatlong LM and to the north of the N8 between Kimberley and Schmidtsdrift. Most of the Ghaap Plato and areas to the Northwest are predominantly identified as Ecological Support Areas, specifically focusing on the Aqua environment and species.

4.1.1.3 The Protection of Sensitive areas/Critical Biodiversity Areas

Critical Biodiversity Areas are located along the perennial rivers running through the Frances Baard District, and dams.

4.1.1.4 Climate Change

The growing awareness of climate change and the crucial role played by the natural environment in providing the essential ecosystem goods and services upon which all life on earth depends is the context for this theme.



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Breakdown as it has come to be termed – is regarded as the most significant challenge to human development and, indeed, human survival as a viable species on earth in our era. It is already having – and will continue to have – far-reaching impacts on human livelihoods.

4.1.1.5 disaster management

The development of a Disaster Management Strategy is of Key Importance to ensure that communities are able to sustain through a disaster, whether natural or a pandemic.

It is recommended that a 100m ecological buffer zone (no development) around wetlands be used as a guide when informing developments.

Developments within 500m of wetlands will be required to apply for a Water Use License under the National Water Act. It is also recommended that no development be allowed within the 1:100-year flood line of rivers and streams or at least 100m where no flood line exists.

4.1.2 SOCIO-ECONOMIC FRAMEWORK

The objective of the Socio-economic Framework includes aiming to provide skills to locals to be able to sustain themselves as well as identifying areas of potential for social amenities.

Areas which the FBDM need to focus on include the following:

- Employment generation
- Increased growth and output
- More even income distribution
- More equal spatial distribution of economic activity
- Transforming ownership and control of production

Ensuring that the district can be resilient in this sector is of key importance as the district boasts many tourism assets serving the local market from

within the province, local market from within the country as well as international markets.

4.1.2.1 Economy

FBDM has the strongest economic potential in the Northern Cape, accounting for 36% of the provincial GDP.

The Key Performance Area related to economic development as identified in the District IDP identifies the need to “Facilitate growth and diversification of the district economy by optimizing all available resources”. Some of the aims to achieve this goal are as follows:

It has been noted that unemployment is high in the district. It is with this understanding that the key objective for the Economic Framework is Skills development as well as investment and financing mechanisms.

4.1.2.2 Agriculture

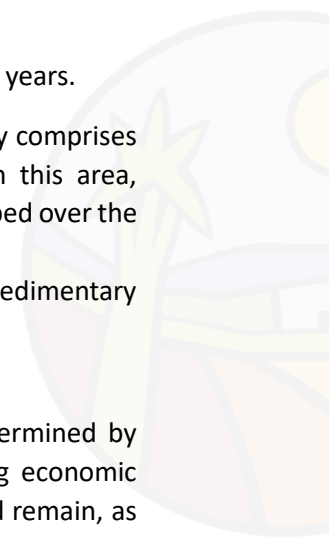
Two defined **agricultural zones** have been established over the years.

- To the west of the Harts- and Vaal River Valley, the geology comprises an uplifted hard dolomite plateau overlain by sand. In this area, extensive grazing, livestock and game farming have developed over the years.
- The area to the east of the service area consists of softer sedimentary areas of the Harts-, Vaal-, and Modder Rivers.

4.1.2.2.1 Agri Hubs And Park

The locality of specific agricultural activities is therefore determined by natural elements and in addition the associated surrounding economic activities in the area. Prime or unique agricultural land should remain, as far as possible, available for production.

Agriculture-related investment should focus on supporting and maintaining existing commercial farming activities in the district in the areas where



extensive commercial farming and large-scale food production currently occurs; as well as enhancing agrarian transformation in the deep rural areas of Northern Cape Province.

- The Vaalharts Irrigation Scheme plays an important role in providing water for irrigation to more than 39 000 hectares of productive agricultural land.
- The Agri-Hub is located within the Magareng Local Municipality in the town of Warrenton.

4.1.2.2.2 Agri processing

Commodities targeted and the respective value chains and opportunities within value chains are to be identified. Processing opportunities are to be identified for further economic potential. Agri-processing is key to the creation of job opportunities.

The game farming industry is expanding at a rapid pace within the FBDM. A number of farms in the commercial farming sector have been game fenced and game species introduced. This is an attractive industry, as income is not only derived from trophy and meat hunting but also through the provision of accommodation to overseas visitors.

4.1.2.3 Mining

The location of mining activities in the Frances Baard Area is also dictated by the position thereof in the natural environment. Therefore, mining is exploited in the following manners.

- Alluvial diamond exploration is taking place alongside and in close proximity to the Vaal- and Modder River beds.
- Diamond digging is also taking place in Kimberlite pipes spread in the central and eastern sections of the service area.
- The Assmang Iron Ore division consists of two iron ore mines, Khumani and Beeshoek Mine. Both mines are situated in the Northern Cape

Province of South Africa, approximately 200 km west of the town of Kimberley.

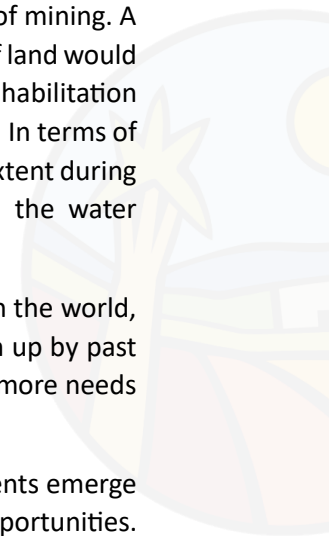
- Khumani Iron Ore Mine is situated approximately 30 km south of the town of Kathu and has a production capacity of 13.5 Mtpa and mineral reserves of 555 Mt or 40 years.
- Beeshoek mine is situated approximately 65 km south of the Khumani mine near the town of Postmansburg and has a production capacity of 4 Mtpa and a mineral reserve of 54 Mt or 13 years. Beeshoek is mainly responsible for supplying iron ore to meet the domestic market.

4.1.2.3.1 Rehabilitation of Mine Dumps

Large parcels of land are occupied by mining activities within the FBDM, mainly in the eastern areas of Kimberley. Noting that the mining sector is on the decline, the rehabilitation plans of mines are an important factor as this would unlock the value of land. Old mining sites should effectively be reconditioned and rehabilitated for use later post the lifespan of mining. A special programme to clear mine dumps and unlock the value of land would stimulate the economy. Non-compliance in terms of the rehabilitation process must be taken up through intergovernmental relations. In terms of the environment, the Vaal River has been abused to a greater extent during the mining of alluvial diamonds, which further exacerbates the water supply issue in the municipality.

The presence of the Big Hole, which is the largest open mine in the world, shows that there has been a significant amount of space taken up by past mining, while it has been developed to be a tourist attraction, more needs to be done to generate the multiplier effect in the economy.

There is a world-wide phenomenon in which informal settlements emerge close to perceived and/or factual areas of socio-economic opportunities. This is largely a result of rural-urban migration wherein the poor migrate from rural areas to urban areas in search of better prospects.



4.1.2.4 tourism

It has been seen through the Status Quo Assessment that Tourism within the FBDM has been on the decline. This has been due to several reasons including the following.

- Decline in mining tourism
- Lack of promotion of emerging tourism opportunities
- The effects of the COVID-19 Pandemic

The district is one of the provinces in South Africa that is heavily impacted by exit migration of the population seeking opportunities elsewhere.

Gong - Gong Area, situated outside Barkly West, was identified as an area of intervention with a specific focus around the 'Gong - Gong Falls,' which is a unique natural occurrence on the Vaal River.

Growth opportunities exist in heritage, conservation (eco) also including adventure/challenges, education, and business sectors, where Gong-Gong can align with these market opportunities. Eco-tourism opportunities with a focus on conservation can also attract educational groups to the Gong - Gong area with its unique heritage attractions.

4.1.2.5 Rural development

The protection of agricultural and scenic land abutting the Urban Edge is particularly important. This area is often the most valuable land from an agricultural or tourism point of view because of its proximity to an urban area. The area should not be blighted by piece-meal or leap-frogging development with urban-type densities.

It is understood that urban settlements are the future centres of economic activity and will likely increase in importance in this aspect, an appropriate focus on both socio-economic and transformative spatial development and land use management is crucial in rural areas.

4.1.2.5.1 Rural Intervention Areas

Rural Intervention Areas have been delineated based on the alignment and support of the three (3) key Rural Development Pillars that were proposed for the Frances Baard District Rural Development Sector Plan. The following Rural Intervention Areas are proposed:

- Rural intervention area 1 is located towards the north and is focused on the high-potential agricultural land of the district.
- Rural Intervention Area is located towards the south along the Riet River (Irrigation Scheme area).
- Rural Intervention Area 3 is located around the R12, N8, and R31 Development Corridors.

4.1.2.5.2 Focus Regions

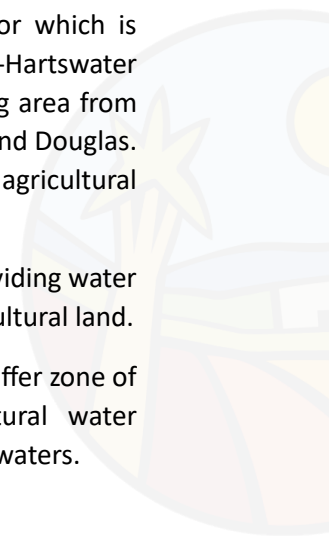
The NCPSDF (2020) also identifies a key Agricultural Corridor which is identified as the Vaal-Orange Agricultural Zone and the Douglas-Hartswater Agricultural Zone. This corridor constitutes the food-producing area from Hartswater and Jan Kempdorp through to Prieska, Hopetown and Douglas. Agricultural zones have been proposed to protect and guide agricultural development along the Orange and Vaal river systems

The Vaalharts Irrigation Scheme plays an important role in providing water for irrigation to more than 39 000 hectares of productive agricultural land.

The FBDM Rural Development Sector Plan aims to provide a buffer zone of at least 50m from the irrigation schemes and the natural water courses/body into which such irrigation scheme discharges its waters.

4.1.2.5.3 Small Town Revitalisation

The small-town regeneration approach focuses on a town's unique traits and the key sectors which can be capitalised on in order to build a strong local economic and spatial base.



The revitalisation programmes aim to promote, encourage and support the economy in and around small towns. Economically vibrant small towns play an important role in economic development, as they provide employment and commercial opportunities for people residing in such towns, as well as in the surrounding rural areas.

The Sol Plaatje SDF has identified the inner city of Kimberly as a revitalisation area. It is expected that Sol Plaatje University will stimulate regeneration in the avenues of residential and commercial developments will occur as a result of support structures that will be needed by the University. The public space is likely to have a strong impact on regenerating the CBD in the retail and services sectors.

The towns identified for STR are as follows;

- Ritchie
- Barkley West
- Delportshoop
- Jan Kemp Dorp
- Hartswater

4.1.2.5.4 Urban-rural linkage

The linkage from urban to rural development through the enhancement of corridor development plays a prominent part in the development of urban settlements within the Northern Cape Province.

4.1.3 BUILT FRAMEWORK

The Built Environment Framework aims to look at the Built aspect with regard to proposals for the FBDM. The following are components of the Built Environment Framework:

4.1.3.1 Settlements / nodes

The emphasis on each of the urban nodes is paced on their primary function and the development of these functions is supported by cross-sector integration.

4.1.3.2 Housing

The Frances Baard District (excluding Sol Plaatje LM) has a housing demand of 31 470 (National Housing Needs Register: 12 May 2020), and 30 current projects (COGHSTA Project Information: May 2020) totalling 15 020 units. In order to address the demand therefore an additional 16 450 units are required.

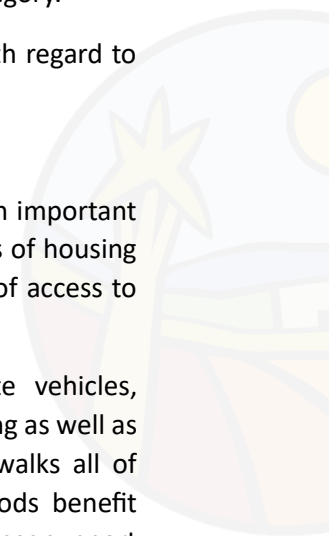
Within the District, the greatest demand is within Phokwane LM, followed by Dikgatlong LM and then Magareng LM, and the greatest demand type is for homeownership for applicants within the basic subsidy category.

Current housing delivery has been hampered by concerns with regard to bulk infrastructure.

4.1.3.3 Densification

Promoting Densification in and around strategic locations is an important antidote to urban sprawl as it looks at providing high numbers of housing units in strategic, highly accessible locations with high levels of access to economic and social opportunities.

Connected communities also reduce the need for private vehicles, increasing the viability of public transport, walking, and bicycling as well as more shared community spaces like plazas, parks, and sidewalks all of which foster interaction. Public transit-friendly neighbourhoods benefit local economies. Less time commuting and more walking increases support of local businesses.



The demand for live-work-play (LWP) communities drives the need for mixed-use developments.

4.1.3.4 Smart Growth

The settlement edge is not an isolated management tool, but rather part of a package of urban growth management tools that all need to be employed equally vigorously by the local authority in order to achieve desired, sustainable, and efficient urban growth management.

4.1.3.5 Corridors

4.1.3.5.1 NSDF – North-Western Transformation Corridor

The Northwestern Transformation Corridor is identified in the NSDF as a national priority in this region. The FBDM falls within this region. It is to be ensured that the FBDM SDF promotes the growth of the district in order to achieve the board goals at a national scale.

Within this Corridor, Sol Plaatje has been identified as an Urban Core and Barkley West, Hartswater, Jan Kempdorp, Pampiestad and Ritchie.

4.1.3.5.2 Movement and Transportation

The Northern Cape SDF identifies a proposed roadway linking Kimberley to Kuruman, the current R31. This would be a key linkage which would have the potential to unlock many economic and tourism opportunities.

Other key movement linkages which would require further upgrades include the N8 and N12 linkages which would ensure safe interprovincial movement.

4.1.3.6 Bulk Infrastructure

Green Infrastructure can be broadly defined as a strategically planned network of high-quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide

range of ecosystem services and protect biodiversity in both rural and urban settings.

More specifically Green Infrastructure, being a spatial structure providing benefits from nature to people, aims to enhance nature's ability to deliver multiple valuable ecosystem goods and services, such as clean air or water. One of the key attractions of Green Infrastructure is its ability to perform several functions in the same spatial area. In contrast to most 'grey' infrastructures, which usually have only one single objective, Green Infrastructure is multifunctional which means it can promote win-win solutions or 'small loss-big gain' combinations that deliver benefits to a wide range of stakeholders as well as to the public at large. However, for this to happen, the ecosystem must be in a healthy condition.

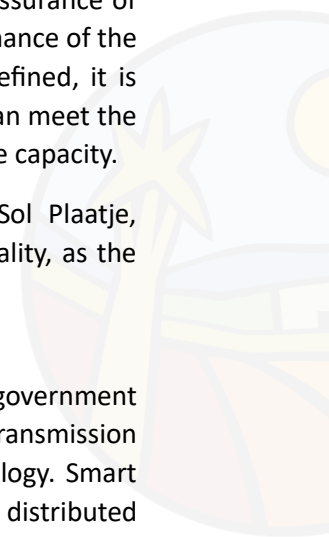
4.1.3.6.1 Water

Water Service Authority (WSA) should be able to guarantee assurance of supply to its water users from the supply, demand and performance of the resources under existing climatic conditions. Although not defined, it is suggested that assurance of supply is met if water resources can meet the peak demand of users by utilising less than 80% of the resource capacity.

There is no separate Water Service Provider contract in Sol Plaatje, Magareng, Phokwane or Dikgatlong. In all cases, the municipality, as the WSA, provides water services.

4.1.3.6.2 Renewable energy

The FBDM should work with the local municipalities and other government agencies to develop solutions to bottlenecks through transmission modernisation, new facilities, and smart transmission technology. Smart grid technologies can also enable greater integration of distributed generation technologies and allow consumers to better manage consumption, helping to reduce both peak and total energy loads. The district should support the development of a comprehensive strategy to deploy smart grid technologies.



4.1.3.7 Transport and Logistics

The focus of movement and Transportation in the FBDM is on the interplay of viable public transportation with the appropriate pattern of land use and settlement development. It is clearly recognised that public transport functions best and most sustainably when it services a user population that resides at sufficient density within the catchments of the transport services offered.

Thus, it is emphasised that the theme encompasses the need to plan for public transportation services in tandem with planning for the transformation of inefficient spatial patterns of development over time. The focus of movement and Transportation in the FBDM is on the interplay of viable public transportation with the appropriate pattern of land use and settlement development.

4.1.3.7.1 Roads

The Northern Cape SDF identifies a proposed roadway linking Kimberley to Kuruman, the current R31. This would be a key linkage which would have the potential to unlock many economic and tourism opportunities.

Other key movement linkages which would require further upgrades include the N8 and N12 linkages which would ensure safe interprovincial movement.

4.1.3.7.2 Rail

The railway freight has declined over the past number of years and the condition of the facility deteriorated. It has been noted through the Spatial

Analysis that there is not much demand in the district for the movement of people by rail.

Should rail be upgraded, it should be in line with that of logistics movement, to ensure safe and speedy movement of produce farmed within the district. Railway lines which traverse the district include as following:

- Cape Town to Gauteng;
- Bloemfontein to Postmasburg; and
- Kimberley to Prieska.

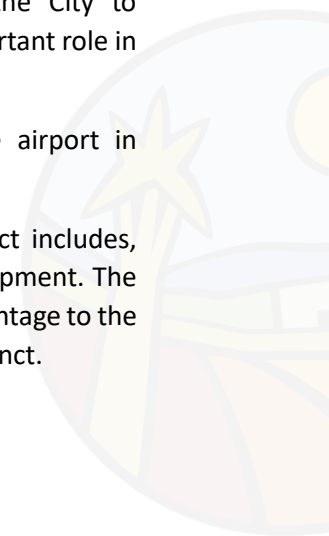
4.1.3.7.3 Air Transport

The Kimberly Airport carries a national status and is owned and managed by the Airports Company of South Africa.

The airport accommodates daily scheduled flights from the City to Johannesburg and Cape Town. It is considered to have an important role in the regional economy.

ACSA aims to ensure regular ongoing maintenance to the airport in Kimberley.

The prevailing development trend around the airport precinct includes, renewable energy, residential development, mixed use development. The establishment of the airport will have a positive economic advantage to the Green Point Township on the opposite side of the Airport Precinct.



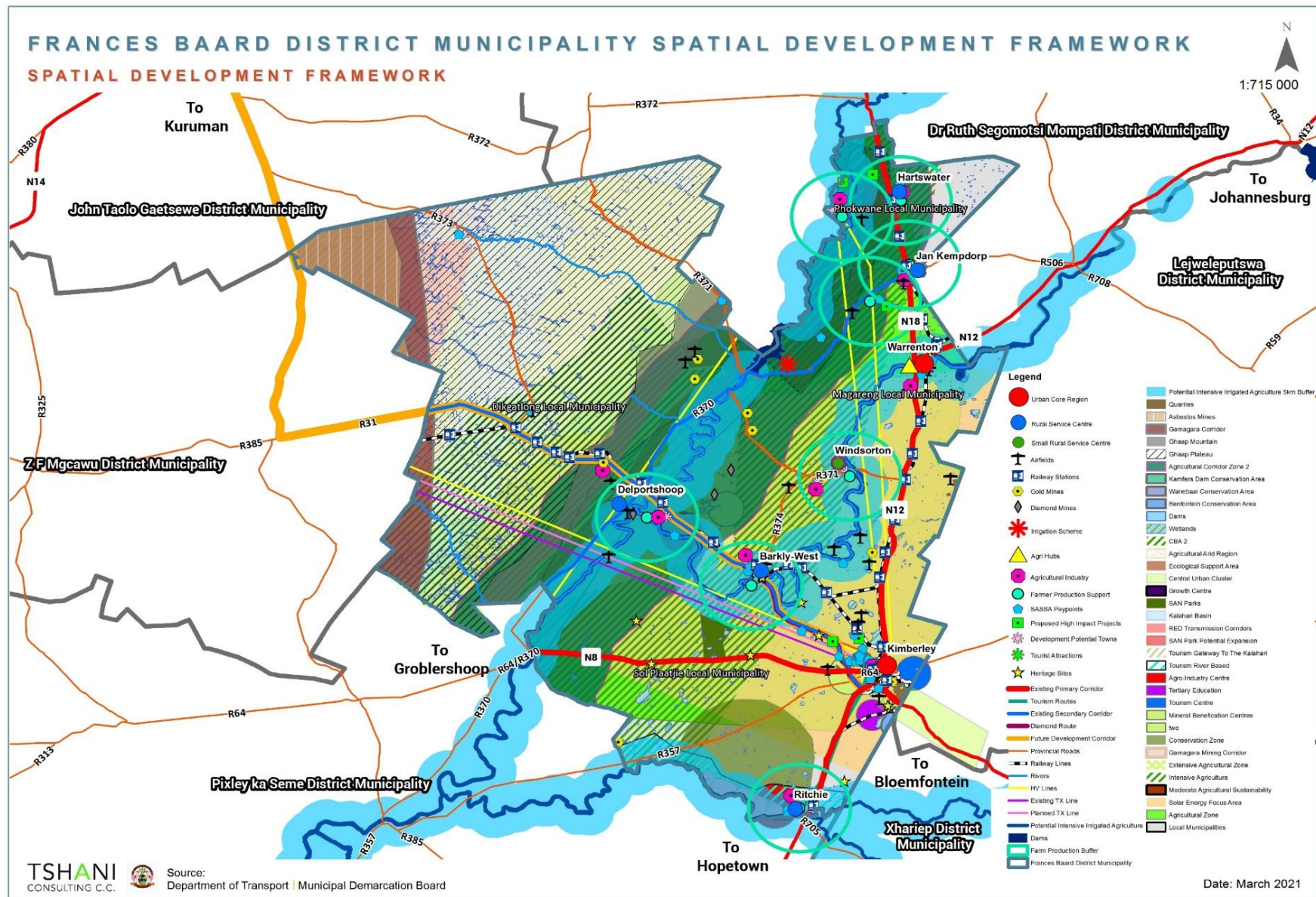


Figure 20: Frances Baard District Spatial Development Framework Composite Plan



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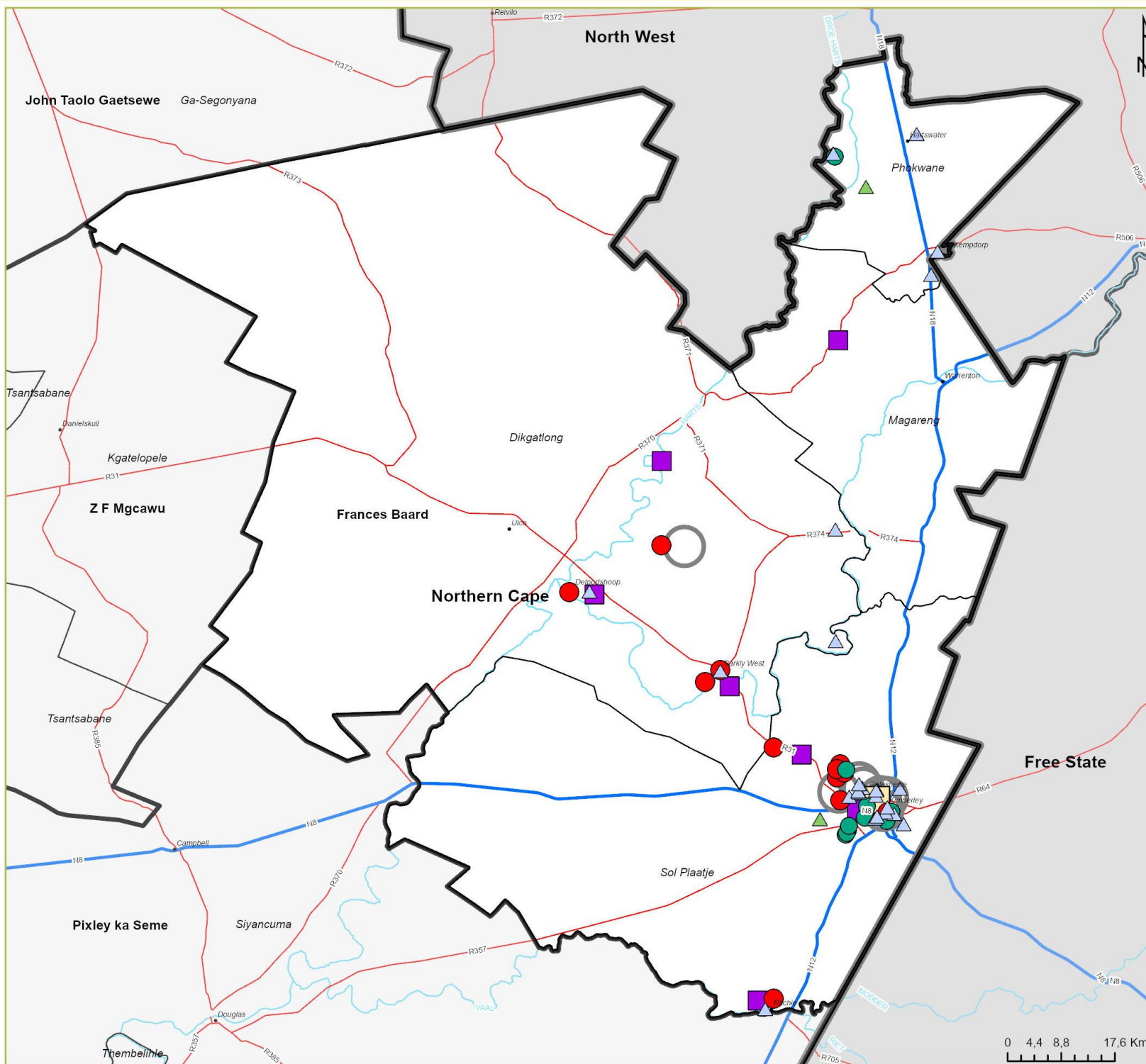
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2023/2024 INFRASTRUCTURE PROJECTS FRANCES BAARD DISTRICT

Legend

- Town/Settlement
 - Main Roads
 - National Roads
 - Main Rivers
 - Local Municipality
 - ▭ District Municipality
- 2023/2024 Infrastructure Projects**
- Department
- ▲ Agriculture
 - ▲ Education
 - Health
 - Human Settlements
 - Roads
 - Social Development
 - Sport, Art and Culture

**Map 23: 2023/2024
Infrastructure Projects –
Frances Baard District**

Source: Sector Departments

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



4.2 JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY



4.2.1 BIOPHYSICAL FRAMEWORK

4.2.1.1 Spatial Planning Categories A; Core Conservation Area

The Biophysical Framework is broken down into 3 spheres as follows:

- Environmental Framework
- Climate Change
- Agricultural Framework

There are four (4) different types of conservation areas that can be found within the John Taolo Gaetsewe district municipal area:

- River Systems

- Critical Biodiversity Areas
- Threatened Eco-systems.

The John Taolo Gaetsewe District Municipal area boasts several significant biodiversity and ecological features that hold great value in terms of their unique characteristics and cultural importance. Some notable examples include:

- **Kuruman Eye:** The Kuruman Eye, also known as the "Fountain of Christianity," is a natural spring located in the town of Kuruman. It is considered a sacred site by the local community and holds cultural and historical significance.
- **Wonderwerk Cave:** Situated near the town of Kuruman, the Wonderwerk Cave is an archaeological and paleontological site of great importance. It contains evidence of human occupation dating back hundreds of thousands of years, making it a significant location for understanding human history and evolution.
- **Moffat Mission Station:** The Moffat Mission Station, located near Kuruman, is a historical site associated with the renowned Scottish missionary Robert Moffat. The station played a crucial role in the spread of Christianity and education in the region and serves as a cultural heritage site.

4.2.1.2 Spatial Planning Categories B: Natural Buffer Areas

This will allow for the creation of a continuous network of natural resources areas throughout the province that maintain ecological processes and provide ecosystem services (e.g., benefits that people derive from ecosystems. In the Northern Cape, these include the provision of water, arable soil, disaster amelioration, recreational opportunities, etc.). Develop a district-level wetland management plan, based on the provincial management plan, which considers the effective management of the Kuruman Eye and other polluted wetlands.



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4.2.1.3 Protection of Critical Biodiversity Areas

There are several protected areas, i.e., the Kathu Forest (2,245 ha), Tswalu Private Nature Reserve (100,000 ha), the Kathu Nature Reserve and the Brooks and Bredenkamp Nature Reserves. Game farms are also argued to be private conservation efforts.

The Kathu Forest protected woodland and buffer is indicated in the following Figure compiled by the Department of Agriculture, Forestry and Fisheries with the following land use proposals for the different zones:

- Zone 1 - No-go area
- Zone 2 - Low-impact eco-tourism
- Zone 3 - Low-density residential if permission must first be provided by DAFF.

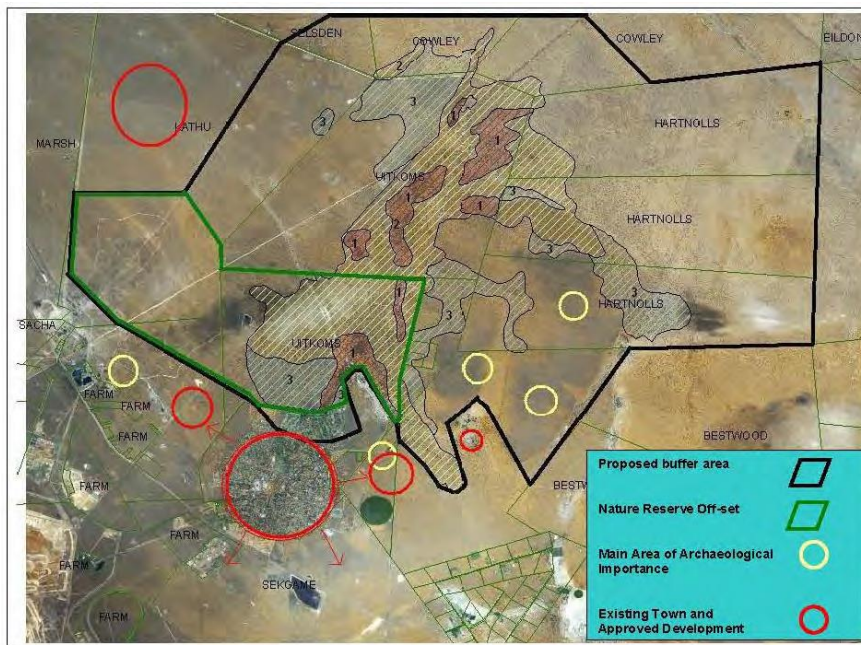


Figure 21: Kathu Forest: Declared Protected Woodland and Proposed land Use.

4.2.1.4 Climate Change

One of the main issues faced by the sector is water scarcity and climate change is likely to exacerbate impacts. The adaptation response plans that will have to be adopted include:

- Adopting water management regimes,
- The cultivation of crops is better suited to a hot and dry climate.
- Land management techniques,
- Grazing management regimes; and
- Application of innovative, smart agriculture.

The JTGDM Climate Change Risk and Vulnerability Assessment demonstrates that projected Climate Change has implications for water, ecosystems, human settlement and infrastructure, agriculture and food security, human, and animal welfare as well as income for the majority of households in the district.

4.2.1.5 Disaster Management

The nature of disaster management will likely change because of the increasing transportation of hazardous materials through the district which has a potential impact on human health.

4.2.2 SOCIAL ECONOMIC FRAMEWORK

The Socio-Economic Framework refers to the social and economic aspects that underpin the proposals for the JTG District. The following components form part of the Socio-Economic Framework:

4.2.2.1 Economy

The following section aims to unpack the Economic Framework underpinning JTG DM and highlight the areas of focus to lead to economic growth.

Economic growth and developments drive all other focus areas and are the key to creating employment opportunities, eradicating poverty, infrastructure developments as well as improving livelihoods.



4.2.2.2 Agricultural Framework

The importance of agriculture cannot be underestimated as both a formal and informal rural-based activity. When consideration is taken of rural-based agriculture, the sector becomes an integral component of the Local Economic Development (LED) landscape, through its ability to provide for community livelihoods, generating employment and fighting endemic poverty in the area.

4.2.2.2.1 Agri Hubs And Park

The establishment of an Agri-Hub and Park is a national initiative planned for in the District Rural Development Sector Plan.

Kuruman, as both a regional anchor and gateway was identified for the location of the Agri-Hub and to this end a Kuruman Agri-Hub Precinct Plan was adopted in conjunction with and aligned to the Ga-Segonyana Spatial Development Framework.

4.2.2.2.2 Agricultural Corridor

This corridor constitutes the food-producing area from Hartswater and Jan Kempdorp through to Prieska, Hopetown and Douglas. Agricultural zones have been proposed to protect and guide agricultural development along the Orange and Vaal River systems.

To develop a detailed Agricultural Master Plan for the proposed development zones which needs to improve the effectiveness and management of the region (e.g., irrigation quotas, fertilisers, crop genetics, Agro-processing, value chains, transportation of goods and services, SMME development).

4.2.2.2.3 Land Reform

The NSDF recognizes that implementing land reform in areas connected to the settlement network or as integral components of the settlement network would greatly contribute to fulfilling this objective. Two (2) priority Farming Production Supporting Units were earmarked, namely:

→ Kathu (due to mining opportunities - diversification); and

→ Yale Farm (due to the proximity of the Kuruman Agri-Hub).

4.2.2.2.4 High-Potential Agricultural Areas

The protection and appropriate use of high-potential agricultural land is of critical importance for sustainable economic growth and food security. High-potential agricultural land near settlements is often subjected to non-agricultural development pressure, while negative social impacts associated with such settlements often have a significant detrimental impact on the production potential of such land. It is therefore imperative that the highest priority be given to the protection of high-potential agricultural land and that measures be instituted to create and maintain circumstances conducive to sustainable agriculture.

4.2.2.3 Mining

Kumba has two mining operations in the Northern Cape consisting of Sishen Mine located near Kathu which has an estimated life of mine of 10 years with a production capacity of 37 Mtpa and mineral reserves of 535 Mt whilst Kolomela is located near Postmansburg with a 10 Mtpa production capacity, mineral reserves of 188 Mt and an estimated life of mine of 18 years.

Iron smelter and sinter plant. The location of the iron smelter and sinter plants/s should be such that it is strategically sensible, best placed in terms of externalities and especially in terms of linkage to the Kathu Industrial Park. Gamagara Municipality is better positioned to provide services and infrastructure in support of the envisaged plants. However, it should be placed so that it can maximise the economic benefit for both Gamagara and Joe Morolong.

Linked to the Kathu Industrial Park, Kuruman Light Industry Area (metals cluster) and light industrial areas elsewhere in the district, the iron smelter and sinter plant/s, mining industry and infrastructure services, in general, provide unique opportunities for SMME Development and capacity building, especially if it is linked to the three pillars for a knowledge-based



economy, i.e., mining, and related services, mineral beneficiation, health and the Agri-park;

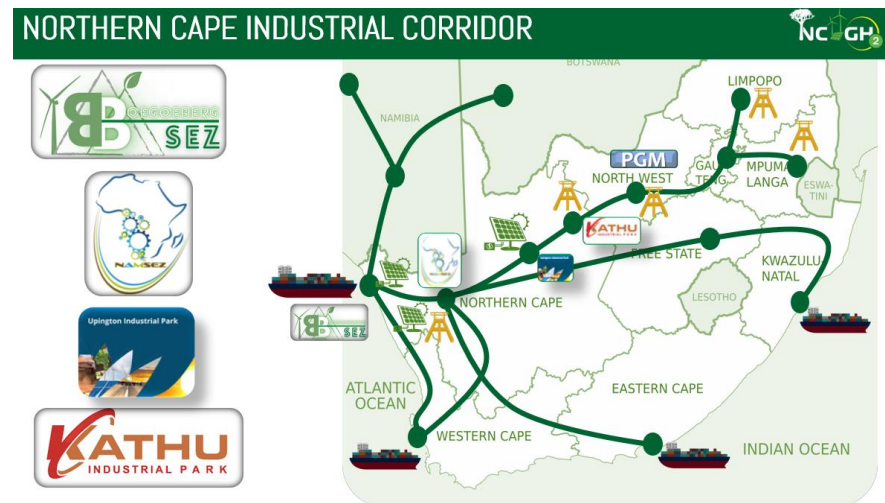


Figure 22: Northern Cape Industrial Corridor

Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 or R380 and the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, but especially also the mining industry and proposed knowledge-based economies.

4.2.2.3.1 Special Economic Zones

Special Economic Zones (SEZs) are envisaged for each of the three local municipal areas, which should contribute to the diversification of the district economy.

Linkage to existing planned initiatives, such as human settlement expansions in both Gamagara and Ga-Segonyana, as well as the Agri-park and light industry areas in Kuruman and the Kathu Industrial/Supplier Park, will play a contributing role in the establishment and maintenance of the envisaged SEZs. SMME development should be further explored and enhanced from this perspective.

Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 and the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, but especially also the SEZs; and

Opportunities for vulnerable groups, i.e., women, youth, and disabled should be prioritised and maximized in both the public and private sectors, as it relates to industry development in general. Again, SMME development may play a crucial role in this regard.

4.2.2.3.2 Kathu Industrial Park

Kathu Industrial Park is known for being one of South Africa's largest industrial parks, with a focus on iron ore mining and related activities. The park houses various facilities and infrastructure, including ports, roads, water and power supplies, and other infrastructure to support the mining and industrial activities in the area.

Kathu is an important economic hub, and the industrial park is a significant contributor to the region's economy, providing jobs and business opportunities for local communities. The park has attracted several international companies to invest in the area, further boosting economic development and growth.

4.2.2.3.3 Northern Cape Industrial Development Corridor

The N14 Industrial Development Corridor is a significant initiative aimed at boosting economic growth and development in the Northern Cape Province of South Africa. The master plan focuses on localizing and diversifying the economy of the region by utilizing its resources effectively. The plan consists of several nodes that serve as clusters for services and diversification.

The nodes include the Kathu Industrial Park, the Upington Industrial Park, the Namakwa Special Economic Zone (SEZ), and the Boegoebaai deep port harbour for imports and exports.



4.2.2.4 Tourism Framework

John Taolo Gaetsewe has several tourist attractions that range from nature-based tourism to heritage, adventure, and cultural tourism. There is, in addition also a few unique opportunities that can be developed to infiltrate a niche tourism market (RDSP, 2022/23).

Several tourists pass through the region en route to Namibia, Botswana, Western Cape, Free State and other surrounding provinces and other attractions using the N14, R31, and R380. It should be noted, however, that the R380 is currently more of a deterrent than an aid due to its upgrading.

4.2.2.5 Rural development

Township enterprises have different legal forms - for-profit and not-for-profit enterprises registered under the Companies Act and cooperative enterprises registered under the Cooperatives Act. However, most township enterprises have high rates of informality.

The Department of Small Business Development has developed a programme to support the township economy. This programme is called the “Township and Rural Entrepreneurship Programme (TREP).”

The TREP is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. The focus is to create platforms which provide the business support infrastructure and regulatory environment that enables entrepreneurs to thrive.

4.2.2.5.1 Rural Intervention Areas

Rural Intervention Areas have been delineated based on the alignment and support of the three (3) key Rural Development Pillars that were proposed for the John Taolo Gaetsewe District Rural Development Sector Plan.

4.2.2.6 Social Facilities

Social facilities are a vital aspect of human settlements as they serve as sources for social and public services, including health, education, recreation, and cultural and social spaces among other services.

4.2.2.6.1 Regional Hospital

The envisaged hospital poses a unique opportunity for not only innovation but also to turn health as a district challenge into an opportunity. It is especially important to create a new model wherein there is a combination of public and private facilities of a very high standard, available to all citizens. Public Private Partnerships will play a crucial role in ensuring a high standard of services.

4.2.2.6.2 Basic Education

The basic education levels, of mainly the historically disadvantaged people in the district, are still inadequate. Improving basic education levels and literacy rates is of paramount importance to (1) promote the continuous development of all district citizens, (2) promote economic development, (3) promote the knowledge-based economies that are envisaged in this plan, (4) enable citizens to access tertiary education and training opportunities and by doing so to be able to enter the mainstream economy, and (5) taking charge of their rights and responsibilities as citizens and in doing so contributing to governance in the District and thereby to promote the continued growth of our democracy.

4.2.2.6.3 Higher Education Facilities, I.E., University, University Of Technology, FET College, And Artisan Training Facilities

It should be emphasised that the district's low education and skill levels make this catalytic endeavour an essential part of the growth of its residents, and this is especially true when poverty and youth unemployment are considered.

Although higher education facilities are highlighted specifically, they should also be seen in conjunction with basic education and training as a point of departure.



4.2.3 BUILT ENVIRONMENT ANALYSIS

To ensure the sustainability of urban development it is important to achieve a balance between the conflicting interests of land-use planning. In this regard, a key objective of the PSDF is to promote the rehabilitation of existing settlements and to ensure that any future developments are sustainable.

4.2.3.1 Settlements

To ensure the sustainability of urban development it is important to achieve a balance between the conflicting interests of land-use planning.

4.2.3.1.1 Housing

Achieving sustainable human settlements is one of the main spatial goals within an area such as JTG DM which is characterised by a settlement pattern that has encountered a high level of disintegration and fragmentation.

An opportunity still exists to turn the situation around by facilitating and promoting the evolution of these discrete pockets of settlements into sustainable, integrated human settlement clusters.

4.2.3.2 Disaster Management Centre

A high-capacity district disaster management centre is envisaged to provide a second responder service throughout the district. To this end, the existing centre will either be beefed up, or replaced with a modernised centre that can deal with disasters.

It is vitally important that the capacity of local municipalities to function as first responders is beefed up.

4.2.3.3 Corridors

The focus of movement and transportation in the JTGM DM is on the interplay of viable public transportation with the appropriate pattern of land use and settlement development. It is recognised that public transport

functions best and most sustainably when it services a user population that resides at sufficient density within the catchments of the transport services offered. Thus, it is emphasised that the theme encompasses the need to plan for public transportation services in tandem with planning for the transformation of inefficient spatial patterns of development over time.

4.2.3.4 Bulk Infrastructure

Addressing the significant backlogs related to bulk infrastructure and distribution networks in all three local municipal areas remains a decisive priority for the district, not only to ensure equitable and equal access to services for all citizens but particularly also to strengthen the development.

Green building is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout the building's life cycle.

4.2.3.4.1 Water

JTGDM falls within the Vaal Water Management Area, one of nine water management areas in the country. The most important water catchment area in the JTGDM is the Korannaberg Mountains. This is where most of the streams in the district originate from and where they drain into the Kuruman River system.

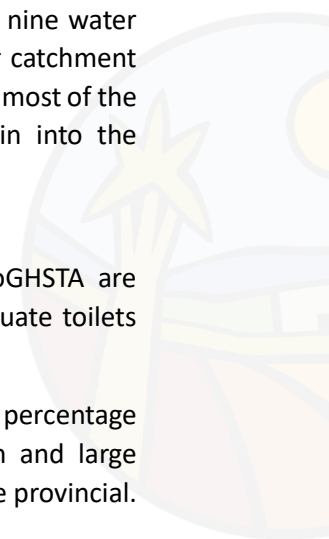
4.2.3.4.2 Sanitation

The Provincial Department of Water and Sanitation and CoGHSTA are running sanitation projects in the district to eradicate inadequate toilets and provide toilets where there is a lack.

This intervention will address the high concern that JTGDM is a percentage of the population with no access to any form of sanitation and large numbers of the population still use pit latrines compared to the provincial.

4.2.3.4.3 Electricity

The provision of energy is vital in modern society. The availability of energy remains a serious resource challenge. ESKOM does not have the generation



capacity to meet the rising energy demand resulting from the rapid economic growth in South Africa (DME-2008).

Electricity fuels industry. Electrical railway transportation, telecommunications, and other factors determine various aspects such as cooking methods employed by households, heating mechanisms utilized for warmth, and the lighting methods adopted.

4.2.3.4.4 Renewable Energy

South Africa has committed itself to reducing its emissions below a baseline of 34% by 2020 and 42 per cent by 2025. “The approach to mapping out the transition to a low-carbon economy is informed by the need to reach broad consensus on the challenges and trade-offs involved in implementing South Africa’s climate policy” (NDP, Ch5).

The transition to a low-carbon and resilient economy requires a capable state to lead, enforce the regulation of GHG emissions, and respond to the impacts of climate change. The transition to a low-carbon economy depends on the country’s ability to improve skills in the workforce, at least in the early phases of the transition.

4.2.3.5 Transport and Logistics

4.2.3.5.1 Roads

In JTGDM, some roads are managed and kept by various spheres of government, as well as the private sector. The N14 is currently the only SANRAL road in the area and it cuts across the mining corridor roughly from west to east, linking the area with Upington in the west and ultimately Gauteng in the east.

Walking and cycling are the most dominant modes of non-motorised transport within the JTGDM with animal-drawn transport being the least dominant and found mostly in rural low-income communities.

4.2.3.5.2 Rail

Rail transport is mainly used in the mining sector. Ore is transported in this manner. A railway line extends from Blackrock southwards past Sishen to Kimberley where it connects with the main Cape Town – Johannesburg line.

There is a proposal by Transnet for the Boegoebaai railway that will connect Kuruman within the JTG municipality. The proposed route will connect the Boegoebaai Port to the surrounding mines within the province

There is a proposal by Transnet for the Boegoebaai railway that will connect Kuruman within the JTG municipality. The proposed route will connect the Boegoebaai.

4.2.3.5.3 Air Transport

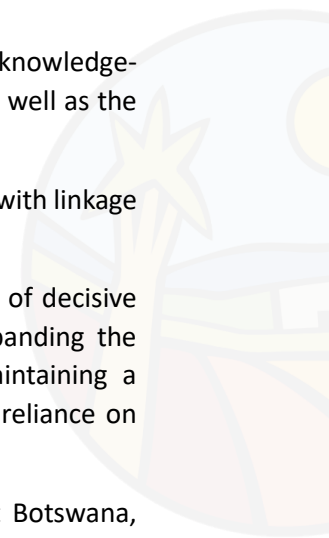
The JTGDM has an airport located in Kathu, known as Sishen Airport, privately owned. Situated just outside of the Kalahari Desert, known for being the iron ore capital of the Northern Cape. Another airport within JTGDM is Kuruman Airport.

Keeping both Kuruman as the planned regional anchor and the knowledge-based economy linked to health, mining, and the Agri-park, as well as the higher education facilities in mind,

Proximity to both the N14 as a national and provincial corridor, with linkage to the R31 transport corridor.

The establishment and development of a regional airport are of decisive importance for (1) diversifying the district economy, (2) expanding the existing and potential value chain, (3) establishing and maintaining a knowledge-based economy/economies, (4) and reducing the reliance on mining going forward.

Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 and the N14 via Vryburg to Gauteng and via Upington to Cape.



4.2.3.5.4 Solid Waste Management & Refuse Removal

The JTGDM has established a regional waste management plan that ensures participatory and effective waste management sustainably.

The Joe Morolong Municipality has one landfill facility in Vanzylsrus in which general waste is disposed of. There are no other official licensed landfill sites in the area.

Ga-Segonyana Local Municipality has one licensed landfill site (Kuruman Landfill), which is about 5km from the urban area of Kuruman. The management of the landfill has been outsourced to Uhuru Company. There is no compaction of waste at the landfill site. The machinery present at the Kuruman Landfill site consists of one tractor and a loading vehicle which is in disrepair.

There are three landfills in operation within the Gamagara Local Municipality; they are situated at Olifantshoek, Deben and Dingleton. Hazardous and medical waste is transported and disposed of at a facility in Gauteng.

4.2.3.5.5 Telecommunications

Mainstreaming of telecommunication and information infrastructure in the district should create additional possibilities for SMME and entrepreneurial development. It will also promote equal and equitable access to all citizens, particularly the vulnerable groups in our society.



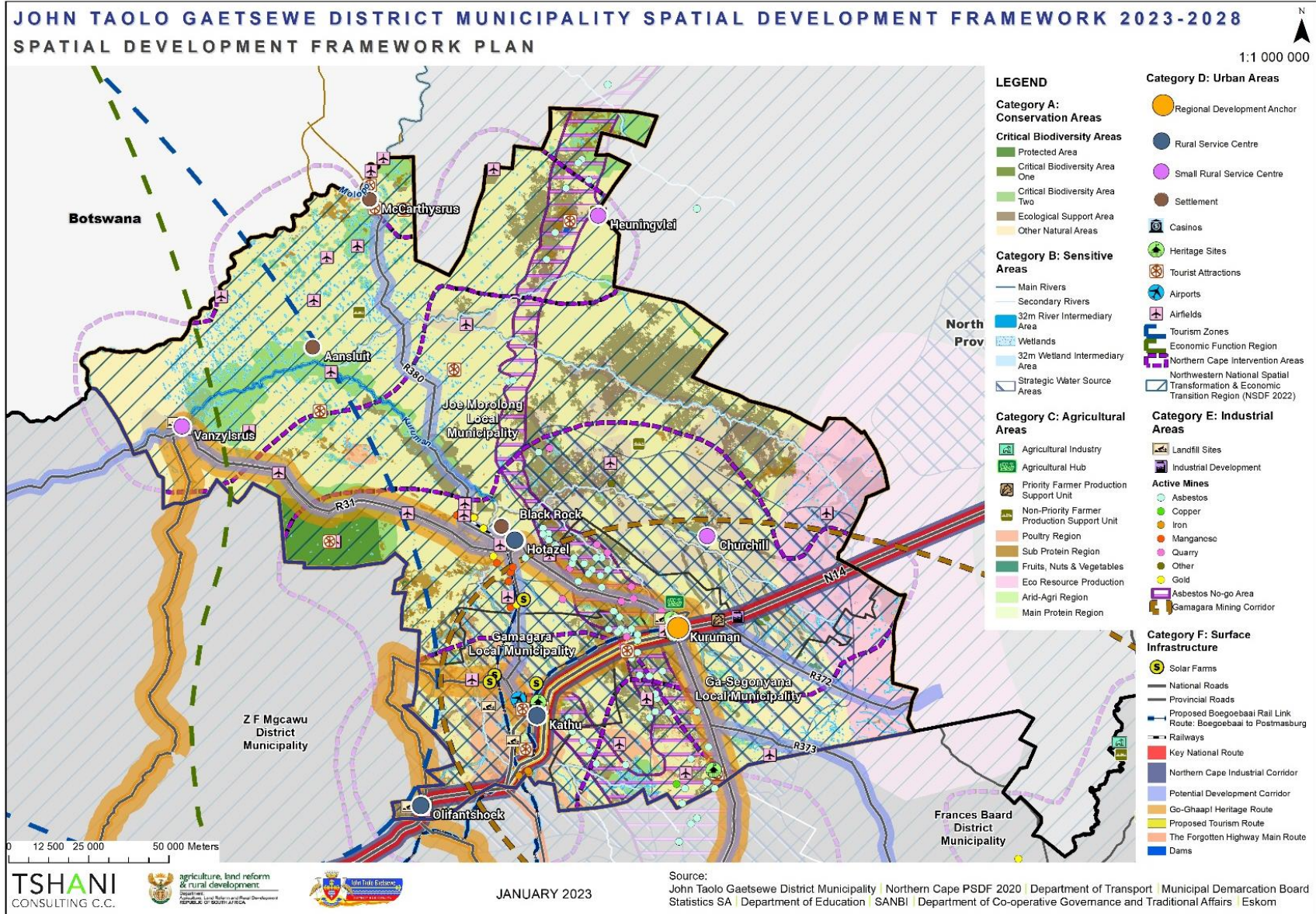


Figure 23: John Taolo Gaetsewe District Spatial Development Framework 2023-2028



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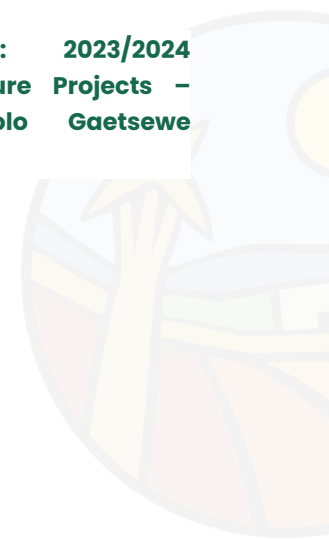


<http://www.northern-cape.gov.za>



For Building, 65 Memorial Road, Monuments Heights, Kimberley

**Map 24: 2023/2024
Infrastructure Projects –
John Taolo Gaetsewe
District**



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T&I Building, 69 Memorial Road, Monuments Heights, Kimberley

4.3 NAMAKWA DISTRICT MUNICIPALITY



4.3.1 BIOPHYSICAL FRAMEWORK

4.3.1.1 Spatial Planning Categories A: Core Conservation Area

There are five (5) different types of conservation areas that can be found within the Namakwa district municipal area:

- River Systems
- Dams
- Critical Biodiversity Areas
- Threatened Eco-systems.
- Marine Protected Areas

4.3.1.2 Spatial Planning Categories B: Natural Buffer Areas

The SPC B areas serve to create appropriate buffer areas around or adjacent to SPC A areas that protect the latter against consumptive or habitat-fragmenting land-use impacts.

4.3.1.3 Protection of Sensitive Areas

Namakwa DM is faced with the pressures of balancing economic development with environmental protection and recognizes that uncontrolled development may lead to an irreversible loss of ESAs. Without a SEA, the municipality will use this exercise to identify these areas.



4.3.1.3.1 Marine Protected Areas (MPA)

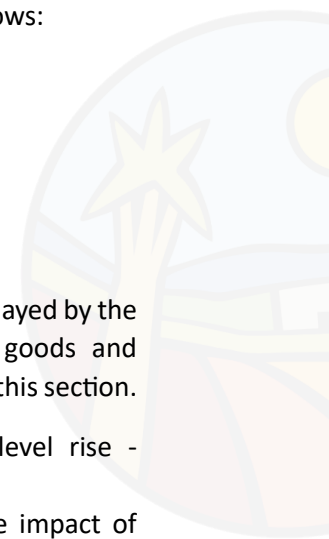
In the Namakwa DM, specifically along the west coast, four (4) marine protected areas have been established. These areas are as follows:

- Orange Shelf Edge
- Namaqua Fossil Forest
- Namaqua National Park
- Childs Bank

4.3.1.4 Climate Change

The growing awareness of climate change and the crucial role played by the natural environment in providing the essential ecosystem goods and services upon which all life on earth depends is the context for this section.

- Identify coastal areas most sensitive/high risk to sea level rise - delineation of coastal setback lines.
- Identify and establish new water sources to mitigate the impact of lower precipitation and promote water-wise measures to restrict irresponsible water use.
- Promote reduction of carbon gas emission



- Promote and encourage green technology, solar power and wind energy use and implement a rebate strategy.
- Resilient to Climate Change

4.3.1.5 Disaster Management

- The District Municipality created a Disaster Management Plan for the District as well as each of the Local Municipalities within the district.

4.3.2 SOCIAL ECONOMIC FRAMEWORK

- Economy
- Support and promote sustainable economic development by stimulating economic growth in key development locations.
- Create employment opportunities.
- Investment in key sectors for development and employment opportunities

4.3.2.1 Agricultural

The agricultural sector is one of the 3 biggest sectors of the economy of the Namakwa DM, between 2010 and 2020, the agriculture sector experienced the highest growth in 2017 with an average growth rate of 11.3%. (Namakwa IDP 2022).

The agricultural sector in the Namakwa DM hosts a diverse variety of activities that can be associated with specific character areas throughout the study area. These production areas relate to natural elements, including climate conditions, soil types and precipitation, as well as the fishing and aquaculture industries operating from the respective harbours along the coastline.

4.3.2.1.1 Agri-Parks and Hubs

The Namakwa DM has an ocean and land-based economy, both with huge potential for growth and sustainable job creation in the district. Apart from this the Namakwa DM also has many small-scale and emerging farmers and

fisher folk dependant on the land and the ocean for a living. The Agri Hub is located in Springbok.

The Namakwa DM has agricultural and ocean economy components. It was therefore decided to advise that both economies be included in the Agri-Park concept and developed as such. The proposed Agri-Hub and its Farmer Production Support Units and Aqua Farmer Production Support Units are discussed and indicated in the plan below.

- Identify and protect potential agricultural resources.
- Promote & support sustainable agricultural and fishing practices (including aquaculture)
- Identify actions to mitigate the impact of climate change on agriculture.

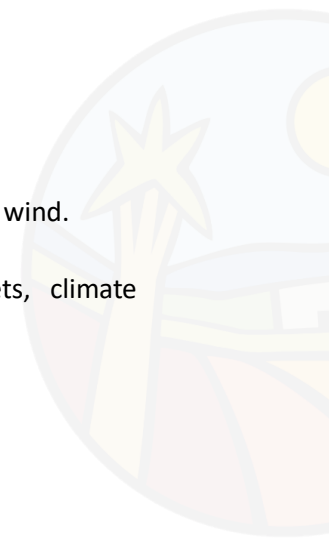
4.3.2.1.2 Agri Corridors

To plan, it is necessary to understand prevailing and anticipated change drivers and how they have and are expected to influence the development trajectory of farming in arid areas.

- Increased urban – rural linkages.
- Increase Agri-efficiency.
- Transformation of Agri-systems.
- The knowledge economy drives bottom-up innovation.
- Local energy production through renewable sources: solar, wind.
- Smart water technologies.
- Green economy transition: biodiversity, carbon markets, climate finance, demand for sustainable production.
- Enhancement of existing agricultural economies.
- Exploration of new value chains.
- Lifestyle farmers driving rural growth.
- Mining/ mineral extraction.

4.3.2.1.3 Land Reform

Land reform plays an important role in all spatial planning spheres of government, including national-, provincial-, and district levels.



- Support feasible, sustainable, and desirable identified agricultural reform projects

4.3.2.2 Mining

There is a concentration of minerals around the Springbok area, as well as in a broad band along the south of the Orange River. Although many of these sources have been depleted, there are still plenty of occurrences that can be exploited, and this should be considered for small-scale mining.

4.3.2.3 Special Economic Zone

The Northern Cape Economic Development, Trade, and Investment Promotion Agency (NCEDA) has identified the Richtersveld Local Municipality as the municipality to have an SEZ.

The value proposition of the Namakwa SEZ is based on the existence of the Gamsberg Zinc Mine and the proposed building of Zinc International.

4.3.2.3.1 Boegoebaai Port and Rail Infrastructure

Deep-water port development comprising two berths: one dry bulk export berth and one break bulk berth, supported by a 550 km railway line, bulk services and associated social infrastructure.

It is to be noted that the envisaged Boegoebaai deep water port will be a greenfield development. The project is the first development of this magnitude to be undertaken by the province in the last 26 years.

Boegoebaai is approximately 60 km north of Port Nolloth and 20 km south of the border between Namibia and South Africa, and it is located in the Richtersveld Local Municipality in the Northern Cape Province of South Africa.

In terms of positioning, the primary opportunity of the site is the short distance between the coastline and relatively deep water. The location places it in close proximity to rich mining and agriculture sectors compared to other existing ports. *Source: Global Africa Network.*

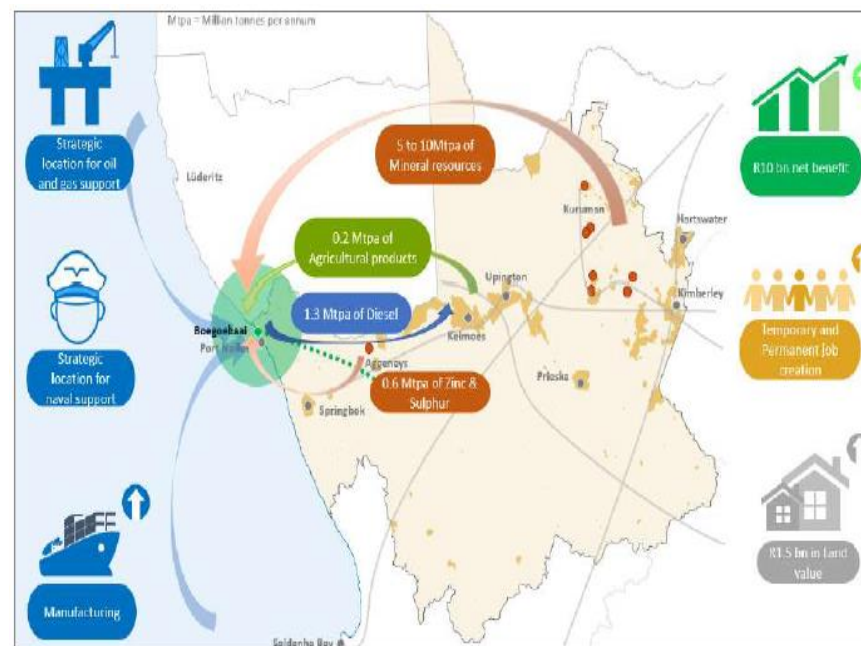


Figure 24: Boegoebaai Potential Benefits

4.3.2.3.2 Tourism Framework

The Namakwa DM presents itself as an appealing tourism destination, boasting a diverse range of attractions and assets for visitors. Furthermore, the study area is conveniently located in close proximity to both Namibia and the Cape Metropolitan area, rendering it easily accessible as a getaway destination for those seeking respite from the bustling city lifestyle.

- Identify and map key tourism assets/ sectors
- Promote tourism routes
- Support rural tourism initiatives



Figure 25: Sutherland Stargazing

4.3.2.4 Rural Development

Rural development necessitates the implementation of self-help initiatives, alongside coordinated and integrated broad-based agrarian transformation. It also requires strategic investments in economic- and social infrastructure that benefit rural communities, extending beyond the scope of solely agricultural involvement.

4.3.2.4.1 Rural Intervention Areas

Rural Intervention Areas have been delineated based on the alignment and support of the three (3) key Rural Development Pillars that were proposed for the Namakwa District Rural Development Sector Plan. The following Rural Intervention Areas are proposed:

- Rural Intervention Area 1 is located around the N7 and Oceans development corridor.
- Rural Intervention Area 2 is located around the Orange River and N14 Corridor:

- Rural Intervention Area 3 is located around the R63 and R27 Corridors

4.3.2.5 Social Facilities

Social facilities are a vital aspect of human settlements as they serve as sources for social and public services; including health, education, recreation, and cultural and socializing spaces among other services.

- Identify areas with a lack of facilities.
- Maintenance of Social Facilities

4.3.3 BUILT ENVIRONMENT FRAMEWORK

4.3.3.1 Settlements

To ensure the sustainability of urban development it is important to achieve a balance between the conflicting interests of land-use planning. In this regard, a key objective of the SDF is to promote the rehabilitation of existing settlements and to ensure that any future developments are sustainable.

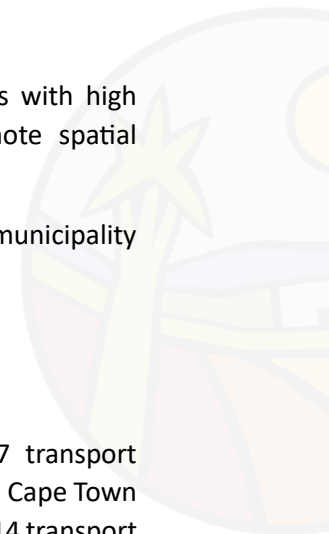
4.3.3.2 Housing

Concentrate human settlement development in towns/nodes with high socio-economic needs and high growth potential to promote spatial transformation.

- ▣ Prioritise investment in human settlements per local municipality – promote integrated planning.
- ▣ Prioritise the upgrade of informal areas.

4.3.3.3 corridors

The Namakwa District is strategically located along the N7 transport corridor, serving as a crucial tourism and freight route between Cape Town and Namibia. Additionally, the district is positioned along the N14 transport corridor extending from Springbok to Gauteng, further contributing to its transportation significance.



4.3.3.4 Bulk Infrastructure

An effective, competitive, and responsive infrastructure network is imperative for the ongoing economic development of the province and the local municipalities.

4.3.3.4.1 Water

Most households within the Namakwa DM have access to piped water inside the dwelling, yard or from an access point outside the yard.

- Establish a seawater desalination plant on the west coast of the district near Boegoebaai.
- Promote water-wise measures by means of a dedicated campaign.
- Improving the water quality of the Orange River.

4.3.3.4.2 Electricity

Energy provision is critical in modern society; however, the availability of energy continues to present a significant resource challenge. Eskom faces limitations in generation capacity, leading to an inability to meet the escalating energy demand prompted by rapid economic growth in the country. (DME-2008).

- Support convergence to green building approach, green building design, etc. to promote energy saving at a local municipal level.
- Identify/ Map areas most suitable for renewable energy projects, specifically wind energy.
- Support the roll-out of the onshore gas pipeline network.
- ESKOM battery storage.

4.3.3.4.3 Renewable Energy

There are four primary areas where renewable energy development is likely to be concentrated within the district. These are:

- The coastal plain from Koingnaas to Alexander Bay.
- The inland plateau from Springbok to Pofadder.
- Loeriesfontein to Granaatboskolk.
- South of Sutherland to the border of the Namakwa DM.

4.3.3.5 transport and logistics

4.3.3.5.1 Road

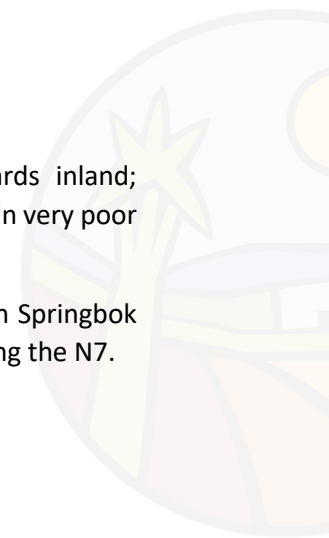
The Namakwa District is strategically located along the N7 transport corridor, serving as a crucial tourism and freight route between Cape Town and Namibia. Additionally, the district is positioned along the N14 transport corridor extending from Springbok to Gauteng, further contributing to its transportation significance.

- Boegoebaai Deep Water Port Development.
- Designate specific road-based freight routes, linking the proposed Boegoebaai Port development to the east and south.
- Upgrade of existing and proposed road network.
- Other proposed road upgrades.
- Promote key transport routes.

4.3.3.5.2 Rail

There are railways from Calvinia to Sak River and eastwards inland; however, these rail lines are not currently in operation and are in very poor condition.

- Establish a reliable railway service for passengers between Springbok and Upington with the potential to extend southwards along the N7.
- Boegoebaai Port and rail links.



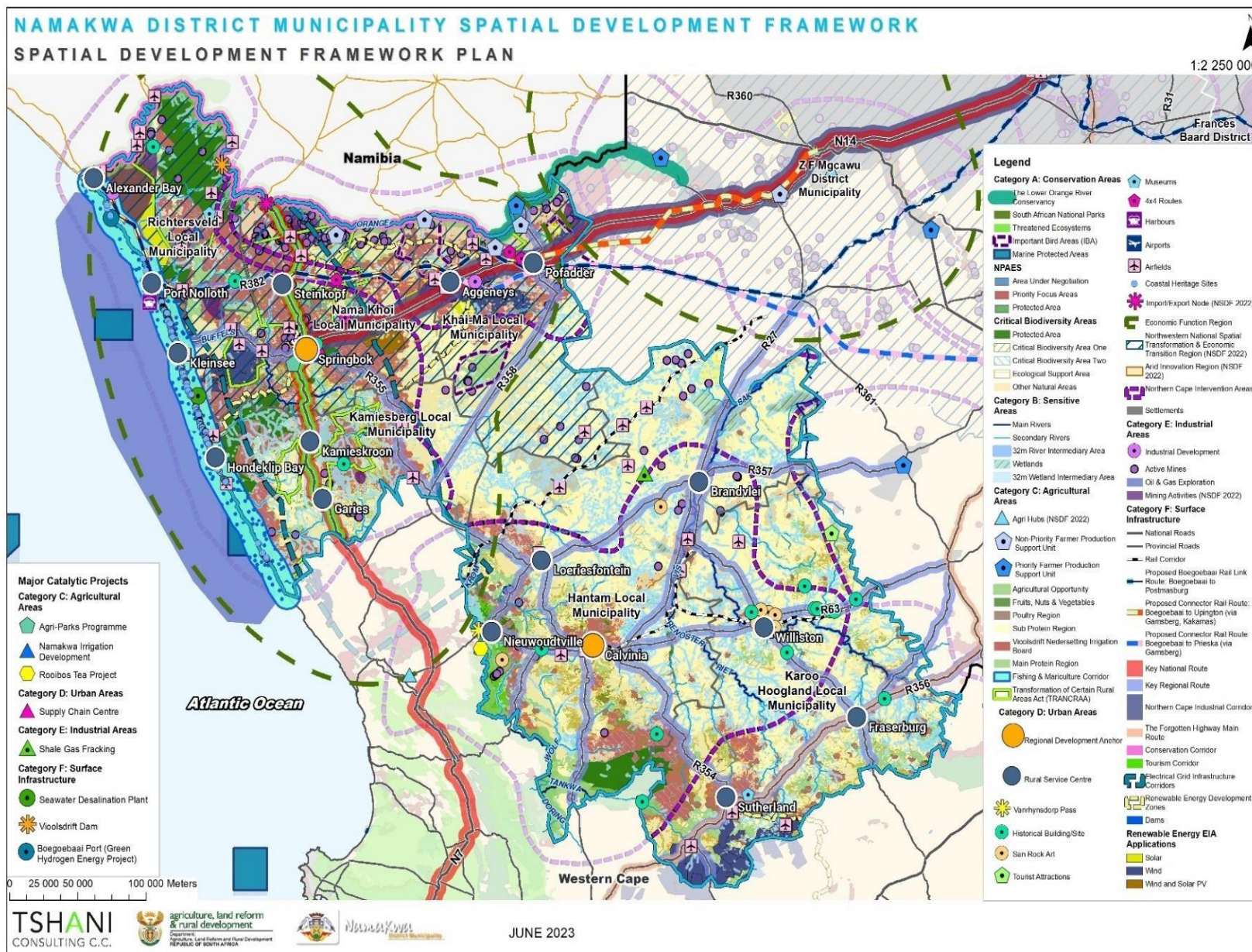


Figure 26: Namakwa District Spatial Development Framework 2023–2028



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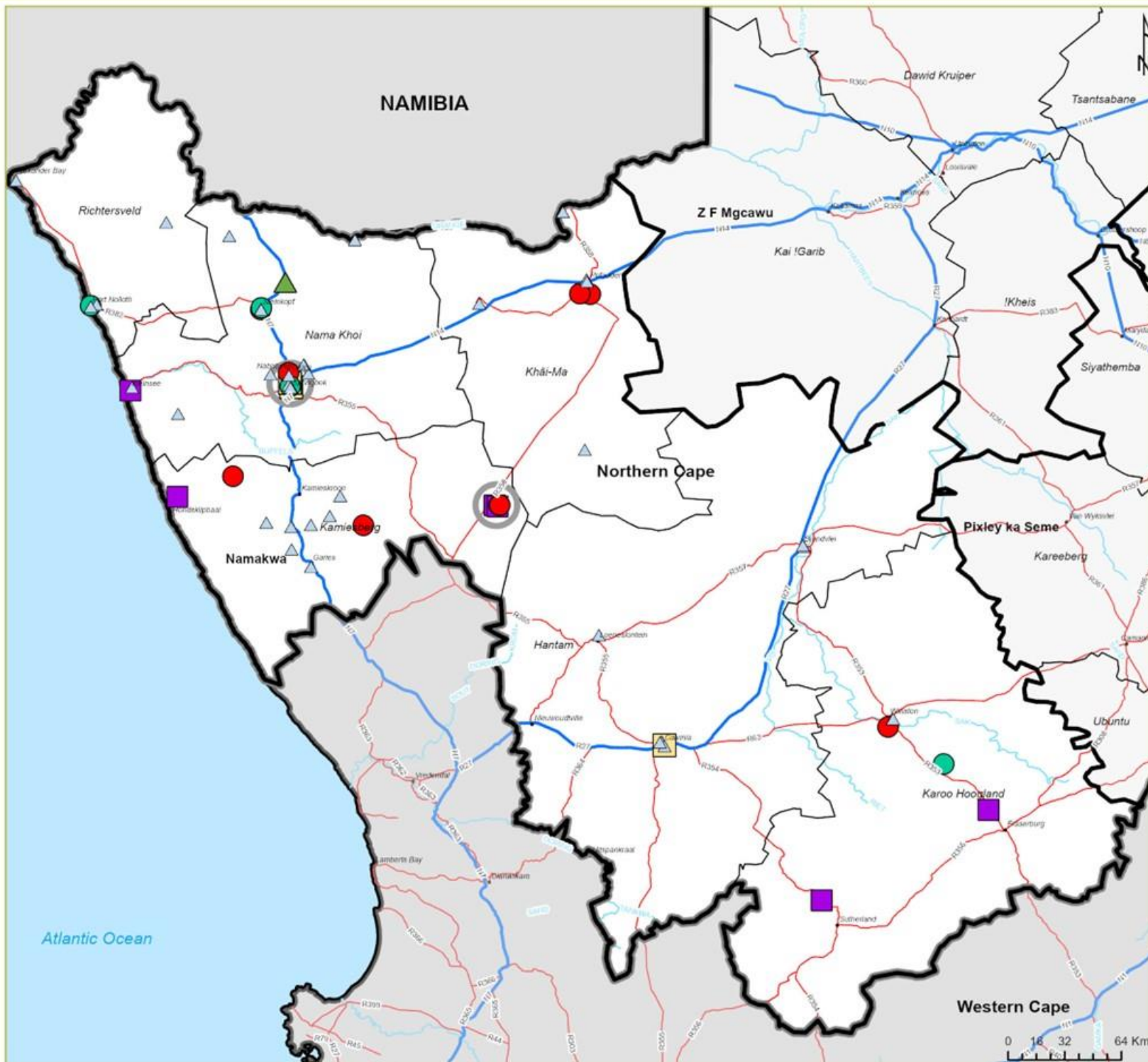
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2023/2024 INFRASTRUCTURE PROJECTS NAMAKWA DISTRICT

Legend

- Town/Settlement
- Main Roads
- National Roads
- Main Rivers
- Local Municipality
- District Municipality

2023/2024 Infrastructure Projects

Department

- ▲ Agriculture
- ▲ Education
- Health
- Human Settlements
- Roads
- Social Development
- Sport, Art and Culture

**Map 25: 2023/2024
Infrastructure Projects –
Namakwa District**

Source: Sector Departments

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



4.4 PIXLEY KA SEME DISTRICT MUNICIPALITY



4.4.1 BIOPHYSICAL FRAMEWORK

4.4.1.1 Spatial Planning Categories A: Core Conservation Area

These land areas dedicated to conservation use need to be carefully managed to ensure it remains a viable resource for the future. Key Provincial/National Nature Reserves in the Pixley Ka Seme District are:

- Mokala National Park is one of South Africa's newest National Parks, proclaimed only in 2007. It is also informally known as the park where endangered species roam, because of its breeding and re-allocation of animals for use in other national parks and game reserves. Mokala comes from 'kameeldoring' or camel thorn tree (*Acacia erioloba*), a tree common to this semi-desert region.
- Rolfontein Nature Reserve has been in existence since 1970 – 8 000 hectares of mountainous terrain, Karoo plains, little dolerite koppies and densely wooded mountain kloofs. Rolfontein borders on the Vanderkloof Dam.

- Doornkloof Nature Reserve is positioned at the top end of the southern shore of the Vanderkloof Dam – South Africa's second-largest water reservoir
- Karoo Gariep Conservancy. The Karoo Gariep Conservancy is found on the Karoo "dry and hard" side of the Gariep "big river."

4.4.1.2 Spatial Planning Categories B: Natural Buffer Areas

The SPC B areas serve to create appropriate buffer areas around or adjacent to SPC A areas that protect the later against consumptive or habitat-fragmenting land-use impacts.

4.4.1.3 Protection of Sensitive Areas

Conservation of the unique Karoo landscape and fauna and flora is important to maintain the environmental quality and resources in the Pixley Ka Seme District.

Together with protected areas, they are important for the persistence of a viable representative sample of all ecosystem types and species as well as the long-term ecological functioning of the landscape. The Northern Cape's biological diversity and vast natural resources are facing challenges of biodiversity loss because of the transformation and degradation of natural habitat.

4.4.1.4 Climate Change

It is predicted that the Karoo could experience more drought periods, coupled with increased evaporation and temperatures and this will negatively impact the already restricted water supply. Regional predictions suggest a drying trend from west to east, a shift to more irregular rainfall of possibly greater intensity, and rising temperatures everywhere. The greatest impact will likely be on the water supply (Midgley et al. 2005). This highlights the importance of protecting water resources from over-abstraction, degradation, and the spread of invasive alien plants (which use more water than indigenous plants).



Management of mountain catchment areas is critical in this regard, as they are the primary source of our water supply. The increase in temperatures anticipated with climate change may result in increased fire frequencies. Invasive alien plants are often highly flammable and with their large volumes, are likely to fuel more frequent fires. The combination of more frequent and intense fires will have a devastating impact on the region.

4.4.2 SOCIAL ECONOMIC FRAMEWORK

4.4.2.1 Economy

The functional economic regions as delineated in the Karoo Regional SDF are used as a baseline to support economic linkages within the District. These regions were determined and differentiated taking into account the spatial characteristics and economic activity at different scales.

Key Economic Regions include:

- **Upington Regional Development** Anchor region which includes Marydale and Prieska.
- **Kimberley Urban Development** Node which includes Griekwastad, Douglas, Hopetown and Strydenburg.
- **De Aar Regional Development** Anchor region which includes Vosburg, Britstown, Colesberg, Van Der Kloof, Petrusville and Hanover.
- **Cradock Regional Development** anchor region which includes Noupoot.
- **Beaufort West Regional Development** Anchor region which accommodates Victoria West, Richmond, Carnarvon and Loxton.

4.4.2.2 Agricultural

Agriculture is the key economic factor in the district. Despite the largely semi-arid and arid environment in the district, the fertile land that lies alongside the Orange, Vaal and Riet Rivers supports the production of some of the country's finest quality agricultural products. The district is well known for the quality of its meat – the term Karoo lamb comes to mind – as well as the production of wool, mohair, wine, maize, and wheat.

Livestock production is spread throughout the district municipality, with sheep and goats being the main livestock commodities.

Crop production in the area includes wheat, maize and lucerne, with the potential for the production of more high-value crops. The largest area in the district is primarily used for stock farming, consisting mainly of small stock including sheep and goats. The area has a long history of wool and mutton production with several abattoirs located in the region. According to the Pixley Ka Seme District IDP, the largest abattoir is located in Emthanjeni Municipality with a capacity to slaughter 2000 sheep per day. In the Umsobomvu Municipal area, a total of 1000 sheep are slaughtered daily Land Reform

4.4.2.2.1 Agri-Parks and Hubs

The town of Petrusville is proposed by the Northern Cape Province as the best location for the Agri-hub, the following key considerations are ongoing:

Farmer Production Support Units will include Vanderkloof, Van Wyksvlei, Griekwastad, Douglas, Vosburg and Colesberg.

Conversion of the existing abattoir at the Petrusville Agri-hub to a tannery which can process a minimum of 13 200 hides per annum. Manufacturing of leather products as a spin-off from the tannery.

Hub along the major rivers towards Boegoeberg where major cash crops are being produced under irrigation.

Hub on the southern, eastern, and western parts of the Orange River which is mainly for extensive sheep, ostrich, and game farming. Because of the well-known ostrich-producing areas being infested with diseases, the industry has suffered a decline. The chance that arises to increase ostrich farming in as much a disease-free environment as possible, gives rise to ample opportunities. In linking ostrich farming to district growth/development strategy, more jobs can be created. The other hub is the strong source of feed supply for the ostrich enterprise.



4.4.2.2.2 Irrigation Schemes

Irrigated agriculture is among the major contributing factors to the provincial GDP, with a total area of 140 000ha that is under irrigation. This sector uses approximately 80% of the total water used in the province to produce nearly 50% of the gross agricultural product, indicating its value to the region. Most of the irrigation farming in Pixley Ka Seme District occurs in the areas located along the Orange River, Vaal River and the canal systems that are fed from these rivers.

Key irrigation schemes include:

- **Orange Riet Canal System.** This scheme is located along with the Orange Riet Canal System which is located between the Vanderkloof Dam and the Riet River settlement of Modderivier. Although the scheme falls almost entirely within the Free State Provincial area most of the produce is delivered within the Northern Cape. This scheme provides water to an area of approximately 3670ha which represents 44 farms with an average size of 85ha.
- **Upper Orange River.** The irrigation area is confined to a strip along the Orange River, in the districts of Colesberg, Phillipstown and Hopetown as well as Fauresmith and Phillipolis. This scheme serves an area of 8585ha.
- **Middle Orange River and Lower Vaal River.** The area is located between Hopetown and the Boegoeberg Dam on the Orange River and the Vaal River from Schmidtsdrift to the junction with the Orange River. This is the largest of the three areas with a total of 21 381ha under irrigation. Although the sizes of the properties in this scheme vary, most properties have an average size of 65.7ha.
- **Douglas Irrigation Scheme** is located at the downstream end of the Vaal River. This scheme receives water from the Vaal River, supplemented with releases from the Orange River via the Orange-Vaal Transfer Scheme.

4.4.2.3 Agro-processing

Agro-processing is the main manufacturing activity in Pixley ka Seme, which consists of the production of various plant and meat products. Linked to the agriculture sector, the potential exists for storage, packaging, and distribution of vegetable production.

4.4.2.4 Land Reform

Land reform plays an important role in all spatial planning spheres of government, including national-, provincial-, and district levels.

4.4.2.3 Mining

Thirty-eight per cent (38%) of South Africa's diamond output is delivered by the Northern Cape and the majority of these diamond mines are situated within the Pixley Ka Seme District Municipality (see map below). De Beers (95% of local production) and Transhex are the two major producers. The diamond-cutting industry provides approximately 2 100 jobs in South Africa while African mining benefits other countries more e.g., India with 900 000 people employed in this trade.

The Prieska Copper Mine is to be reopened. The total capital cost to construct the mine is estimated to be R4.1 billion, which includes a 10% contingency. The peak funding required is R4.5 billion. During construction, a peak-site labour force including contractors will be an estimated 1 200 people. During steady-state operations, the total average workforce including contractors will be 840 to 880 people. Up to 8 400 indirect jobs are expected to be created.

4.4.2.4 Special Economic Zone

De Aar Logistics Hub: The Project entails the construction of an inland intermodal system comprising a container Terminal, Vehicle parking Terminal, and Warehouse/Cold room Terminal. The province has focused its priorities (in alignment with the National Development Plan Vision 2030) and identified priorities to enhance the quality of life of the community.



4.4.2.5 Tourism Framework

The district is home to the central Karoo which is characterized by desolate valleys between flat topped hills. The district contains three of South Africa's major dams and is also the largest producer of wool in the country. It offers hunting, hiking, game watching and as well as water sports. Recreational activities and the Khoisan rock art engraving are worth exploring and experiencing. The District contributes towards the Northern Cape Karoo Skies and Culture and Oasis Tourism clusters. Key Regional tourism Routes include:

The Karoo Highland Route is situated in the southern part of the Northern Cape in South Africa. The route covers the small Karoo towns of Nieuwoudtville, Calvinia, Williston, Sutherland, Fraserburg, Carnarvon, Loxton and Victoria West and forms the heart of the Great Karoo.

The Karoo tourist market consists of two main categories: Travellers passing through the Karoo, and tourists who are making the Karoo a destination – either as a mini-destination en route to other destinations (e.g., coastal cities) or increasingly, as a destination in its own right.

4.4.2.6 Rural Development

The Pixley Ka Seme District is regarded as one of the more remote district areas in South Africa. The concept of functional rural regions suggests that settlement areas (within proximity) should be integrated and connected to share services, amenities, and functions. These areas should therefore become “functionally and spatially linked” via improved road connections. The successful integration of these functional rural regions is strongly reliant on and emphasises the importance and need for improved and well-maintained access routes and the introduction of an efficient public transport system that transports commuters across the functional rural regions, but also to the larger urban conurbations. The Town of De Aar has been defined as a regional Development Anchor in the NSDF and requires providing regional services to the district.

4.4.2.6.1 Rural Intervention Areas

Rural Intervention Areas have been delineated based on the alignment and support of the three (3) key Rural Development Pillars that were proposed for the Pixley Ka Seme District Rural Development Sector Plan. The following Rural Intervention Areas are proposed:

- ➔ Rural Intervention Area 1 is located around the Orange and Vaal Rivers
- ➔ Rural Intervention Area 2 is located around the R63 and SKA Zone.
- ➔ Rural Intervention Area 3 is located around the N10 and N9 Corridors

4.4.2.7 Social Facilities

The District boasts One (1) District hospital (newly built in de Aar), 8 local Hospitals, 27 Clinics as well five (5) mobile clinics that service the more remote and rural areas.

Many of the facilities are not up to standard and require upgrading. Investment should be focused on improving the existing healthcare facilities but to improve access to these facilities by means of improved and more affordable (or free shuttle services) public transport systems that transfer patients to these health clusters should be exploited (in a positive way) by exploring alternative economies and trades.

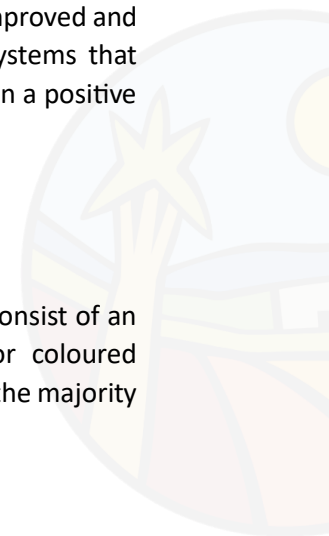
4.4.3 BUILT ENVIRONMENT FRAMEWORK

4.4.3.1 Settlements

All the towns within the district are typical Karoo towns that consist of an (in some cases, small) middle class (including black and/or coloured government officials) and a few emerging entrepreneurs, with the majority of the remaining population depending on government grants.

4.4.3.2 Housing

The total number of households within Pixley ka Seme District Municipality increased at an average annual rate of 2.01% from 2008 to 2018, which is higher than the annual increase of 2.13% in the number of households in South Africa. Pixley Ka Seme District Municipality consists of eight local



Municipalities which represent a total of 26 towns of different sizes and statuses. From the analysis of the municipalities and different towns, it is evident that unemployment, poverty, difficulties with the delivery of basic services and poor economic conditions harm many of these areas.

4.4.3.3 corridors

4.4.3.3.1 Development

The District forms part of the Arid-Innovation Region Carnarvon falls within the proposed Astronomy Development Zone The remaining parts of the District fall under the Karoo Zone (region).

The De Aar Technology Corridor is proposed. This corridor centres around Carnarvon and extends to the proximity of De Aar and Calvinia. The corridor presents access towards the SARA0 astronomy zone and seeks to develop Broadband Access, Science and Technology, Astronomy Tourism, Logistics Development and an Electronic Development Hub.

Prieska, Douglas and Hopetown form part of the Vaal-Orange Agricultural Zone and Douglas– Hartswater Agricultural Zones.

Reference in the existing SDF is made to the SKA, Solar, Kimberley Food and Orange River Corridors.

4.4.3.3.2 Movement

Promoting the district as a rural regeneration and economic development hub through strengthening its position within the provincial and national distribution network. Minimising the ecological impacts of logistics through intermodal freight and transport systems and green economy initiatives while strengthening local economic supply chains. The key to improving regional connectivity is developing and aligning development along with Movement and Transportation Corridors.

Key Corridors observed in the National Spatial Development Framework (NSDF), Northern Cape PSDF and Karoo Regional SDF include:

- N1: Cape Town – Worcester – Beaufort West – Colesberg – Bloemfontein – Kroonstad – Johannesburg – Roodepoort – Pretoria – Polokwane – Musina – Beit Bridge (– Bulawayo, Zimbabwe) - Lusaka) - Zambia);
- N8: Groblershoop – Kimberley – Bloemfontein – Ladybrand – Maseru Bridge (– Maseru, Lesotho);
- N10: Port Elizabeth – Cradock – Middelburg (EC) – De Aar – Prieska – Upington – Nakop (– Keetmanshoop, Namibia);
- N12: George – Beaufort West – Kimberley – Klerksdorp – Potchefstroom – Johannesburg – eMalahleni.
- Inter-Regional Rail Corridors via De Aar.

4.4.3.4 Bulk Infrastructure

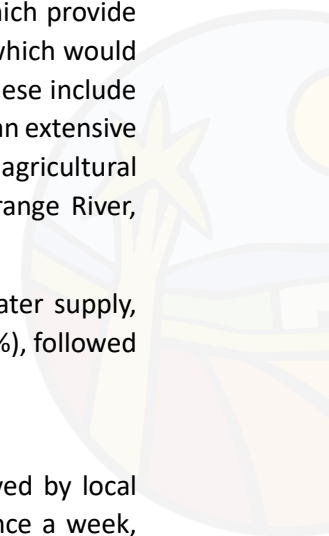
4.4.3.4.1 Water

The district partially falls within the Lower Orange and partly in the Upper Orange Water Management Areas (WMA's). The Orange River feeds several water supply schemes within the Northern Cape Province, which provide the livelihood for a range of activities in the catchment area, which would otherwise not be possible in such dry and harsh conditions. These include rural, domestic, industrial, and mining activities. Furthermore, an extensive network of irrigation canals provides water for intensive agricultural activities for large sections along the banks of the Lower Orange River, which includes the Douglas area.

More than 93% of the population have access to drinking water supply, mainly from piped (tap) water inside the dwelling/house (45.8%), followed by piped (tap) water inside the yard.

4.4.3.4.2 Solid Waste and Refuse Removal

More than 78.1% of the households have their refuse removed by local authority / private company/community members at least once a week, whereas 8.1% have their refuse dump.



4.4.3.4.3 Electricity

The majority of households within the Pixley ka Seme district municipality (82%) have access to electricity by means of an in-house prepaid meter.

Approximately 5.8% of households do not have any access to electricity, whereas 9.0% have access to in-house conventional electricity meters.

The main source of energy for lighting is electricity from mains (92.5%), followed by 5.1% of households using candles as their main source of lighting.

SIP 10: Electricity transmission and distribution for all refers to the expansion of the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development. Align the 10-year transmission plan(link is external), the services backlog, the national broadband roll-out and the freight rail line development to leverage off regulatory approvals, supply chain and project development capacity.

4.4.3.4.4 Renewable Energy

South Africa has embarked on a process of diversifying its energy mix to enhance energy security while also lowering greenhouse gas emissions. The country is blessed with a climate that allows Renewable Energy (RE) technologies like solar photovoltaic (PV) and Wind generation to be installed almost anywhere in the country. According to the Integrated Resource Plan 2019 (IRP 2019, Eskom) a total of 14400MW of wind power capacity plus 6000MW of solar PV technology is allocated for procurement leading up to 2030. Of this allocation, 4800MW is allocated to wind energy and 2000MW of Solar PV. The preferred bidders for bid window 5 will be expected to bring their projects to financial close in the next six months and commercial close within the next three years.

Based in central South Africa, the relatively small town of De Aar is home to the largest solar farm anywhere in the southern hemisphere and across the Middle East.

Completed in 2016, the facility comprises an area spread over 500 hectares, with its 700,000 [solar panels](#), a number set to increase in the future, providing 175MW of capacity.

The Copperton Wind Farm Project is situated in the Siyathemba Local Municipality (Northern Cape), specifically within the small settlement of Copperton

Potential for green hydrogen volumes in setting up the Prieska Power Reserve, and projects like it across the Northern Cape solar belt. This complements the Hydrogen Valley project being spearheaded by Anglo Platinum and Sasol's partnership with the Gauteng Provincial Government to create decarbonised industrial power grids and supply lines for hydrogen-based green aviation fuel.

4.4.3.5 transport and logistics

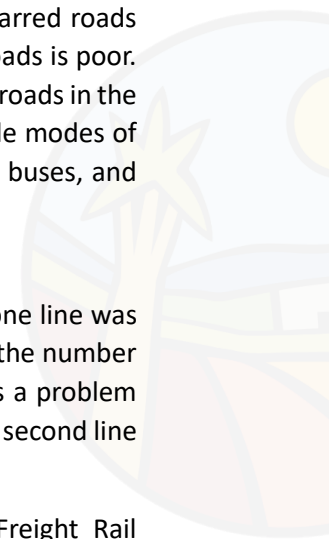
4.4.3.5.1 Road

As per the District municipality IDP, the current condition of tarred roads within the district is good, whilst the condition of the gravel roads is poor. In addition, there are stormwater management issues on some roads in the urban areas which makes them prone to flooding. The available modes of public transport available in the district include minibus/taxis, buses, and trains.

4.4.3.5.2 Rail

The Kimberley–De Aar section was initially a double line, but one line was closed and the other electrified about 20 years ago. However, the number of passing loops for long trains was limited; this now presents a problem when two trains with 104 wagons need to pass each other. The second line needs to be electrified and signalled for passing loops.

SIP 3: The Manganese export line refers to the Transnet Freight Rail developing the rail network between the manganese-rich Northern Cape and the Port of Ngqura in the Eastern Cape, to become the utility's third heavy-haul export channel. The development aims to increase South



Africa's annual manganese export capacity to 16 million tonnes. The manganese export line development also involves port-related expenditure, including at the Ngqura manganese terminal.

4.4.3.5.3 Air Transport

Smaller airfields and good landing strips are available and the landing strips are within the Pixley Ka Seme District. Because of the huge distance in the province, this mode of transport is predicted to play a bigger role in future.



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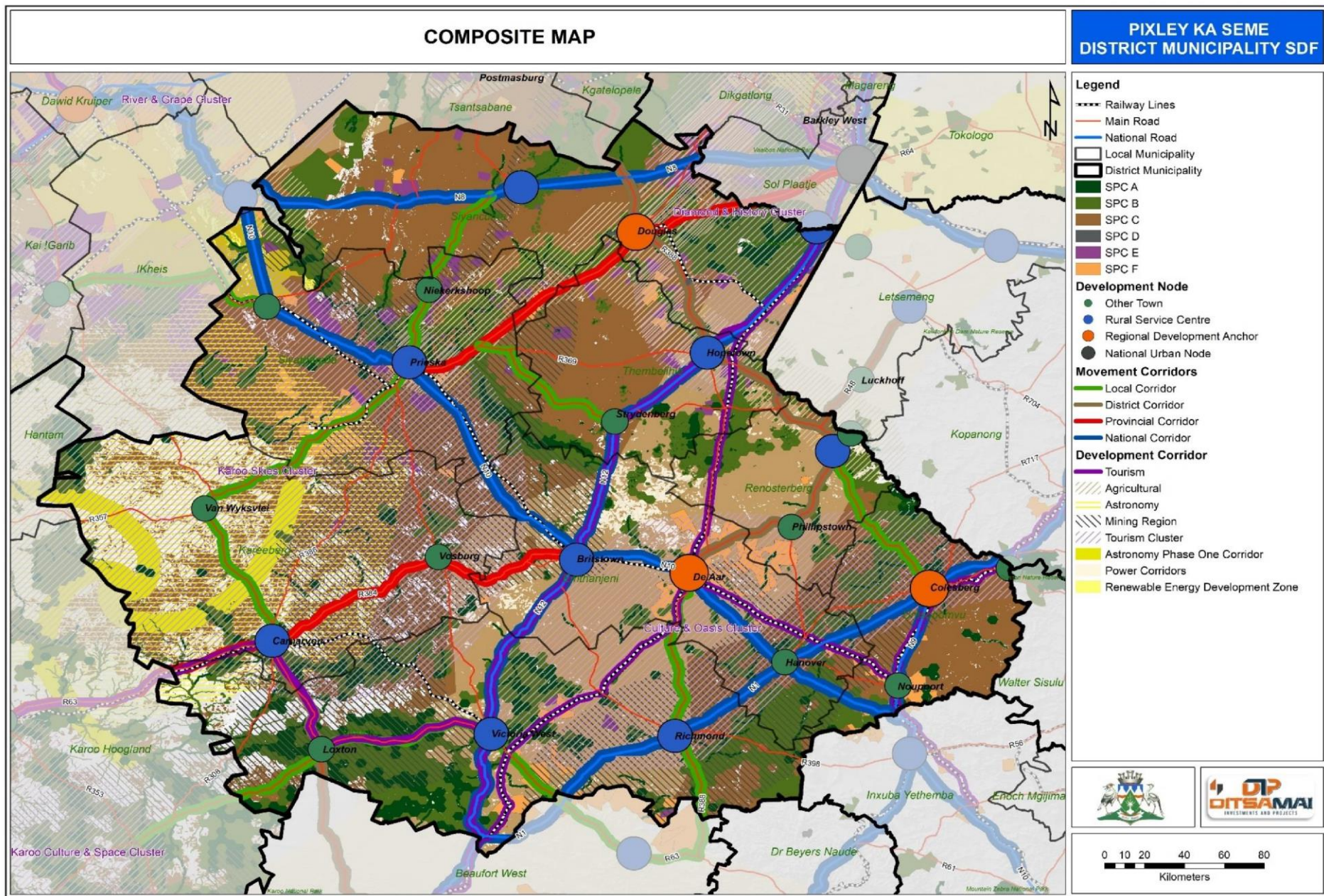


Figure 27: Pixley ka seme District Spatial Development Framework (2022–2027)



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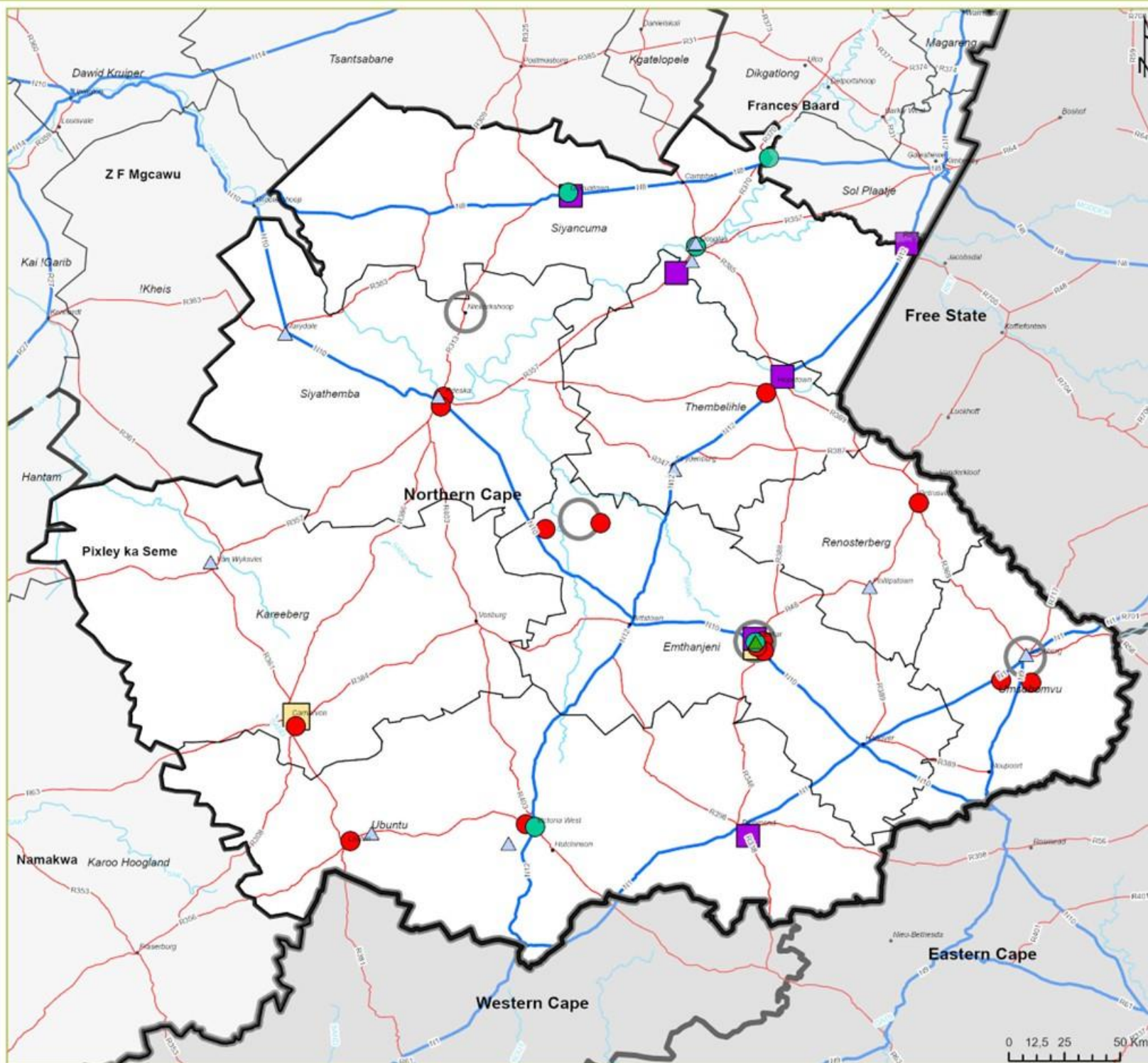
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2023/2024 INFRASTRUCTURE PROJECTS PIXLEY KA SEME DISTRICT

Legend

- Town/Settlement
- Main Roads
- National Roads
- Main Rivers
- Local Municipality
- District Municipality
- 2023/2024 Infrastructure Projects**
- Department**
 - ▲ Agriculture
 - ▲ Education
 - Health
 - Human Settlements
 - Roads
 - Social Development
 - Sport, Art and Culture

**Map 26: 2023/2024
Infrastructure Projects –
Pixley Ka Seme District**

Source: Sector Departments

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



4.5 ZF MGCAWU DISTRICT MUNICIPALITY



4.5.1 BIOPHYSICAL FRAMEWORK

4.5.1.1 Spatial Planning Categories A: Core Conservation Area

ZF Mgcawu District municipality is faced with the pressures of balancing economic development with environmental protection and recognizes that uncontrolled development may lead to an irreversible loss of ESAs. Without a SEA, the municipality will use this exercise to identify these areas.

The formal conservation areas within the district are Kgalagadi Transfrontier Park, the Augrabies Falls National Park, the Natural hot springs in Riemvasmaak and National Monuments. There are several registered conservancies in the ZF Mgcawu district. Some of these have been developed in the tourism sector.

4.5.1.2 Spatial Planning Categories B: Natural Buffer Areas

The SPC B areas serve to create appropriate buffer areas around or adjacent to SPC A areas that protect the latter against consumptive or habitat-fragmenting land-use impacts.

The Environmental Framework plan reflects buffer areas applicable to the conservation areas. The following intermediary areas have been provided as follows:

- Rivers – 32m normally and 50m for larger wide rivers
- Wetlands – 32m

4.5.1.3 Protection of Sensitive/ critical BIODIVERSITY Areas

Critical Biodiversity Areas are located along the perennial rivers and Dams running through the district. There are also large parcels of CBA1s that need to be excluded from agricultural potential land due to the conservancy of critically endangered species and grassland in the DM.

There is a lot of intensive farming and pivots located within the DM, especially in the towns along the Orange River that need to be protected for food security. There are also a lot of mining activities in the district in the Kgatelopele and Tsantsabane local municipalities.

4.5.1.4 Climate Change

Climate change is a significant global concern. Traditional livestock farming e.g., cattle farming has a major impact on climate change. The practice of cattle farming is also vulnerable during drought events. Game such as sheep are more resilient to drought. The municipality is currently facing major water shortages due to a lack of sufficient water storage.

4.5.2 SOCIAL ECONOMIC FRAMEWORK

4.5.2.1 economy

The district should focus on developments in science and technology that are pointing the way to new directions in sustainable urban and rural



development. Investing in science and technology will allow the district to become truly integrated into the knowledge economy, and innovative towns can develop significant advantages in globalisation.

4.5.2.2 Local Economic Development

This is aimed at promoting economic opportunities in the predominantly rural areas of the municipality, addressing the high dependency on social grants and promoting a varied economic base among other factors.

4.5.2.2.1 Township Economy'

Township economy' refers to enterprises and markets based in the townships. These are enterprises operated by township entrepreneurs to meet primarily the needs of township communities and therefore can be understood as 'township enterprises' as distinguished from those operated by entrepreneurs outside the townships.

The Department of Small Business Development has developed a programme to support the township economy. This programme is called the "Township and Rural Entrepreneurship Programme (TREP)".

The Township and Rural Entrepreneurship Programme (TREP) is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. The focus is to create platforms which provide the business support infrastructure and regulatory environment that enables entrepreneurs to thrive.

4.5.2.3 Agricultural

The protection and appropriate use of high-potential agricultural land is of critical importance for sustainable economic growth and food security. High-potential agricultural land in close proximity to settlements is often subjected to non-agricultural development pressure.

4.5.2.3.1 Agri-Parks and Hubs

The farmer's produce (input) is processed on a large scale at the Agri-Hub. The Agri-Hub provides quality production support services to the farmers

including product development and improvement (i.e. Innovation, Research and Development) and links the farmers to the targeted commodity value chain. (Market: The Agri-Hub mainly supplies agro-processed products through the RUMC and local Market).

4.5.2.3.2 Agro-processing

Agro-processing refers to a subset of the manufacturing sector that processes raw materials and intermediate products derived from the agricultural sector.

The aim is to develop and advance new processing technologies from lab to pilot and commercial scale implementation, using tools to demonstrate product and process.

4.5.2.3.3 Land Reform

Land reform plays an important role in all spatial planning spheres of government, including national-, provincial-, and district levels.

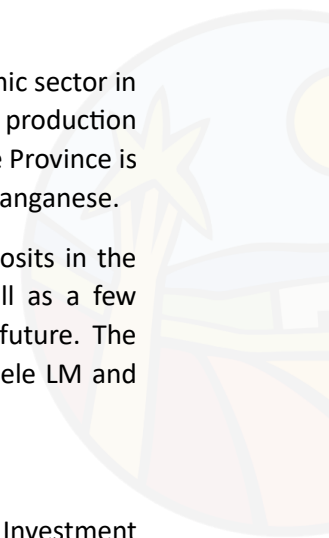
4.5.2.4 Mining

The mining and quarrying sector is the most important economic sector in the Northern Cape Province. The industry is mostly around the production of ores, minerals and semi-precious stones. The Northern Cape Province is the top producer of diamonds, zinc, silver, iron ore, lead and manganese.

The ZF Mgcawu District Municipality has several mineral deposits in the region (some of which are the richest in the world) as well as a few untapped resources that could potentially be mined in the future. The mining activities are mainly concentrated within the Kgatelopele LM and Tsantsabane LM.

4.5.2.5 Special Economic hubs/Zone

The Northern Cape Economic Development, Trade and Investment Promotion Agency (NCEDA) has identified the Dawid Kruiper Local Municipality (Upington Industrial Park) as the municipality to have an industrial park.



Industrial parks have long been recognized as an efficient means of unifying industrial activities with business, infrastructure and service objectives. The Upington Industrial Park is meant to play a massive role in the Just Energy Transition as one of the key ambitions is to have the park transition and also aid the decarbonization drive toward net zero emissions.

4.5.2.6 Tourism Framework

ZF Mgcawu has several tourist attractions that range from nature-based tourism to heritage, adventure and cultural tourism. There are, in addition also a few unique opportunities that can be developed to infiltrate a niche tourism market.

The district receives a number of tourists passing through the region en route to Namibia & Botswana and other surrounding Provinces and other attractions using N10 & N 14 and R360/R31. The SDF also proposes a tourism route on the R359 from Upington to the Augrabies Falls. The proposes that the district should promote tourism activities along this route. The tourism activities are dispersed throughout the district, and it is therefore critical that integrated tourism packages are created in order to ensure that tourism as a whole grows throughout the district.

4.5.2.7 Small Town Revitalisation

The small-town regeneration approach focuses on a town's unique traits and the key sectors which can be capitalised on in order to build a strong local economic and spatial base. The Spatial Development Framework aims to offer strategic guidelines on the prioritisation of infrastructure in Small Towns.

The Kai !Garib and !Kheis local municipalities have been identified by SALGA as the two municipalities in the ZFM DM that will benefit from the Small Town Regeneration programmes out of the 16 participating municipalities in the Northern Cape.

4.5.2.8 Rural Development

Rural development is about enabling rural people to take control of their destiny, thereby dealing effectively with rural poverty through the optimal use and management of natural resources. It is a participatory process through which rural people learn over time, through their own experiences and initiatives, how to adapt their indigenous knowledge to their changing world.

4.5.2.8.1 Rural Intervention Areas

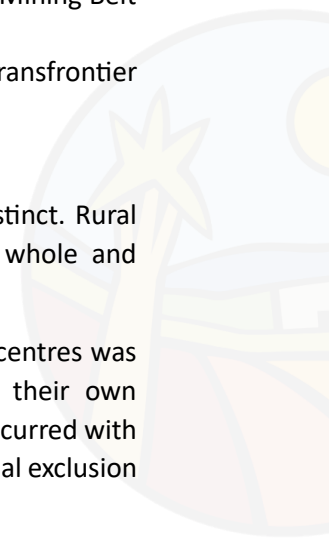
Rural Intervention Areas have been delineated based on the alignment and support of the three (3) key Rural Development Pillars that were proposed for the ZF Mgcawu District Rural Development Sector Plan. The following Rural Intervention Areas are proposed:

- ➔ Rural Intervention Area 1 is located around the N10/N14 and Orange River
- ➔ Rural Intervention Area 2 is located around the Gamagara Mining Belt (Postmasburg & Danielskuil Area).
- ➔ Rural Intervention Area 3 is located around the Kgalagadi Transfrontier Park.

4.5.2.8.2 Rural-urban linkages

Urban and rural development can no longer be viewed as distinct. Rural and urban economies need to be understood as a united whole and addressed in more integrated ways.

In ZF Mgcawu, the growth of the mining economy and urban centres was based on the exploitation of rural areas which prevented their own development potential. Likewise, the development of towns occurred with the simultaneous destruction of the rural economy and the social exclusion of rural inhabitants.



4.5.2.8.3 Strengthening of Institutional Arrangements

The economic function in ZFM DM has been constrained and extremely over-undermined over a period of time. Hence, the organisation of relevant bodies to participate in LED was not prioritised.

The level of willingness and enthusiasm from the local partners necessitate the formalisation of the relevant forum and execution of the programme as per conditions of the Partnership Agreement.

4.5.2.8.4 Social Facilities

Social facilities are a vital aspect of human settlements as they serve as sources for social and public services, including health, education, recreation, and cultural and social spaces among other services.

4.5.3 BUILT ENVIRONMENT FRAMEWORK

4.5.3.1 Settlements

Achieving sustainable human settlements is one of the main spatial goals within an area such as ZF Mgcawu District which is characterised by a settlement pattern that has encountered a high level of disintegration and fragmentation.

4.5.3.2 Housing

According to the National Housing Needs Register as of August 2022 for the ZF Mgcawu District, the total housing need stands at 31 047 in comparison to the province that stands at 127 217.

The Tsantsabane local municipality is in the process of a 6000-unit housing project in the Postmansburg area.

4.5.3.3 Corridors

4.5.3.3.1 Development

The Northern Cape Province has identified a solar corridor which stretches from Upington to De Aar in the Pixley Ka Seme District which is home to the Vanderkloof Power Station. This corridor has been identified as one of

the highest solar radiation corridors in South Africa and is therefore most suitable for the development of solar parks. There is currently a PV solar plant under construction at Kenhardt.

4.5.3.3.2 Movement

There are a number of important movement corridors leading through the ZF Mgcawu District Municipality, of which the most important are:

- The main road from Port Elizabeth to Namibia which goes through Groblershoop and Upington (N10).
- The N14 extends from Springbok to Johannesburg (running through Kakamas and Keimoes).
- There is also the important route linking Upington to the Transfrontier Park (ultimately to Botswana) (R360).
- The R27 joins from Keimoes and extends to Calvinia linking through to Cape Town.

4.5.3.4 Bulk Infrastructure

4.5.3.4.1 Water

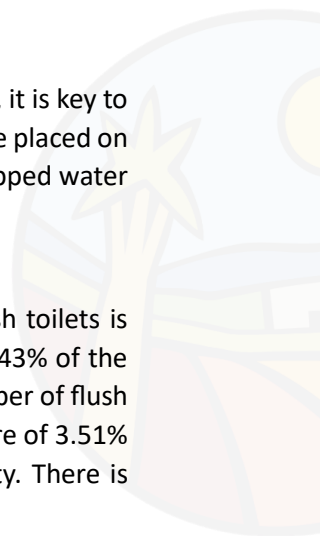
As water is crucial to sustaining life and any other development, it is key to conserve water resources within the district. Emphasis should be placed on the re-use and reticulation of water, rather than exploring untapped water resources.

4.5.3.4.2 Sanitation

The region within ZF Mgcawu with the highest number of flush toilets is Dawid Kruiper Local Municipality with 26 300 or a share of 42.43% of the flush toilets within ZF Mgcawu. The region with the lowest number of flush toilets is! Kheis Local Municipality with a total of 2 180 or a share of 3.51% of the total flush toilets within ZF Mgcawu District Municipality. There is still a need to cater for the backlog in the district.

4.5.3.4.3 Electricity

Electrical infrastructure plays a key role in investor confidence and economic prosperity. The NDP proposes diversity and alternative energy



resources and energy supply options, both in terms of power generation and the supply of liquid fuels. c thereof is, a key component in unlocking the latent economic potential within the agriculture and manufacturing sectors, as well as increasing the viability of existing and future high-impact projects.

4.5.3.4.4 Renewable Energy

The Electricity sector is the backbone of future development taking place in the ZF Mgcawu District Municipality. The utilities sector will form linkages to all the major economic sectors due to the reliance on activities on both electricity and water.

There is an opportunity for renewable energy strategies in pursuit of improving the Northern Cape Province's environment, and alleviating energy poverty, whilst promoting economic development and job creation in the province whilst developing its green economy.

4.5.3.5 Transport and Logistics

4.5.3.5.1 Road

Roads leading to businesses and tourism activities need upgrades and ongoing maintenance throughout the district. There is a need for maintaining the rural roads to facilitate transport to/from farms in areas in the Dawid Kruiper (Kalahari area),!Kheis, Kai !Garib and Tsantsabane municipal areas.

The redirection of trucks into alternative roads in the town's central business districts throughout the districts is of utmost importance and reduces the damage to road infrastructure.

4.5.3.5.2 Rail

There are a number of railway lines running through the ZF Mgcawu District Municipality. There are linkages between Upington and Karasburg in Namibia and to Keimoes and Kakamas in the southwest. Southwards there are also linkages to Prieska, where trains to Johannesburg, Kimberley and

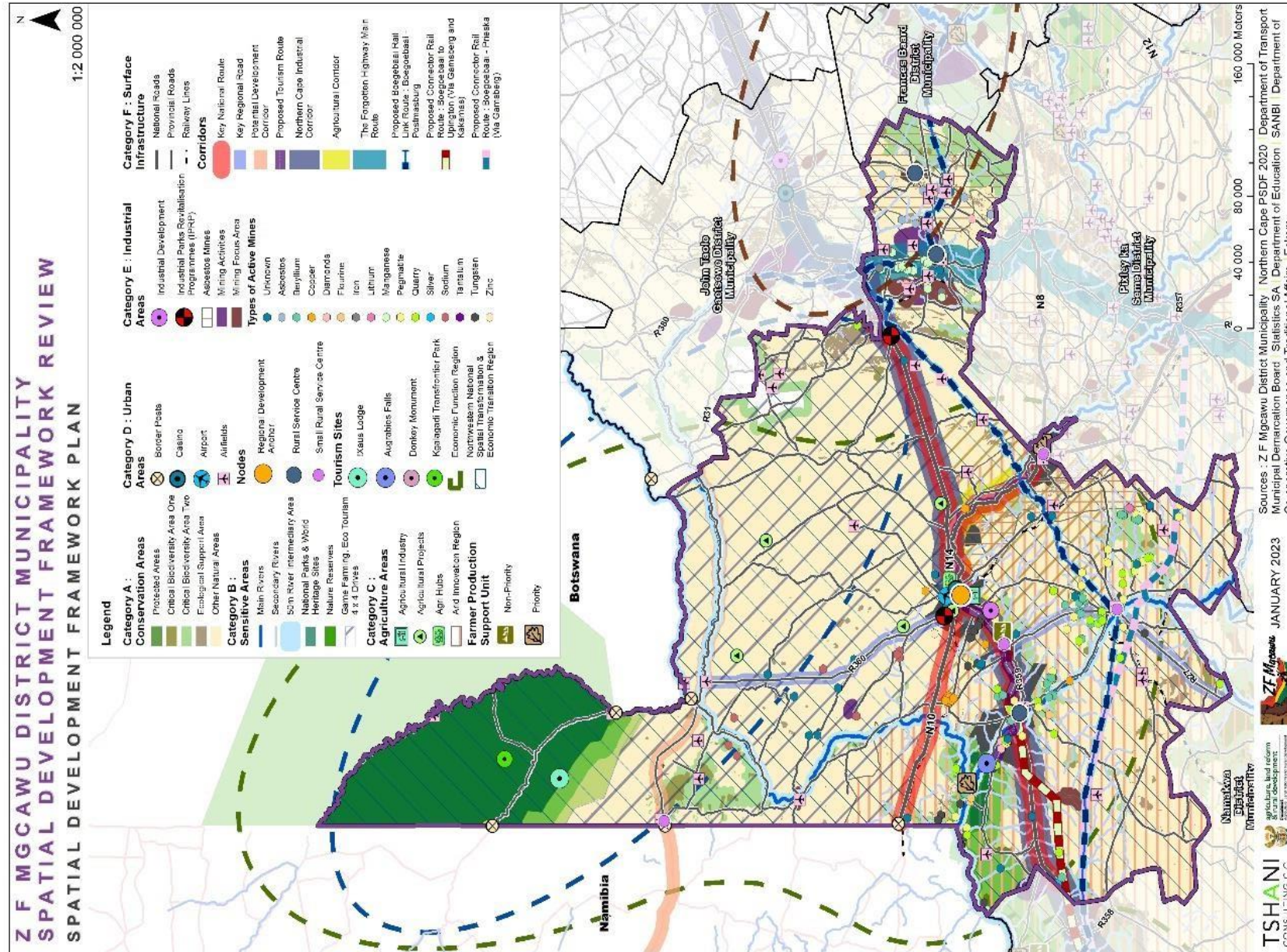
Cape Town can be diverted. The railway infrastructure is underutilised which places a lot of strain on road infrastructure.

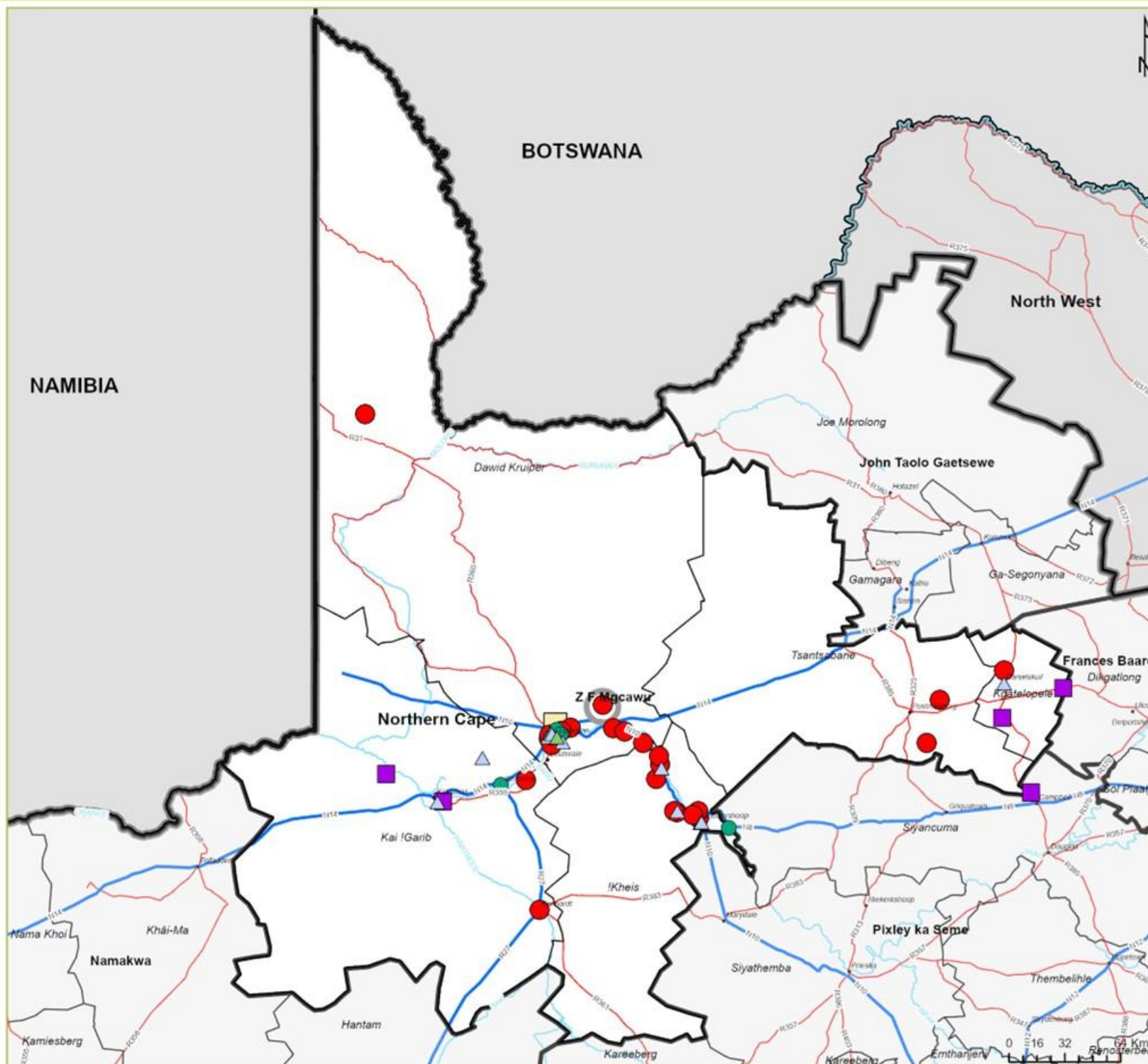
There is a proposal by NCEDA for a new rail link to assist with the strain experienced by the current railway infrastructure. The railway will run from Kuruman, traversing the district through to Boegoebaai in the Namakwa district.

4.5.3.5.3 Air Transport

The Dawid Kruiper local municipality is home to the Upington International Airport. Currently, there are daily flights to and from Johannesburg and Cape Town and during the summer months, the airport is used to export grapes and citrus fruits.







2023/2024 INFRASTRUCTURE PROJECTS ZF MGCWU DISTRICT

Legend

- Town/Settlement
- Main Roads
- National Roads
- Main Rivers
- Local Municipality
- ▭ District Municipality

2023/2024 Infrastructure Projects

Department

- ▲ Agriculture
- ▲ Education
- Health
- Human Settlements
- Roads
- Social Development
- Sport, Art and Culture

**Map 27: 2023/2024
Infrastructure Projects – ZF
Mgcawu DISTRICT.**

Source: Sector Departments

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



Table 5: District Spatial Development Framework Takeaways

Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
BIOPHYSICAL FRAMEWORK					
Core Conservation Area/ Natural Buffer Areas	<ul style="list-style-type: none"> Conservation /Protection of Nature Reserves and ecological infrastructure. Marketing the natural environmental assets within the district. Constant maintenance and upkeep of these natural assets. Maintaining landscape connectivity. Securing and consolidating the conservation estate, and integrating rural development with existing regional and sub-regional movement routes. 	<ul style="list-style-type: none"> Promote the development, utilisation, and long-term conservation of the natural resource. Support integrated natural resource management. Effective veld management plans and practices. Ensure the effective management of water resources and pastureland. Promote the development, utilisation, and long-term conservation of the natural resource. Support integrated natural resource management 	<ul style="list-style-type: none"> Sensitive/high risk to sea level rise - delineation of coastal setback lines. Prioritise Conservation of Biodiversity Corridors that are most resilient to Climate Change There is a need to map prominent landmark natural lands. Protect all river systems and avoid pollution of these hydrological systems, especially the Orange River. 	<ul style="list-style-type: none"> Formally protected areas enjoy the highest levels of protection. Where possible and appropriate these areas should be extended by donation and acquisition. Only non-consumptive and extractive activities are permitted e.g., recreational, tourism, traditional ceremonies, research, and education. Management plans should be drawn up for protected areas. The municipality should engage with the conservation authorities to ensure that economic growth 	<ul style="list-style-type: none"> Encourage the preservation of adequate open space and protect unique and environmentally sensitive areas as identified in applicable Biodiversity Spatial Plans. Maintain natural conservation or production landscapes that maximize the retention of biodiversity patterns and ecological processes: Ecosystems and species are largely



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<p>and employment opportunities in these areas are maximized</p> <ul style="list-style-type: none"> • River corridors and wetlands, including ephemeral pans, must be protected from urban, agricultural, and mining activities to a distance of at least 32 metres 	<p>intact and undisturbed.</p> <ul style="list-style-type: none"> • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for the loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets
Critical Biodiversity Areas	<ul style="list-style-type: none"> • Conserve long-term viable and representatives of habitats of critically endangered species. • Strengthening institutional capacities for demand management, 	<ul style="list-style-type: none"> • Strengthen natural resource management ability in rural areas • Ecosystems and species are intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of 	<ul style="list-style-type: none"> • Within the Namakwa DM, specifically along the west coast, four (4) marine protected areas have been established. • Development of an Integrated Coastal 	<ul style="list-style-type: none"> • This is to permit existing agriculture such as stock and game farming that does not exceed carrying capacity in sensitive biodiversity areas (e.g., CBAs). • Conservation of Critical Biodiversity Areas 	<ul style="list-style-type: none"> • There is a lot of intensive farming and pivots located within the DM, especially in the towns along the Orange River that need to be protected for food security.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<p>groundwater assessment, and integrated water-wastewater planning.</p> <ul style="list-style-type: none"> Support of the implementation of the Working for Water and National River Health Programmes 	<p>area needed to meet biodiversity targets. There are options for the loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets.</p> <ul style="list-style-type: none"> These are landscapes that are approaching but have not passed their limits of acceptable change. 	<p>Management Plan (ICMP)</p> <ul style="list-style-type: none"> The ICMP needs to identify key objectives, strategies, actions, priorities, and performance indicators for coastal management in the Namakwa DM. 	<p>(CBAs) and Endangered vegetation shall be encouraged through the promotion of conservancies and stewardship projects with limited eco-tourism development rights and/or donations to formal conservation agencies.</p> <ul style="list-style-type: none"> Any development applications should show the sustainable desirability of the proposal and only ecologically sensitive developments should be permitted. Critical Biodiversity Areas, Environmental Support Areas, Protected Areas, and areas with valuable aquifers must be protected from shale 	<ul style="list-style-type: none"> Maintain natural conservation or production landscapes that maximize the retention of biodiversity patterns and ecological process The urban concentrations of ZF Mgcawu District Municipality are characterized by several river systems near the respective towns. These systems need to be protected from pollution and encroachment by formal developments. Critical Biodiversity Areas are located along the perennial



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				gas extraction or any other kind of environmentally compromising activity.	rivers and Dams running through the district. There are also large parcels of CBA1's that need to be excluded from agricultural potential land due to the conservancy of critically endangered species and grassland in the DM.
Climate Change	<ul style="list-style-type: none"> Reducing non-climate stressors on water resources. Ensuring that infrastructure and agricultural development are avoided, where possible, in high-risk areas to reduce the long-term impact of climate change, particularly on poor communities. 	<ul style="list-style-type: none"> Conduct innovative awareness campaigns on the impacts of heat stress, especially in schools. Research indoor air pollution reduction techniques; and Compile an adaptation response plan that will have to be adopted include: 	<ul style="list-style-type: none"> Promote reduction of carbon gas emission Green economy transition: biodiversity, carbon markets, climate finance, demand for sustainable production. Identify coastal areas most sensitive/high risk to sea level rise - 	<ul style="list-style-type: none"> Improved genetics in terms of adapting to climate change (e.g., livestock genetics and crop genetics). 	<ul style="list-style-type: none"> The district municipality needs to develop a strategic environmental assessment plan, as it will assist in the protection of critical environmental areas. The municipality needs to ensure that all required environmental studies and reports



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<ul style="list-style-type: none"> Strengthening institutional capacities for demand management, groundwater assessment, integrated water-wastewater planning, Reducing non-climate stressors on water resources 	<ul style="list-style-type: none"> Adopting water management regimes, The cultivation of crops is better suited to a hot and dry climate. Land management techniques, Grazing management regimes; and Application of innovative, smart agriculture. 	<p>delineation of coastal setback lines.</p> <ul style="list-style-type: none"> Identify and establish new water sources to mitigate the impact of lower precipitation and promote water-wise measures to restrict irresponsible water use. Promote reduction of carbon gas emission Promote and encourage green technology, solar power and wind energy use and implement a rebate strategy. Prioritise Conservation of Biodiversity Corridors that are 		<p>are done before the construction of all municipal projects and that they are zoned correctly.</p> <ul style="list-style-type: none"> Research plant breeding and best-adapted cultivars that can be grown using non-irrigation methods such as hydroponics. Research possible interventions for indoor air quality monitoring.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
			most resilient to Climate Change		
Disaster Management	<ul style="list-style-type: none"> Protection of intact natural habitat, especially wetlands, floodplains and intact riparian habitat is extremely important for reducing the magnitude of flood events as these areas play an important role in regulating hydrological processes, such as stormwater run-off. In addition, these areas (especially floodplains) are extremely high risk for communities living in these areas. Disaster Management is vital in terms of agricultural management, a brief 	<ul style="list-style-type: none"> Disaster management plans should be updated to address the potential impact of hazardous materials on human health and the environment. This may involve developing evacuation plans and procedures for responding to spills and leaks. Response teams and local communities should be trained to respond to disasters involving hazardous materials. The LMs need to ensure that all required environmental studies and reports are done Ensure the effective management of water 	<ul style="list-style-type: none"> A high-capacity district disaster management centre is envisaged to provide a second responder service throughout the district 	<ul style="list-style-type: none"> Delineation of flood risk area To facilitate disaster risk management in alignment with biodiversity management programmes. To protect and conserve high-potential agricultural land. To manage, mitigate and control mining development sustainably. 	<ul style="list-style-type: none"> Establish equipped satellite firefighting stations in all local municipalities. Develop centralised warning systems for communication for all extreme weather events (including hail, heavy rains, fires, and heat waves) across the district (including local municipalities) based on a centralised reliable source such as South African Weather Services. Develop relocation plans for agriculture within flood lines. Develop and implement water



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	<p>look at potential risk areas is done to inform policy and decision-makers.</p> <ul style="list-style-type: none"> • All river valleys and ground with slopes equal to or exceeding 1 in 3 should be demarcated as no-development zones. • Areas below the 1 in 100-year flood line are excluded from development 	resources and pastureland.			conservation and rainwater harvesting campaigns within the district

SOCIO-ECONOMIC FRAMEWORK

Local Economic Development	<ul style="list-style-type: none"> • Develop comparative and competitive key localities through the clustering of key economic sector developments in identified development corridors, activity strips or zones, 	<ul style="list-style-type: none"> • Create opportunities for vulnerable groups, • Knowledge-based economies are proposed with it. • Creating an enabling environment that caters to Investment and income generation for the district; including 	<ul style="list-style-type: none"> • Support and promote sustainable economic development by stimulating economic growth in key development locations. • Create employment opportunities. 	<ul style="list-style-type: none"> • The knowledge economy drives bottom-up innovation. • Commercial & industrial development applications received by the municipalities. • • Percentage increase in commercial land. 	<ul style="list-style-type: none"> • The knowledge economy drives bottom-up innovation. • The market trends are moving with technological changes, it is therefore important that the ZF Mgcawu
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Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<ul style="list-style-type: none"> • The knowledge economy drives bottom-up innovation. • 	<p>projects such as Iron Smelter and Sinter Plans and Agri-Park, which will form the Farmer production support units (FPSUs), Agri-Hub (AH) and Rural-urban Market Centre (RUMC)</p> <ul style="list-style-type: none"> • Uplift the skills base of communities to allow them to be able to earn a living. • Investigate potential or enhance existing tourism opportunities 	<ul style="list-style-type: none"> • Investment in key sectors for development and employment opportunities • Policies and interventions to achieve better outcomes for local communities. • The knowledge economy drives bottom-up innovation. • Support and promote sustainable economic development by stimulating economic growth in key development locations. • Create employment opportunities. • Investment in key sectors for 	<ul style="list-style-type: none"> • Consolidating economic activity at strategic locations within transportation corridors thereby strengthening existing rural nodes. • Concentrating investment in areas with potential for sustainable economic development within and along transportation corridors. • 	<p>District Municipality not only focus on opportunities for the agricultural sector but also investigate potential improved technology</p> <ul style="list-style-type: none"> • Changes that could improve the quality of produce as well as the production methods. Technology changes to investigate include but are not limited to, hydroponics, aquaculture, new products, etc. • CBD road improvement programme will be implemented to allow a smooth flow of traffic and delivery trucks ought



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
			development and employment opportunities		to be redirected from the CBD areas. <ul style="list-style-type: none"> Support expansion of the trading centre Provide services to Industrial sites
Agriculture	<ul style="list-style-type: none"> Prime or unique agricultural land should remain, as far as possible, available for production. Enhancing equity in agriculture development. Support Land Reform Programme with emerging farmers; Supporting the range of generic settlement models proposed in the Frances Baard District Municipality in the Land Reform & Settlement Plan. 	<ul style="list-style-type: none"> The continuous degradation of agricultural land needs to be mitigated The protection and appropriate use of high-potential agricultural land is critical Effective veld management plans and practices, around catchment areas found in the high-lying regions are critical if sustainability of land use is to be achieved. Adopting water management regimes, 	<ul style="list-style-type: none"> Increased urban–rural linkages. Increase Agri-efficiency Transformation of Agri-systems Medium-size abattoir for small and large stock at the Agri-Hub in Springbok Feed processing plant (pelleting plant) to formulate animal feed from locally produced lucerne, maize and other ingredients 	<ul style="list-style-type: none"> The development of local/district Agricultural Master Plan The improvement of rural food security. The establishment of a small-scale commercial agricultural sector. The intensification and diversification of agricultural production. The establishment of an agribusiness sector Promotion of land reform initiatives as per national government objectives The establishment of a local Agri-Village. 	<ul style="list-style-type: none"> Product Development: Volumes play a significant role in value chain development. Develop livestock and natural vegetation breeding research programmes. Support small-scale and emerging farmers through capacity-building processes and assistance in identifying possible sources of funding.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<ul style="list-style-type: none"> Development of clear regulations for extractive industries located in high-potential agricultural land, and in close proximity to crucial water resources 	<ul style="list-style-type: none"> Land management techniques, Grazing management regimes; Application of innovative, smart agriculture. Establish a donkey commercialisation project. Additionally, it is proposed that JTG provide support for the development of new markets for donkey products Provide support to the Veterinary Services The establishment of an Agri-Hub and Park is a national initiative planned for in the District Rural Development Plan. Kuruman, as both a regional anchor and 	<ul style="list-style-type: none"> Raisin drying and packing facility Rooibos tea drying, fermentation and packing plant at the Nieuwoudtville FPSU A Rose geranium extraction plant Six Agri FPSUs have been identified Support feasible, sustainable, and desirable identified agricultural reform projects The Farmer Production Support Units 	<ul style="list-style-type: none"> Sufficient infrastructure support services are required to unlock the opportunity for value chains. An Agricultural Center of Excellence (training, research) would be required to support and manage the interventions between the different role players. 	<ul style="list-style-type: none"> There is major scope for developing the entrepreneurial competencies of the farmers in the district to better capacitate them to maximise their profit from their farming endeavours Provide tools for assessment of the entrepreneurial competencies of farmers: Technical Skills: Link producers with service providers providing training in the technical aspects of production, financial and business management Providing



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		gateway was identified for the location of the Agri-Hub			
Mining	<ul style="list-style-type: none"> Promotion of manufacturing activities that support the mining industry. Develop and adopt strategies for efficient water use and increase water conservation at mine sites. Development of a strategy to address the establishment and inevitable decline of mining towns. Development of clear regulations for extractive industries located in high-potential agricultural land, and in close proximity to crucial water resources. 	<ul style="list-style-type: none"> Providing clean energy for heavy industrial development, particularly for the envisioned plants The development of a knowledge-based economy related to all components of the mining industry and related service provision should be rolled out Neither the iron smelter nor the sinter plant/s should be established on non-disturbed land. Infrastructure development to support trucks operating in the mines. Promote expansion of the mining industry in 	<ul style="list-style-type: none"> Policies and interventions to achieve better outcomes for local communities. 	<ul style="list-style-type: none"> Submission of a mine closure plan which needs to be evaluated annually. Identification of “no go” areas where natural vegetation should not be disturbed. Clear identification and delineation of soil types during the mining phases (e.g., delineating the topsoil areas which are required for rehabilitation). Monitor Environmental Authorisation conditions during the mining lifespan. A key area of concern around shale gas extraction in the Karoo is the potential impact 	<ul style="list-style-type: none"> Mining development must be decoupled from settlement development, and existing settlement expansion or formation/development. There is an opportunity to establish a mining recycling plant in the ZF Mgcawu District Municipal area to minimise the environmental impacts of the mining sector within the district as a whole. The Tsantsanbane and Kgatelopele municipalities can



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	<ul style="list-style-type: none"> Mine rehabilitation should be considered 	<p>such a way that its negative impacts are minimised, and distressed mining communities are supported.</p> <ul style="list-style-type: none"> 		<p>of this activity on groundwater resources. All impacts of this activity, on groundwater resources specifically, must be adequately mitigated if it is to proceed in the Karoo basin.</p> <ul style="list-style-type: none"> The Prieska Copper Mine is to be re-opened 	<p>identify the project as they are the main mining municipalities.</p> <ul style="list-style-type: none"> The Mining Development Management Strategy aims to limit the negative long-term effects associated with mining Align social and capital contributions to the needs of the communities:
Special Economic Zones	<ul style="list-style-type: none"> Kimberley Urban Development Node which includes Griekwastad, Douglas, Hopetown and Strydenburg. 	<ul style="list-style-type: none"> Linkage to existing planned initiatives, such as human settlement expansions in both Gamagara and Ga-Segonyana, as well as the Agri-park and light industry areas in Kuruman and the Kathu Industrial/Supplier Park, 	<ul style="list-style-type: none"> Namakwa Special Economic Zone Boegoebaai Deep Water Port Development Designate specific road-based freight routes, linking the proposed 	<ul style="list-style-type: none"> De Aar Logistics Hub: The Project entails the construction of an inland intermodal system comprising Colesberg and De Aar as the main development nodes. 	<ul style="list-style-type: none"> The Northern Cape Economic Development, Trade and Investment Promotion Agency (NCEDA) has identified the Dawid Kruiper Local Municipality (Upington Industrial



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		<ul style="list-style-type: none"> • SMME development should be further explored and enhanced from this perspective. • N14 Industrial Development Corridor • Kathu Industrial Park 	Boegoebaai Port development to the east and south.		<p>Park) as the municipality to have an industrial park.</p> <ul style="list-style-type: none"> • The SDF also proposes a tourism route on the R359 from Upington to the Augrabies Falls. The proposes that the district should promote tourism activities along this route
Tourism	<ul style="list-style-type: none"> • Marketing the natural environmental assets within the district • Promote Township Tourism • Develop a “Key Places” Cleansing and Maintenance Programme • Enhance existing tourist attractions, 	<ul style="list-style-type: none"> • Enhance tourism as a more important component integrated into the economy of the district. • Many tourism opportunities exist within the district including (but not limited to), game drives, hunting, indigenous wildlife, 	<ul style="list-style-type: none"> • Identify and map key tourism assets/ sectors • Promote tourism routes • Support rural tourism initiatives 	<ul style="list-style-type: none"> • The Development of a Tourism Development Strategy for the District. • The development of rural tourism routes (secondary routes for Overlanding enthusiasts) • The development of expanded natural areas and nature reserves, therefore promoting 	<ul style="list-style-type: none"> • The SDF also proposes a tourism route on the R359 from Upington to the Augrabies Falls • Constant maintenance and upkeep of these natural assets • Promote Township Tourism



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	<p>thus encouraging revisits</p> <ul style="list-style-type: none"> Promote Heritage Tourism - Utilize and promote all of BCMM's heritage resources to attract Tourists Game farming to remain within the carrying capacity of existing veld resources 	<p>natural springs, and caves.</p> <ul style="list-style-type: none"> Find tourism routes and products that require linkages. Maintenance and upgrading of the road network to allow for smart growth. 		<p>ecological corridors in the district and beyond.</p> <ul style="list-style-type: none"> To collaborate and form partnerships with private tourism operators and enterprisers to grow the local tourism industry to promote the region as a tourism link (linking towards the Arid National Parks of South Africa). Increased investment in terms of tourism, leisure, and commerce within the municipal region. Branded Tourism Routes. Introduction of new tourism products. To enhance potential tourism links en-route to the Camdeboo, Mount Zebra, Karoo, 	<ul style="list-style-type: none"> Develop a "Key Places" Cleansing and Maintenance Programme aimed at ensuring that major gateways, routes and destinations in the ZFM DM are beautified and maintained. Enhance existing tourist attractions, thus encouraging revisits. Promote Heritage Tourism - Utilize and promote all of ZFM DM's heritage resources to attract Tourists. Encourage tourists to extend stopover duration in the area, thereby spending more money in the local market;



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				and Kgalagadi Transfrontier Park regions.	<ul style="list-style-type: none"> • Provide more options for stopover tourists to choose from and thus increase the attractiveness of the larger area; • Develop a heritage and cultural tourism route. • Promote rural tourism; • Promote adventure and eco-based tourism; and • Increase game farm and hunting development.
Rural Development & Small Town Revitalisation	<ul style="list-style-type: none"> • Optimise the agricultural opportunities in the region and support the establishment of small-scale farming activities, agri- 	<ul style="list-style-type: none"> • Improving accessibility of rural towns, and informal settlements to the social and economic opportunities in urban areas mainly through the development of 	<ul style="list-style-type: none"> • The TREP is a dedicated programme to transform and integrate opportunities in townships and rural 	<ul style="list-style-type: none"> • The TREP is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. 	<ul style="list-style-type: none"> • The Spatial Development Framework aims to offer strategic guidelines on the prioritisation of infrastructure in



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcaawu
	<p>enterprises and agri-led industrialisation.</p> <ul style="list-style-type: none"> Optimising historical investment in rural infrastructure and adopting sustainable technologies in new investments. Investigate how affordable and sustainable mobility in rural areas Development of a strategy to address the establishment and inevitable decline of mining towns. The TREP is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. 	<p>public transport networks, activity nodes and corridors,</p> <ul style="list-style-type: none"> prioritising agricultural and rural development along mobility corridors and at strategic intersections, The TREP is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. 	<p>areas into productive business ventures.</p> <ul style="list-style-type: none"> Rural Intervention Area 1 is located around the N7 and Oceans development corridor. Rural Intervention Area 2 is located around the Orange River and N14 Corridor: Rural Intervention Area 3 is located around the R63 and R27 Corridors 	<ul style="list-style-type: none"> Uptake of commercial land in dense rural settlements Identify the role of specific settlements as gateways and interchanges on the regional public transportation network and incorporate these as such into the planning of functional rural regions. Strengthen the connectivity of traditional areas and rural settlements with (1) higher-order urban settlements, and (2) economic systems in functional rural regions, by making use of the road and rail network and regional corridor development. 	<p>Small Towns. The Kai !Garib and !Kheis local municipalities have been identified by SALGA as the two municipalities in the ZFM DM that will benefit from the Small Town Regeneration programmes out of the 16 participating municipalities in the Northern Cape.</p> <ul style="list-style-type: none"> Giving more attention to rural-urban linkages can enhance our understanding of the complexities of poverty and urbanisation processes. <p>Small-Town Regeneration Strategy</p>



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<ul style="list-style-type: none"> Plan social infrastructure provision within a regional-rural setting using the ‘social services wheel’ and use such investment to establish and create well-functioning, compact, lively, rural settlements, and regional rural systems 	<ul style="list-style-type: none"> To address poverty in small towns To address economic marginalization To address imbalances caused by spatial deficiencies. To build a more inclusive society and economy To increase the number of people who are in sustainable economic activity. To develop infrastructure To reduce unemployment through local economic development initiatives



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
Social Amenities	<ul style="list-style-type: none"> • Provide catalytic, innovative, and contextually suitable sustainable infrastructure, and social and basic services to support enterprise development, well-being, and inclusive growth with both an ecological and human-focussed approach. • Prioritise human capital and people-centred enterprise development 	<ul style="list-style-type: none"> • There exists a distinctive and specialized prospect for the advancement of higher education • Basic education -7 new schools are proposed in Ga Segonyana, 2 in Gamagara and 1 in Joe Morolong local Municipalities. • The envisaged hospital poses a unique opportunity Although higher education facilities are highlighted specifically, they should also be seen in conjunction with basic The continuous development of tourism in the district 	<ul style="list-style-type: none"> • Identify areas with a lack of facilities. • Maintenance of Social Facilities • Prioritize access to Social Amenities to support community livelihoods. 	<ul style="list-style-type: none"> • All households access a health facility within a 5km radius. • Number and location of new health facilities. • Weakly mobile clinics. • The number of new schools • Eliminate inequalities among and within communities. • Improve the quality of life, especially of poor communities, provide for law and order, and enhance the stability of a community. • Ensure that sufficient land is reserved for essential facilities. 	<ul style="list-style-type: none"> • Construction of new education facilities • •
Institutional	<ul style="list-style-type: none"> • There are various aims of this KPA. The first as outlined in the IDP is to “Create, 	<ul style="list-style-type: none"> • The creation and promotion of an enabling environment for business is 	<ul style="list-style-type: none"> • Reducing Red Tape is all about using a wide range of specific tools that 	<ul style="list-style-type: none"> • To ensure intergovernmental cooperation of the different spheres of 	<ul style="list-style-type: none"> • To formalise stakeholder engagements thereby allowing



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<p>Strengthen and maintain a positive opinion of the district through effective channels of communication”</p> <ul style="list-style-type: none"> • Municipal Internal Audit, the district aims to “Facilitate the Provision of internal audit services in the district”. • Reducing Red Tape is all about using a wide range of specific tools that promote service delivery excellence. There are three main determinants of customer service excellence - people, processes, and technology. They should be viewed as overlapping circles with the so-called 	<p>fundamental to a competitive and vibrant economy</p> <ul style="list-style-type: none"> • Develop a Red Tape Action Plan, which includes identifying practical ideas and solutions to address each of the causes and identifying a Red Tape Champion to take responsibility for taking forward and ensuring the Action Plan is implemented 	<p>promote service delivery excellence. There are three main determinants of customer service excellence - people, processes, and technology. They should be viewed as overlapping circles with the so-called ‘sweet spot of service quality’ being achieved when the three operate in harmony with the customer’s preferred method of doing business.</p>	<p>government to facilitate the development of transport-related infrastructure.</p> <ul style="list-style-type: none"> • Increase accessibility between the disadvantaged rural areas and Regional Development Anchors • Reducing Red Tape is all about using a wide range of specific tools that promote service delivery excellence. There are three main determinants of customer service excellence - people, processes, and technology. They should be viewed as overlapping circles with the so-called ‘sweet spot of service quality’ being achieved when the three operate in 	<p>them to find common economic ground for the district.</p> <ul style="list-style-type: none"> • To extend the area of responsibility to all people with a vested interest in growing the district to be a home for all races and address collaboratively all existing social ills. • To understand the scope of planned economic initiatives beyond the public sector or government-driven initiatives. • Reducing Red Tape is all about using a wide range of specific tools that promote service delivery excellence.



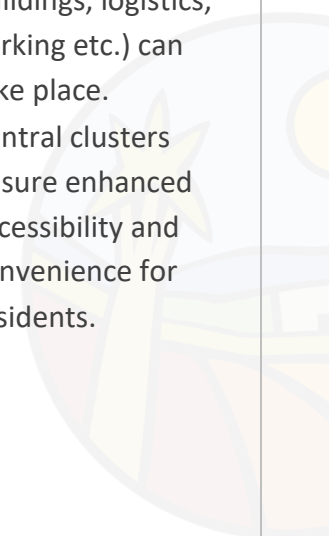
Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	‘sweet spot of service quality’ being achieved when the three operate in harmony with the customer’s preferred method of doing business.			harmony with the customer’s preferred method of doing business.	There are three main determinants of customer service excellence - people, processes, and technology. They should be viewed as overlapping circles with the so-called ‘sweet spot of service quality’ being achieved when the three operate in harmony with the customer’s preferred method of doing business.

BUILT ENVIRONMENT FRAMEWORK

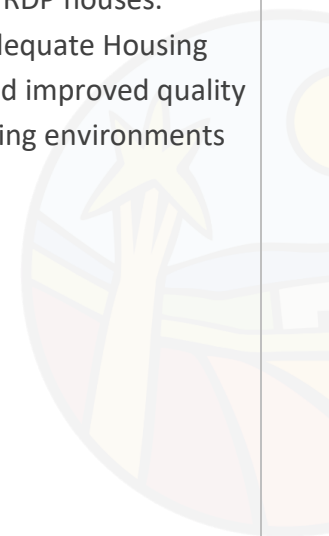
Urban Development Settlements/nodes	<ul style="list-style-type: none"> • Sustainable urban development • Allowing the development of smaller residential erven 	<ul style="list-style-type: none"> • Keeping both Kuruman as the planned regional anchor and the knowledge-based economy linked to health, mining, and the Agri-park, as well as the 	<ul style="list-style-type: none"> • Prioritise investment in human settlements per local municipality – promote integrated planning. 	<ul style="list-style-type: none"> • Development of nodes • Focusing strategic and high-impact projects within focus areas • Promoting clusters of public facilities to 	<ul style="list-style-type: none"> • Facilitate the development of special-use facilities and ensure that a financial strategy is developed to ensure a sustainable source
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Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<ul style="list-style-type: none"> Discouraging subdivision of agricultural land (outside of the Urban Edge) No development is to be permitted on any nature reserves and the outer boundary of the vegetation of coastal forests and reserves. Ensure effective city and town management to prevent sprawl, ensure innovative settlement planning and urban land reform, well-managed land use, enabling infrastructure investment. 	<p>higher education facilities in mind, Kuruman should perhaps be the better choice for the regional airport.</p> <ul style="list-style-type: none"> Linkage to existing planned initiatives, such as human settlement Concentration of development within and along development and activity nodes, The existing Hotazel town urban edges in Joe Morolong Municipality should be reviewed to guide the development growth and accommodate the demand for housing. 	<ul style="list-style-type: none"> Prioritise the upgrade of informal areas. Ensure that Municipal Land Use Schemes (LUMS) have appropriate zones to support the development of such facilities including appropriate additional controls. Alternative methods for the disposal of human remains need to be explored Communal cemeteries within farmsteads and Traditional Authority areas need to be mapped as part of the development of Traditional Settlement Map 	<p>encourage nodal development.</p> <ul style="list-style-type: none"> Availability of infrastructure in nodes to enable these to perform their roles. The number of public facilities located in the identified service. Re-development, whereby urban sprawl is controlled; the urban landscape is more formalised and optimally utilized to maximize benefits. Physical restructuring entails physical rearrangement and provision of basic services. Revitalisation seeks to rejuvenate the dilapidated sections of the mixed-use business areas and address 	<p>of revenue for the operation of such facilities.</p> <ul style="list-style-type: none"> Multiple neighbourhoods can be served by social services in central points. The sharing of facilities between various services (e.g., buildings, logistics, parking etc.) can take place. Central clusters ensure enhanced accessibility and convenience for residents.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<p>overcrowding as well as improve the aesthetic character of the mixed-use development areas (informal CBDs).</p> <ul style="list-style-type: none"> Focus is given to the restructuring of these main development centres 	
Housing	<ul style="list-style-type: none"> Encouraging the development of 'Social Housing' in the Integration Zones identified within the Urban Edge. Encouraging higher densities in 'low cost' housing developments, Encouraging the development of flats and townhouses Allowing the development of smaller residential erven 	<ul style="list-style-type: none"> Increase the need for housing The housing need in Gamagara Municipality remains high with a total backlog of 7 300. 	<ul style="list-style-type: none"> Prioritise investment in human settlements per local municipality – promote integrated planning. Prioritise the upgrade of informal areas. 	<ul style="list-style-type: none"> Affordable housing projects should have easy access to public transport. 	<ul style="list-style-type: none"> Eradicate shacks through rolling out of RDP houses. Adequate Housing and improved quality living environments



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
Corridors	<ul style="list-style-type: none"> The Northwestern Transformation Corridor is identified in the NSDF as a national priorities on this region. The Northern Cape SDF identifies a proposed roadway linking Kimberley to Kuruman, the current R31 Strengthen and upgrade on the existing freight corridors, developing logistic and industrial corridors, and corridor development along the N2 and N18. 	<ul style="list-style-type: none"> Prioritising agricultural and rural development along mobility corridors and at strategic intersections, To develop a detailed Agricultural Master Plan for the proposed development zones which needs to improve the effectiveness and management of the region This corridor forms the mining belt of the John Taolo Gaetsewe, Frances Baard, and ZF Mgcawu districts and runs from Lime Acres and Daniëlskuil to Hotazel in the north The N14 Industrial Development Corridor is a significant initiative aimed at boosting economic growth and 	<ul style="list-style-type: none"> The Namakwa District is strategically located along the N7 transport corridor, serving as a crucial tourism and freight route between Cape Town and Namibia. The Northern Cape Economic Development, Trade, and Investment Promotion Agency (NCEDA) has identified the Richtersveld Local Municipality as the municipality to have an SEZ. 	<ul style="list-style-type: none"> Development along municipal and or provincial development corridors A number of high-impact and catalytic projects are located along with transportation or other development corridors. Focused development in Settlements located along activity and movement corridors Type and level of services provided to settlements located along development corridors. The District forms part of the Arid-Innovation Region (NSDF, 2020). Carnarvon falls within the proposed Astronomy 	<ul style="list-style-type: none"> The Northern Cape Economic Development, Trade and Investment Promotion Agency (NCEDA) has identified the Dawid Kruiper Local Municipality (Upington Industrial Park) as the municipality to have an industrial park Prioritise and strengthen strategically located regional development anchors in productive rural regions and priority national development, trade and transport corridors to provide a range of services



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
		development in the Northern Cape Province of South Africa. The		<p>Development Zone (PSDF, 2019)</p> <ul style="list-style-type: none"> • The remaining parts of the District fall under the Karoo Zone (region). • The De Aar Technology Corridor is proposed. 	<p>within the specific towns/cities and surrounding network of settlements and productive rural regions.</p> <ul style="list-style-type: none"> • Support and strengthen strategically located regional development • Strengthen the connectivity of traditional areas and rural settlements with (1) higher-order urban <i>settlements</i> and (2) <i>economic systems</i> in functional rural regions, by making use of the road and rail network and regional corridor development



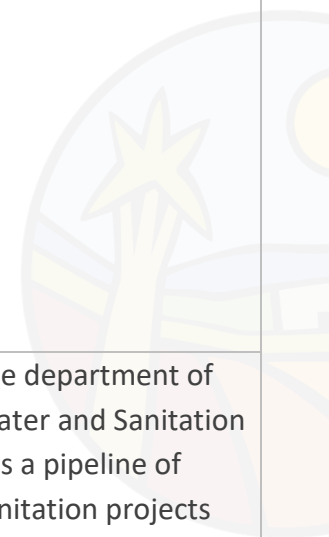
Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
Bulk Infrastructure	<ul style="list-style-type: none"> Provision of basic services to informal settlements. Development of a Master Infrastructure Plan to align and coordinate infrastructure investment Improve the levels of mobility, infrastructure development, and synergies in the transport planning activities. Green Infrastructure - developers within the would need to consider green building techniques. 	<ul style="list-style-type: none"> Develop a network of (1) strong and vibrant existing and emerging cities and large towns to fulfil the role of fully-fledged national urban nodes, (2) viable regional development anchors, and (3) well-capacitated rural service centres; Ensure effective city and town management to prevent sprawl, ensure innovative settlement planning and urban land reform, well-managed land use, enabling infrastructure investment. Provide catalytic, innovative, and contextually suitable sustainable infrastructure, 	<ul style="list-style-type: none"> An effective, competitive, and responsive infrastructure network is imperative for the ongoing economic development of the province and the local municipalities. Support convergence to green building approach, green building design, etc. to promote energy saving at a local municipal level. 	<ul style="list-style-type: none"> Capitalising on existing transportation, utilities, and civil infrastructure and activities to strengthen and diversify the local economy while eradicating service backlogs and creating an environment where all communities are at least adequately serviced Two large hydropower stations were constructed at Gariep and Vanderkloof Dams 	<ul style="list-style-type: none"> The policy framework indicates a high level of willingness from the South African government to transform the economy and cease the opportunity while the window is still open. Interestingly the proposals for the localisation of solar geysers and panel manufacturing and improvement of investment climate within the industrial set-up of the green sector are surely gaining momentum.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
Water	<ul style="list-style-type: none"> Promote water conservation and demand management through regulation where appropriate. Rainwater harvesting, greywater recycling, re-use of treated effluent from WWTW and similar technical enhancements should be encouraged. Dedicated catchment management for important water yield areas (notably the NFEPA and priority sub-catchments). Ensure that water is fit for use as imposed by the water quality standards. 	<ul style="list-style-type: none"> Addressing the significant backlogs related to bulk infrastructure Water, sanitation, electricity and refuse removal (particularly landfill sites) should receive priority The expansion and upgrading of the Vaal-Gamagara pipeline 	<ul style="list-style-type: none"> Identify and establish new water sources to mitigate the impact of lower precipitation and promote water-wise measures to restrict irresponsible water use. Smart water technologies Establish a seawater desalination plant on the west coast of the district near Boegoebaai. Promote water-wise measures by means of a dedicated campaign. Improving the water quality of the Orange River 	<ul style="list-style-type: none"> Water conservation and demand management should be encouraged through regulation where appropriate. Rainwater harvesting, greywater recycling, and similar technical enhancements such as low-flow shower heads, dual flush toilets, and water-wise gardens should be encouraged with respect of new residential, commercial, and community projects. There should be the implementation of water demand management techniques such as minimizing leaks by reducing water pressure and a stepped tariff system that 	<ul style="list-style-type: none"> It would be desirable to have green water used for ablution facilities, in all urban centres, this will respond to climate change and preserve of blue water supply. Groundwater management strategy for the Municipal region. Water use and management initiatives to capacity the local community for the sustainable use of water resources.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<p>effectively addresses excessive water consumption.</p> <ul style="list-style-type: none"> • An invasive alien species control plan should be developed, with a particular focus on stressed catchments and previously cleared catchments for water production. • All new development projects should be fitted with water-saving technology and be approved subject to appropriate water-saving conditions. 	
Sanitation	<ul style="list-style-type: none"> • Provision of adequate sanitation, stormwater and waste management services. 	<ul style="list-style-type: none"> • Addressing the significant backlogs related to bulk infrastructure Water, sanitation, electricity and refuse removal (particularly landfill 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Improved sanitation services and infrastructure • Waterborne sanitation system in areas inside urban edge. 	<ul style="list-style-type: none"> • The department of Water and Sanitation has a pipeline of sanitation projects for the district, and this will be shown in



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
		sites) should receive priority			the implementation plan.
Solid Waste Management & Refuse Removal	<ul style="list-style-type: none"> Waste management planning should be addressed in an integrated manner; Waste should be minimized by the recycling process; Waste collection and transportation facilities to be managed; and The proper management of waste treatment and disposal. 	<ul style="list-style-type: none"> Addressing the significant backlogs related to bulk infrastructure Water, sanitation, electricity and refuse removal (particularly landfill sites) should receive priority 	<ul style="list-style-type: none"> The JTGDM has established a regional waste management plan that ensures participatory and effective waste management sustainably. 	<ul style="list-style-type: none"> Disposal Infrastructure Waste Collection Infrastructure Institutional Capacity and Human Resources Financial Resources Dissemination of Information / Communication Management of Illegal Waste Minimisation Material recovery facilities should be established at all transfer stations. Every urban settlement should have a transfer station within a maximum of 5km from the town centre, inside the urban edge. These transfer stations should be effectively managed 	<ul style="list-style-type: none"> Waste management planning should be addressed in an integrated manner; Waste should be minimized by the recycling process; Waste collection and transportation facilities to be managed; and The proper management of waste treatment and disposal. Implementation of a litter control programme for the Local municipalities in the district Possible recycling strategies to be implemented



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcau
				<p>according to best practices to minimize nuisance to surrounding neighbours.</p> <ul style="list-style-type: none"> Transfer stations can include facilities like drop-offs, recycling centres, treatment facilities, and waste disposal facilities. 	<ul style="list-style-type: none"> Development of partnerships with community-based Organisations & Non-Government Organisations involved in environmental programmes Identify additional, suitable waste sites for all the local municipalities.
Electricity	<ul style="list-style-type: none"> The FBDM should work with the local municipalities and other government agencies to develop solutions to bottlenecks through transmission modernisation, new facilities, and smart transmission technology. 	<ul style="list-style-type: none"> High-capacity power lines into and out of the district need to be improved and developed 	<ul style="list-style-type: none"> Identify/ Map areas most suitable for renewable energy projects, specifically wind energy. Support convergence to green building approach, green building design, etc. to promote energy saving at a local municipal level. 	<ul style="list-style-type: none"> Development of the up to 400 kV De Aar 2 South Transmission Line and Switching Station, Northern Cape Province The expansion of the electrical grid and the capacity The Northern Cape Province has identified a solar corridor which stretches from 	<ul style="list-style-type: none"> To develop ZFM DM as a leading centre for Renewable Energy and introduce green opportunities for local companies and green jobs for local people. Renewable energy is proposed for all



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
			<ul style="list-style-type: none"> Support roll-out of onshore gas pipeline network ESKOM battery storages 	<p>Uppington to De Aar in the Pixley Ka Seme District which is home to the Vanderkloof Power Station.</p> <ul style="list-style-type: none"> There is currently a PV solar plant under construction at Kenhardt. 	<p>areas within the district.</p> <ul style="list-style-type: none"> Reduction of carbon emissions due to renewable energy being used. Local manufacturing provides skills and economic upliftment. enhanced reliability and resilience reduced environmental impact. power quality improvement energy efficiency by loss reduction Local Network congestion relief
Renewable energy	<ul style="list-style-type: none"> The district should support the development of a comprehensive 	<ul style="list-style-type: none"> Alternative (specifically) energy from the district into the national grid, as well as across the 	<ul style="list-style-type: none"> Local energy production through renewable sources: solar, wind 	<ul style="list-style-type: none"> Renewable energy projects should be promoted to ensure at least basic services are 	<ul style="list-style-type: none"> To develop ZFM DM as a centre for Renewable Energy and maximise



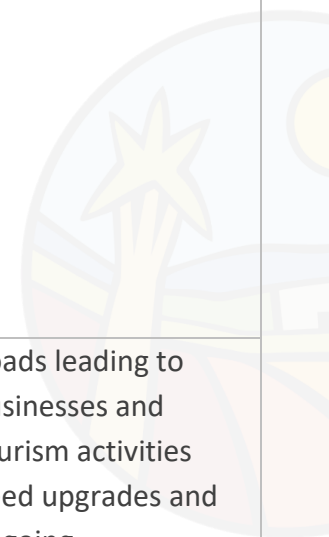
Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<p>strategy to deploy smart grid technologies.</p>	<p>border to Botswana and other SADEC countries can be embraced.</p> <ul style="list-style-type: none"> Alternative energy solutions should be explored and embraced to ensure household access to affordable, reliable, and sustainable energy. Solar energy should be encouraged because it provides the excellent potential to not only promote green energy and to reduce the district's carbon footprint but specifically to create new sources for economic development and diversification, economies of scale and SMME development. 	<ul style="list-style-type: none"> Promote and encourage green technology, solar power and wind energy use and implement a rebate strategy. The coastal plain from Koingnaas to Alexander Bay The inland plateau from Springbok to Pofadder Loeriesfontein to Granaatboskolk South of Sutherland to the border of the Namakwa DM 	<p>provided to all communities.</p> <ul style="list-style-type: none"> Appropriate instruments/mechanisms for implementing renewable energy projects should be developed. Renewable energy projects should be sensitively located in the receiving environment. The Copperton Wind Farm Project is situated in the Siyathemba Local Municipality (Northern Cape), specifically within the small settlement of Copperton Potential for green hydrogen volumes in setting up the Prieska Power Reserve, and projects like it across 	<p>opportunities for local companies and local people</p> <ul style="list-style-type: none"> Promote ZFM DM through the activities of the Renewable Energy Partnership Encourage companies and the district municipality to develop a Directory of Green Products that can be produced locally and mobilise necessary investment for implementation purposes. Prioritise local manufacturing of Solar Geysers and Solar panels to support the government initiative of installing



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				the Northern Cape solar belt. This complements the Hydrogen Valley project being spearheaded by Anglo Platinum and Sasol's partnership with the Gauteng Provincial Government to create decarbonised industrial power grids and supply lines for hydrogen-based green aviation fuel.	<p>more solar geysers in low-cost housing</p> <ul style="list-style-type: none"> Develop a comprehensive range of training and support opportunities that will bring home a better understanding of the Green Economy and related products.
Telecom	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Telecommunication infrastructure, especially high-speed internet connectivity Encourage Telecommunication and Information Infrastructure 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> SIP 15 in the National Infrastructure Plan focuses on expanding access to communication technology To utilize the SIP 15 Broadband rollout of Pixley ka Seme, which will link all the government offices with fibre optic 	<ul style="list-style-type: none"> It should be acknowledged that new technological advancements in smart urban systems, green energy, mass transit transportation and telecommunications play a role in assisting cities to become centres of



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<p>technology to achieve Broadband & Wi-Fi Access to create downstream strategy implementation for the youth development initiatives.</p> <ul style="list-style-type: none"> Enhance rural telecommunication enterprise development to foster local economic development and improve rural livelihoods. Investigate and promote the establishment of telecentres and digital hub service points. 	<p>innovation, culture and diversity.</p>
Transport and Logistics	<ul style="list-style-type: none"> The Northwestern Transformation Corridor is identified in the NSDF as a national priorities on this region. 	<ul style="list-style-type: none"> High corridor potential is clear between Vryburg, Kuruman and Kathu Roadworks on the N14 next to Kathu must be 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> N1: Cape Town – Worcester – Beaufort West – Colesberg – Bloemfontein – Kroonstad – Johannesburg – Roodepoort – Pretoria – 	<ul style="list-style-type: none"> Roads leading to businesses and tourism activities need upgrades and ongoing maintenance throughout the



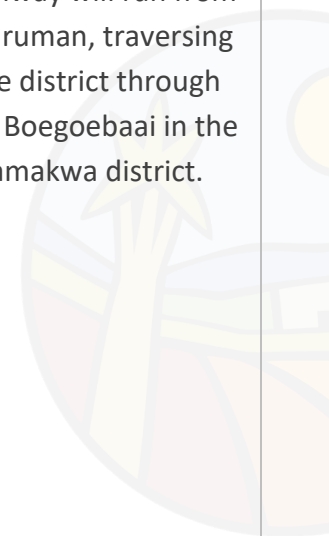
Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	<ul style="list-style-type: none"> Extend and improve the transportation networks, ensure regular maintenance and upgrading of existing infrastructure, 	<p>completed as a matter of urgency.</p> <ul style="list-style-type: none"> Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 or R380 and the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, Bus passenger transport should also be rolled out in line with the polycentric nodes, hubs, and service centres in the different district functional economic regions. 		<p>Polokwane – Musina – Beit Bridge (– Bulawayo, Zimbabwe) - Lusaka) -Zambia);</p> <ul style="list-style-type: none"> N8: Groblershoop – Kimberley – Bloemfontein – Ladybrand – Maseru Bridge (– Maseru, Lesotho); N10: Port Elizabeth – Cradock – Middelburg (EC) – De Aar – Prieska – Upington – Nakop (– Keetmanshoop, Namibia); N12: George – Beaufort West – Kimberley – Klerksdorp – Potchefstroom – Johannesburg – eMalahleni. Inter-Regional Rail Corridors via De Aar 	<p>district. There is a need for maintaining the rural roads to facilitate transport to/from farms in areas in the Dawid Kruiper (Kalahari area),!Kheis, Kai !Garib and Tsantsabane municipal areas.</p>



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
Roads	<ul style="list-style-type: none"> Extend and improve the transportation networks, ensure regular maintenance and upgrading of existing infrastructure, notably roads, increase investment in high-speed ICT infrastructure and enhance urban-rural and rural-rural connectivity; Other key movement linkages which would require further upgrades include the N8 and N12 	<ul style="list-style-type: none"> Upgrade of existing and proposed road network Upgrading both the N14, R31 and the R380 and maintaining Other proposed road upgrades Mining-related exports from the district, as well as importing mining and industrial-related products to the district, by road must be eradicated over time 	<ul style="list-style-type: none"> Upgrade of existing and proposed road network Boegoebaai Deep Water Port Development Designate specific road-based freight routes, linking the proposed Boegoebaai Port development to the east and south. Upgrade of existing and proposed road network Other proposed road upgrades Promote key transport routes. 	<ul style="list-style-type: none"> Upgrade of existing and proposed road network Maintain and enhance the National road infrastructure quality in the region Upgrading of major transportation routes/roads Improving access to existing and proposed focus areas Creating new linkages and Gateways Improved public transportation networks through infrastructure development/upgrading and/or refurbishment 	<ul style="list-style-type: none"> Promote compact, walkable development patterns that support transit reduce carbon emissions from vehicles and discourage development patterns that rely solely on vehicles for transportation in an effort to reduce vehicle miles travelled Roads leading to businesses and tourism activities need upgrades and ongoing maintenance throughout the district.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
					<ul style="list-style-type: none"> There is a need for maintaining the rural roads to facilitate d
Rail	<ul style="list-style-type: none"> Should rail be upgraded, it should be in line with that of logistics movement, 	<ul style="list-style-type: none"> Establish a reliable railway service for passengers between Springbok and Upington with the potential to extend southwards along the N7. Boegoebaai Port and rail links. The Hotazel to Gqeberha, Boegoe Bay, and Sishen to Saldanha railway lines, with connector lines are of strategic importance in this regard. 	<ul style="list-style-type: none"> Establish a reliable railway service for passengers between Springbok and Upington with the potential to extend southwards along the N7. Boegoebaai Port and rail links 	<ul style="list-style-type: none"> Manganese export line, Transnet is developing the rail network between the manganese-rich Northern Cape and the Port of Ngqura in the Eastern Cape, to become the utility's third heavy haul export channel. Revitalise rail corridor for passenger and freight rail. Invest in and enhance key rail stations such as De Aar Railway Station. A core Shosholozo Meyl rail system between Johannesburg, Noupoot and Cape Town 	<ul style="list-style-type: none"> There is a proposal by NCEDA for a new rail link to assist with the strain experienced by the current railway infrastructure. The railway will run from Kuruman, traversing the district through to Boegoebaai in the Namakwa district.



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
				<ul style="list-style-type: none"> High-speed rail (400km/hour) as part of a high-speed rail system between Johannesburg and Cape Town: between Bloemfontein and Kimberley, between Kimberley and De Aar, and between De Aar and Noupoot. Enhanced PRASA Autopax services linking De Aar and Upington extending to Namibia Enhanced Coach Services linking Johannesburg, Kimberley, De Aar, Noupoot, Graaff Reinet and 	
Air Transport	<ul style="list-style-type: none"> The prevailing development trend around the airport precinct includes renewable energy, 	<ul style="list-style-type: none"> Kuruman should perhaps be the better choice for the regional airport. 	<ul style="list-style-type: none"> Upgrade the current airports, airfields, and airstrips within the Namakwa DM. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Development of a Cargo Hub – Upington Airport Converting Upington Airport's spare



Key Areas	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	ZF Mgcawu
	residential development, mixed-use development.	<ul style="list-style-type: none"> The envisaged regional airport is expected to play a key role in this corridor and gateway. 			capacity into parking and storage space for under-utilised (mothballed) airliners from Europe and Africa



5 SPATIAL CHALLENGES AND OPPORTUNITIES

5.1 INTRODUCTION

This section provides a strategic overview of the provincial area through summarising the status of the biophysical, socio-economic and built environment. This chapter is built on the Status Quo analysis report that was developed as a precursor of the Spatial Framework. The key challenges and opportunities are addressed as follows:

HUMAN SETTLEMENTS

- Poverty and Vulnerability;
- Population concentrations;
- Settlement and Housing; and
- Economic concentrations.

INFRASTRUCTURE DEVELOPMENT

- Basic Services;
- Energy; and
- Technology.

CONNECTIVITY AND MOBILITY

- Public transportation.

PROVINCIAL RESOURCES

- Mining resources;
- Environmental Resources;
- Tourism resources;
- Agricultural resources; and
- Competing resources.

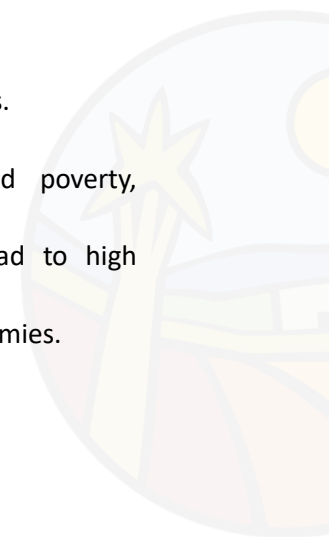
5.2 HUMAN SETTLEMENTS

Human settlements play a key role in the provision of basic and social needs to communities. The Northern Cape is characterised by its vast distances between small and regional centres within the province which creates challenges for Local Municipalities to provide basic services. The following section provides an overview of the challenges affecting and manifested within settlement areas and the potential opportunities that can be utilised to alleviate the challenges faced within these spaces.

5.2.1 POVERTY AND VULNERABILITY

5.2.1.1 Spatial Challenges

- The majority of poverty is concentrated in urban areas.
- The John Taolo Gaetsewe District's tribal and mining region has the largest poverty pocket conglomerate.
- Health and social services are provided to isolated rural communities.
- Accessibility and road conditions.
- Inadequate public transportation network/
- Cost of expanding infrastructure and services to rural areas.
- Lack of social cohesion and quality health care.
- Limited growth and job creation lead to increased poverty, urbanization, and informal settlements.
- Lack of relevant skills and slow economic growth lead to high unemployment rates.
- Limited Economic diversification and declining town economies.
- Climate change.
- Law enforcement.
- Diseases.
- An increase in grant dependency.
- Food security.
- Limited technical support for rural communities.



5.2.1.2 Spatial Opportunities:

- Northwestern National Spatial Transformation Corridor (NSDF) focus in terms of rural development and Poverty alleviation.
- Effective poverty alleviation efforts can be concentrated in urban areas.
- Concentrated poverty alleviation programmes can indirectly aid migration.
- Mobile social and health services can be provided.
- Sustainable livelihood models and sustenance farming can be promoted in rural areas.
- Diversification of Economy.
- New economic sectors developing.
- Skills development in various sectors.

5.2.2 POPULATION CONCENTRATION

5.2.2.1 Spatial Challenges:

- Population concentrations are concentrated near economic activities and centres.
- The Tribal Authority areas in the John Taolo Gaetsewe district have high population densities in rural areas.
- The population is concentrated in urban areas, but in the east, small population concentrations are dispersed with limited accessibility.
- Limited accessibility and mobility options for rural and small population areas.
- The cost of expanding infrastructure and services to rural areas.
- Urban sprawl.
- Climate Change and migration patterns due to economic pressures.

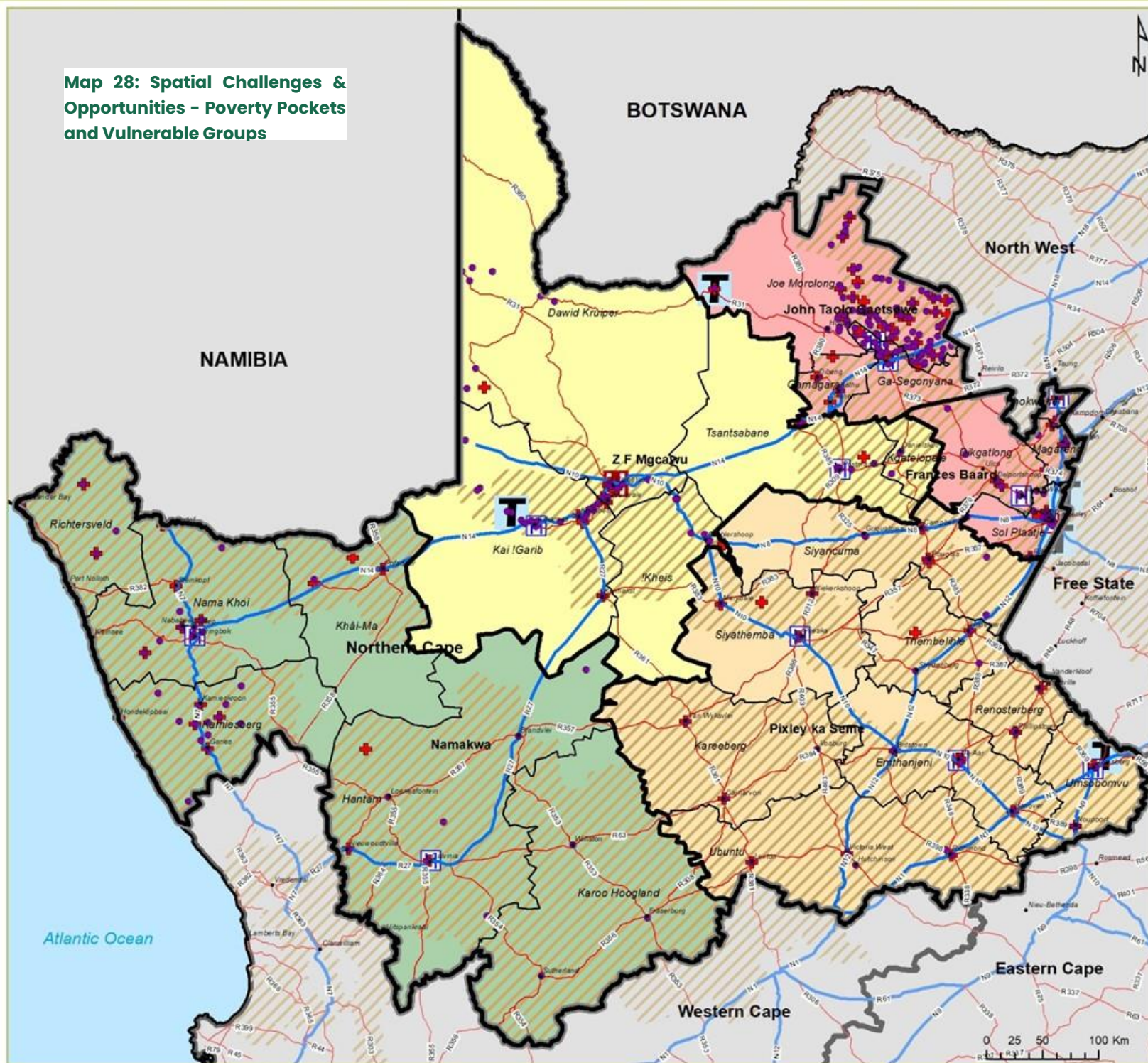
5.2.2.2 Spatial Opportunities:

- Investing in densely populated areas yields higher returns.
- Investing in larger regional centres and providing satellite services to other towns will improve service and product accessibility.
- Provide mobile and electronic services to rural and isolated communities.

- Promoting sustainable livelihood models to help rural and isolated communities sustain themselves.
- Concentrating on shared services between Provincial Sector Departments,
- Implementing the Level of Service wheel model as indicated in the NSDF,2022.



Map 28: Spatial Challenges & Opportunities - Poverty Pockets and Vulnerable Groups



SPATIAL CHALLENGES

POVERTY POCKETS AND VULNERABLE GROUPS

Legend

- Town/Settlement
- SASSA Paypoints
- ✚ Clinic
- [H] District Hospital
- [H] Provincial Tertiary Hospital
- [H] Regional Hospital
- T Thusong Centres
- Main Roads
- National Roads
- ▨ Poverty Pockets
- Local Municipality
- ▭ District Municipality

Population Living on Lower Bound Poverty Line

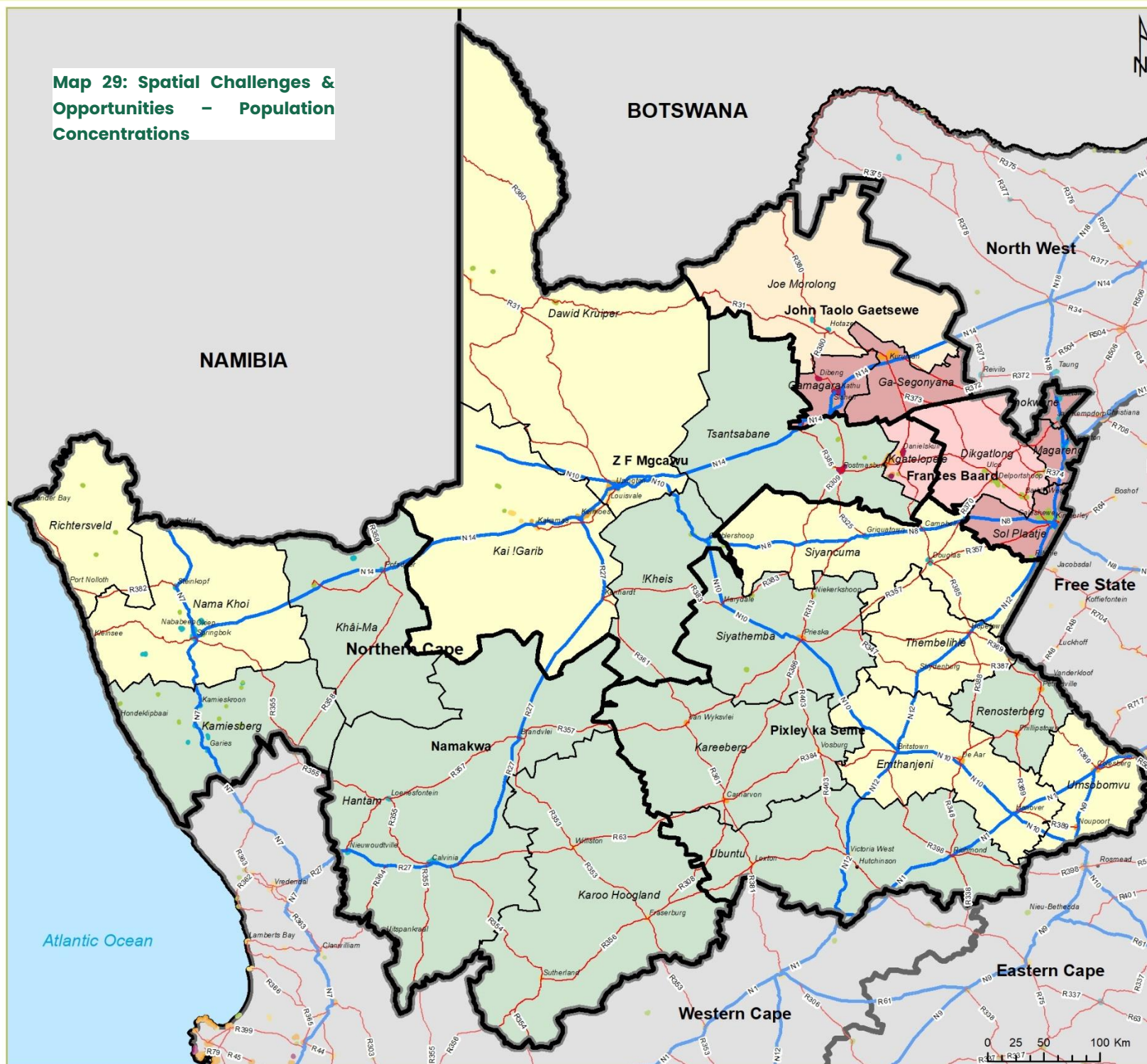
- 0% - 25%
- 25.1% - 30%
- 30.1% - 35%
- 35.1% - 40%
- > 40%

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



Map 29: Spatial Challenges & Opportunities – Population Concentrations



SPATIAL CHALLENGES POPULATION CONCENTRATION

Legend

- Town/Settlement
- Main Roads
- National Roads
- Local Municipality
- District Municipality

Population Density Per Km Squared

- 0 - 2,5
- 2,51 - 5
- 5,1 - 7,5
- 7,51 - 10
- > 10

Pop_Pressure

- Decrease
- No Change
- Medium
- High
- Extreme

Source: Green Book Project 2019

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



5.2.3 SETTLEMENTS AND HOUSING

5.2.3.1 Spatial Challenges

- Due to the level of migration to dominant economic regions, the largest informal settlements are located in close proximity to economic centres.
- Regional economic centres are struggling to provide adequate housing to the growing population.
- The prevalence of informal housing gives rise to various other social and health challenges.
- The sustainability of settlements presents a shift towards the east as presented in the NSDF. This is due to mitigation measures against climate change and the impact thereof on water availability.
- The pressure experienced by mining towns to develop and the impact thereof on smaller municipalities (socio-economic pressures).
- Service delivery has also become a problematic area for the province where basic services are not being maintained in most settlements and towns.
- Backlog in housing also has increased over the last number of years within the province thus creating the ideal environment for informal settlement expansion.
- Lack of affordable housing.

5.2.3.2 Spatial Opportunities:

- Focus settlement investment and development in regional economic centres, in order to effectively address informal settlement growth.
- Prioritise development in Priority Human Settlements Housing Development Areas (PHSHDA).
- Development of new housing provision models to provide sustainable human settlements in a timely and efficient manner.
- Unlocking of the informal economy within informal settlements through mixed and transit-orientated developments.
- Development and finalisation of a Provincial Housing Provision Plan that needs to be aligned with the spatial proposals and

recommendations made in the PSDF, 2020 (also refer to the Socio - Economic Potential of Towns study).

- Ensure adequate bulk infrastructure and accessibility for new development pressures close to Regional Development Anchors, Nation Urban Nodes and Economic centres.

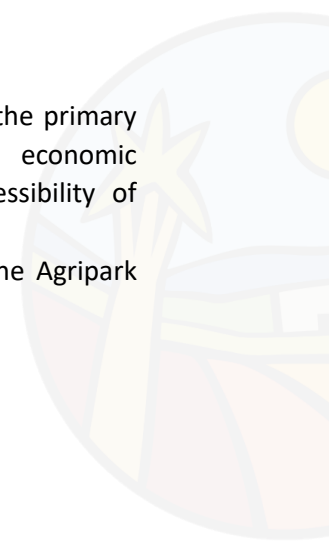
5.2.4 ECONOMIC CONCENTRATIONS

5.2.4.1 Spatial Challenges:

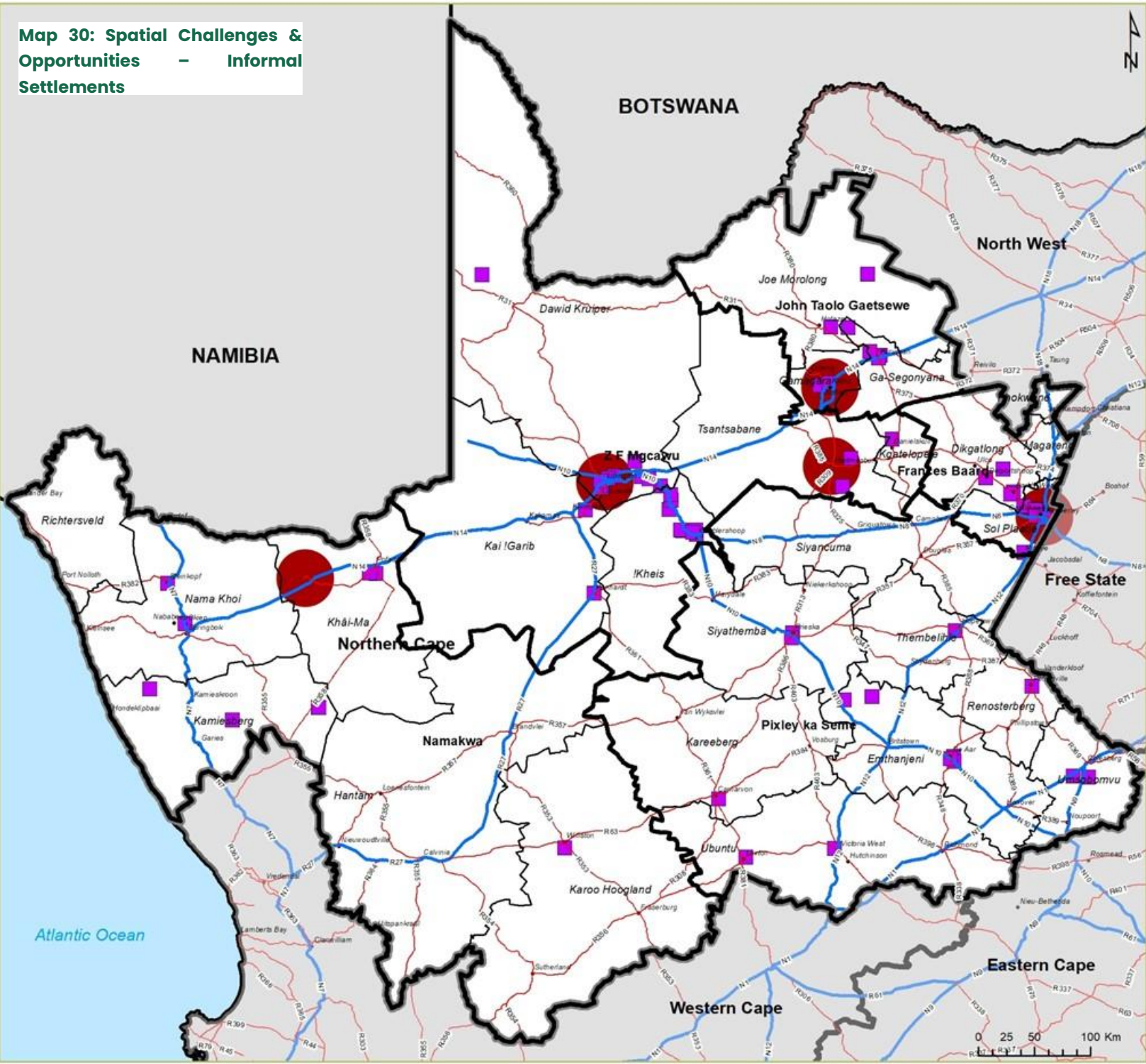
- The province has 3 major regional economic centres, concentrated towards the east of the province, limiting the access to economic opportunities of the remaining parts of the province.
- Due to the dependence on the primary sector, diversification levels are low, which is required to stimulate further economic growth in secondary and regional centres.
- Due to the limited distribution of economic activities, rural municipalities have limited financial viability.

5.2.4.2 Spatial Opportunities:

- Stimulate growth in secondary centres, to both support the primary economic centres, as well as expand and diversify economic opportunities, to stimulate economic growth and accessibility of markets.
- Unlocking of informal economic opportunities through the Agripark programme and similar initiatives.



Map 30: Spatial Challenges & Opportunities – Informal Settlements



SPATIAL CHALLENGES
INFORMAL SETTLEMENTS

Legend

- Town/Settlement
- PHSDA Priority Township Development
- 2023/2024 Human Settlements Projects
- Main Roads
- National Roads
- Local Municipality
- District Municipality

Source: Department of Human Settlements

NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK



5.3 INFRASTRUCTURE DEVELOPMENT

Access to infrastructure is crucial for both communities and economic sectors alike. In the Northern Cape, access to water and electrical infrastructure plays a crucial role in creating a conducive environment for economic development and social inclusivity. Numerous areas and towns are experiencing water shortages, where in other cases the inadequate electricity supply and the capacity of the grid, limit the expansion of the manufacturing sector. Renewable energy production is a dominating infrastructure activity within the province, which requires clear guidance, management and maintenance, to ensure it does not negatively affect the aesthetics and tourism potential of the province.

5.3.1 BASIC SERVICES

5.3.1.1 Spatial Challenges:

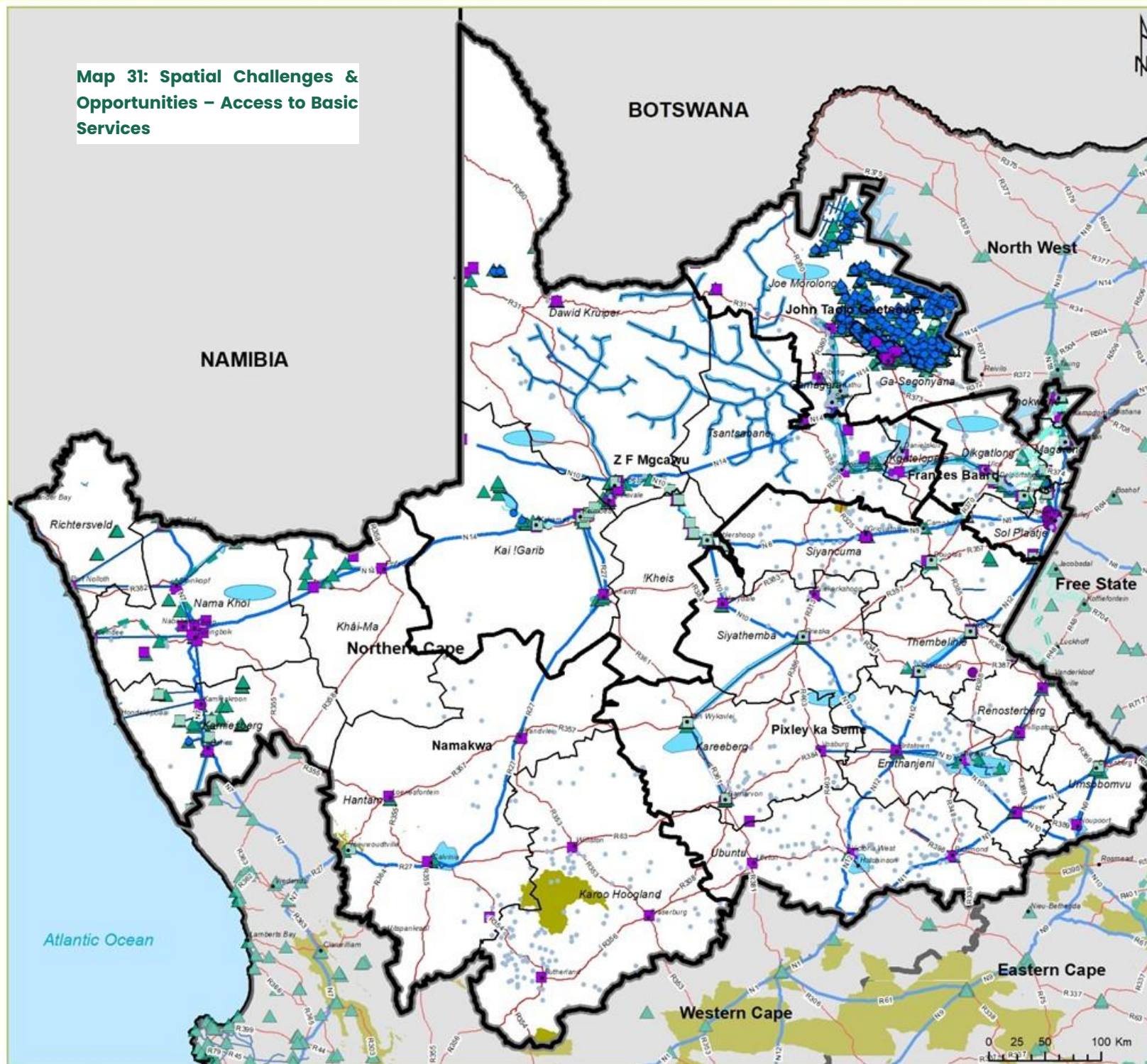
- The Northern Cape is a water-scarce province, with some settlements experiencing water deficits.
- The south-western corner of the province has limited access to water pipelines, relying on groundwater resources.
- Poor groundwater quality in many areas.
- Inadequate waste management and infrastructure contribute to environmental degradation. Providing basic services in remote areas can be financially challenging.
- The NSDF emphasizes that climate change will negatively impact service sustainability.
- Ageing infrastructure and poor maintenance in settlements throughout the province.
- Service delivery lacking in most of the local municipalities.
- Protection of strategic groundwater production areas and catchments.
- Dependency on groundwater especially towards the northeastern parts of the province.

5.3.1.2 Spatial Opportunities:

- Develop a framework or operational model for municipalities to improve control over electricity provision to customers, especially those who are not currently connected to the grid.
- Re-use and reticulation systems are crucial for ensuring sustainable livelihoods until 2040 and beyond.
- Use SPLUMA wall-to-wall land use schemes to protect important water resources.
- Enhancing densification strategies to make the most of existing service infrastructure.
- Implementation of the Provincial Bulk Water and Sanitation Master Plan, 2024.



Map 31: Spatial Challenges & Opportunities – Access to Basic Services



SPATIAL CHALLENGES

ACCESS TO BASIC SERVICES

Legend

- Town/Settlement
- Licensed Boreholes
- Communal Standpipe
- Prepaid Standpipe
- Sewer Pumpstation
- WTW
- WWTW
- ▲ Reservoirs
- Canal
- Bulk Water Pipelines
- Inter Basin Water Transfers
- Main Roads
- National Roads
- Water Schemes
- Stressed Catchments
- Local Municipality
- District Municipality

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



5.3.2 ENERGY

5.3.2.1 Spatial Challenges

- Limited capacity and unreliable infrastructure impede economic development.
- Limited coordination and spatial logic for renewable energy project locations and distribution.
- Long distances lead to higher infrastructure development and maintenance costs.
- National and provincial solar corridors are not aligned, and renewable energy projects are licensed on an ad hoc basis.
- A number of Renewable Energy projects stop at the planning phase, as there is no funding allocated towards implementation.
- Distribution lines to transport energy to bigger economic centres and larger populated cities towards the east and northeast.
- Environmental impact of new technologies within the energy sector e.g. fracking, shale gas, Hydrogen, wind farming and solar farming.

5.3.2.2 Spatial Opportunities:

- Master Infrastructure plan provides the opportunity to consolidate, align and coordinate all national and provincial infrastructure planning, in order to unlock the latent economic potential within the province, and more specifically in Upington, Kathu and Kuruman.
- Large-scale renewable projects are to be concentrated along bulk electrical infrastructure.
- Rooftop solar projects may provide the opportunity for isolated communities and urban settlements alike to have access to a sustainable energy resource.
- Grid re-circulation and the promoting off-grid developments.
- Power reserve around Prieska in Pixley Kaa Seme District.
- Green Hydrogen Energy exploration.
- Green Hydrogen linkages.
- Biomass to energy sources.

5.3.3 TECHNOLOGY

5.3.3.1 Spatial Challenges:

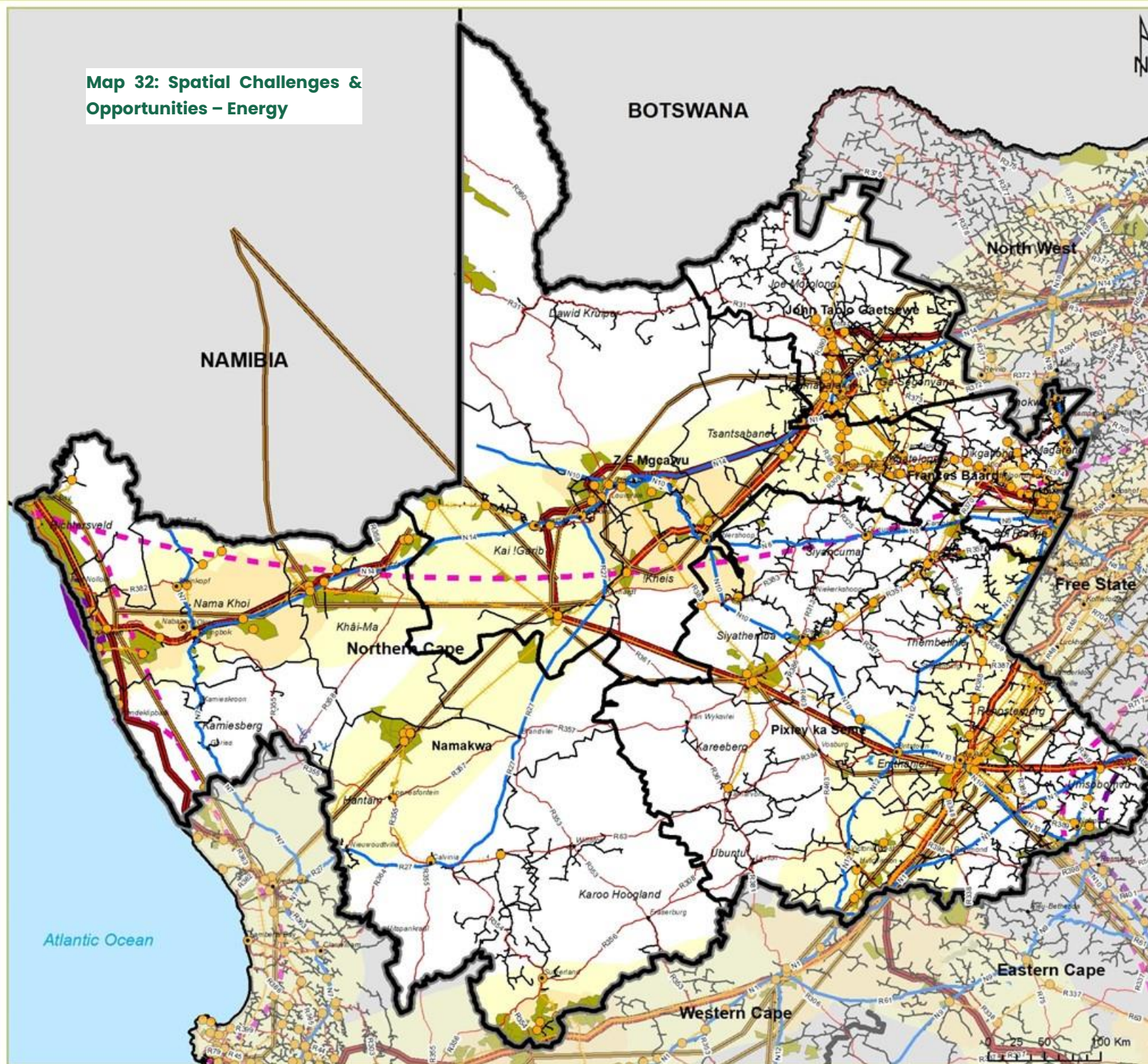
- Due to the vast, sparsely populated regions, provision and access to communication and technological services are limited in rural regions.
- ICT development in areas within the core region of the SARAO needs to adhere to various requirements, in order to limit radio interference with the telescopes.
- High cost vs. the limited return on investment of ICT infrastructure and development in small rural settlements.

5.3.3.2 Spatial Opportunities:

- Further capitalisation on the presence of the SARAO.
- The linkages between universities and industry are critical towards the development of the innovation and knowledge economy.
- Renewable energy-orientated innovation and knowledge economy could play a critical role towards leap-frogging the green economy which could create enormous economic opportunities for the Northern Cape Province.
- ICT 4TH AND 5TH Industrial Revolution opportunities.



Map 32: Spatial Challenges & Opportunities – Energy



SPATIAL CHALLENGES ENERGY

Legend

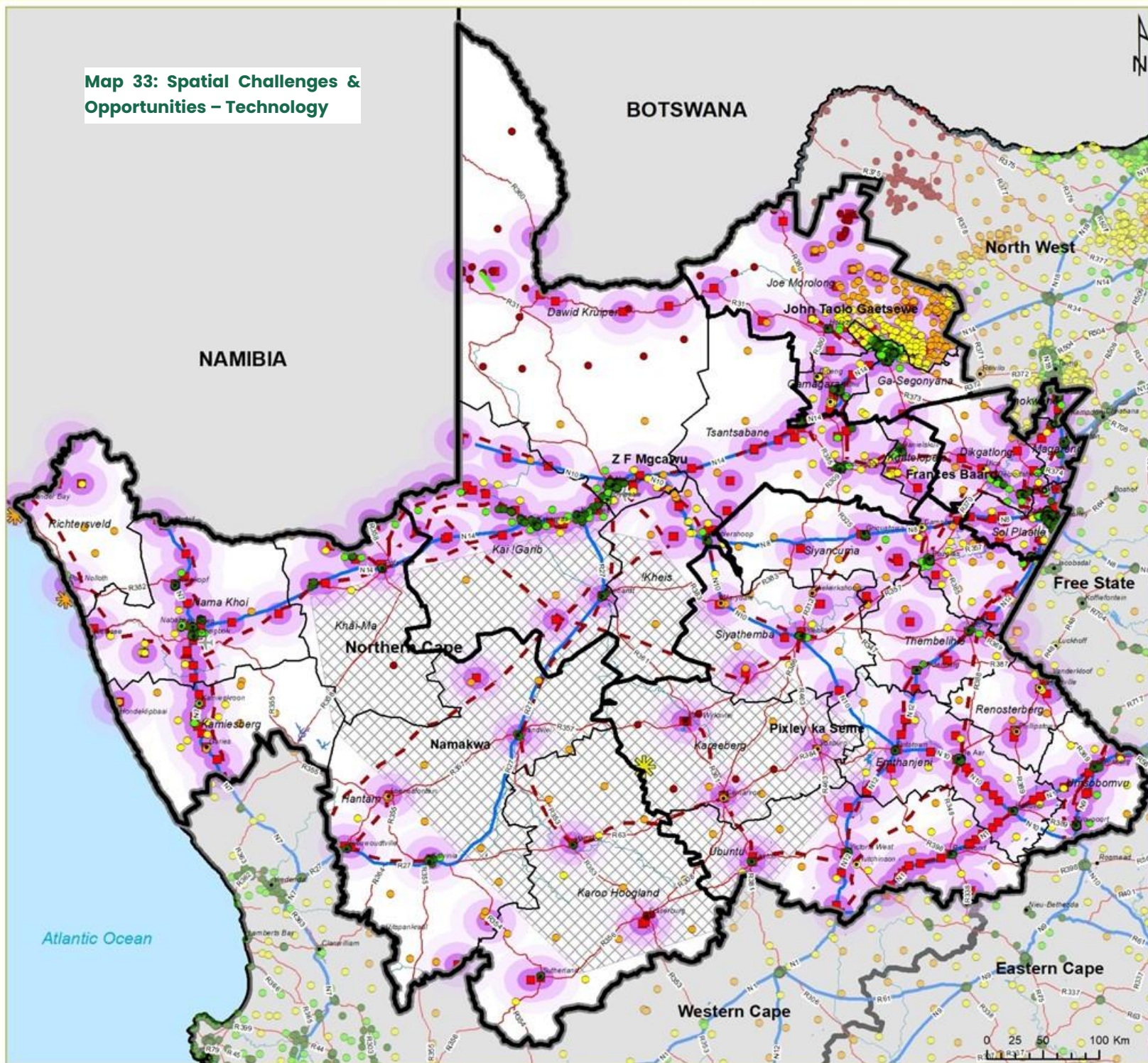
- Town/Settlement
- Substations
- Main Roads
- National Roads
- Eskom HV Lines
- Eskom MV Lines
- Eskom Planned Lines
- Eskom Expansion Projects
- Proposed Gas Pipelines
- Proposed Liquid Fuel Pipeline
- Local Municipality
- District Municipality
- National Renewable Energy Development Zone
- Power Corridors
- Dams
- Renewable Energy Projects
- Wind Energy Generation

Source: Northern Cape PSDF 2020; Karoo RSDF

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



Map 33: Spatial Challenges & Opportunities – Technology



SPATIAL CHALLENGES TECHNOLOGY

Legend

- Town/Settlement
- Cellphone Towers
- ✈ Main Airports
- ☼ Harbour
- ☼ SKA Core Site

ICT Fibre Connection Distance

Distance (m)

- 1 - 5 000
- 5 001 - 10 000
- 10 001 - 30 000
- 30 001 - 80 000
- 80 001 - 300 000

— Main Roads

— National Roads

— Main Rivers

- - - Broadband Lines

10km Cellphone Towers Radius

20km Cellphone Towers Radius

30km Cellphone Towers Radius

■ Dams

■ Bloodhound Initiative

▨ SKA Area

□ Local Municipality

□ District Municipality

Source: Northern Cape PSDF 2020; Karoo RSDF

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



5.4 CONNECTIVITY AND MOBILITY

Vast distances and the challenges faced with mobility within the province are well documented as stumbling blocks for development within the province. Although the condition of the National Routes, and some provincial routes is good, a large portion of the province's accessibility routes for local communities are unpaved provincial and local roads. This does not only hinder the accessibility of communities regarding access services but also the accessibility of tourists wishing to visit isolated landmarks or areas.

5.4.1 TRANSPORT

5.4.1.1 Spatial Challenges:

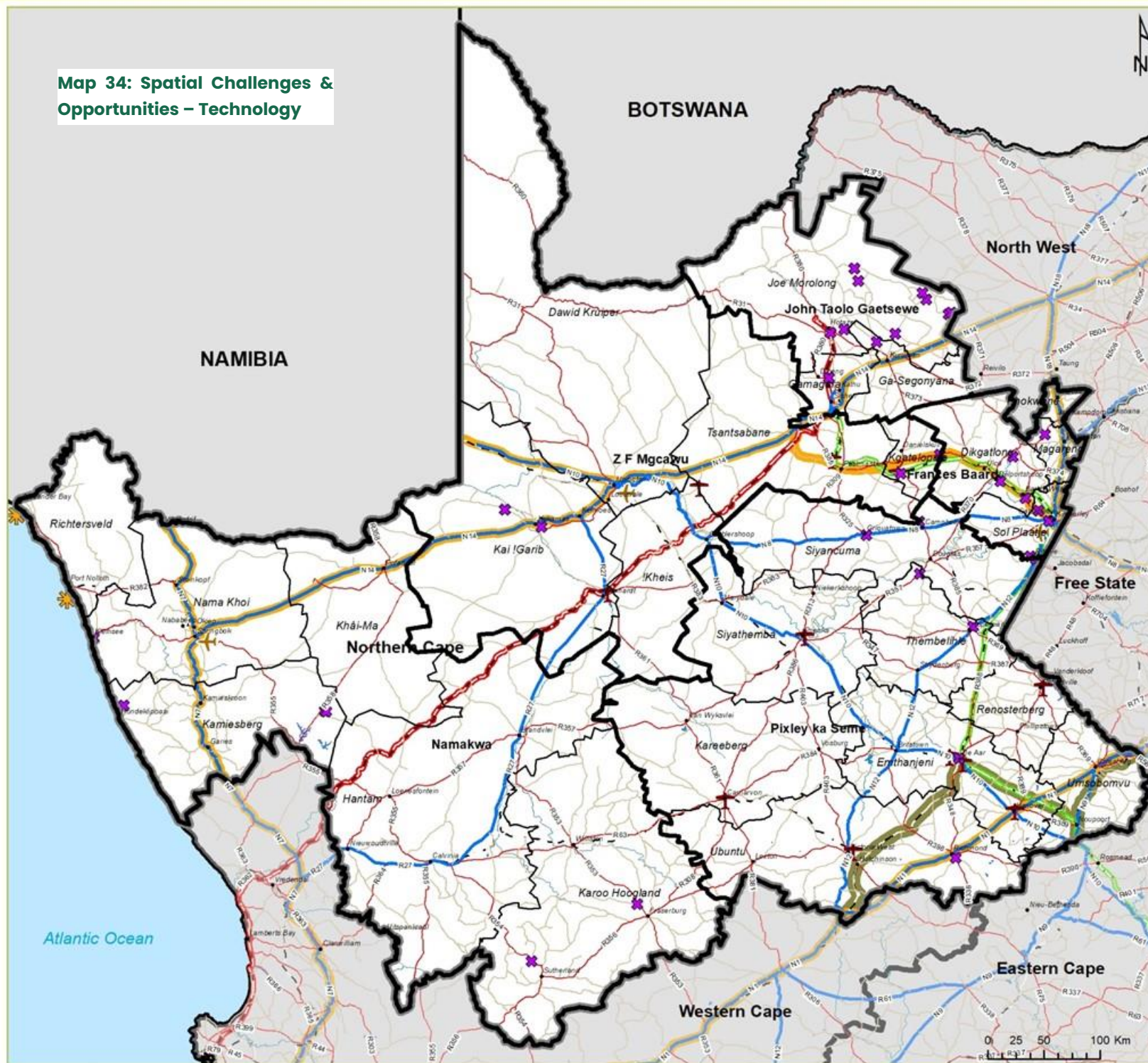
- A lack of paved or well-maintained provincial roads limits community accessibility and mobility.
- High transportation costs in remote areas can lead to poverty and limited economic opportunities. Rail is primarily used for raw material exports.
- The use of heavy motor vehicles to transport raw materials is causing road surfaces to deteriorate faster.
- The SALT site is inaccessible via the Astronomy Route (Calvinia-De Aar), as the road conditions are unsuitable for tourism or development.
- Restricted road conditions from Kimberley to Kuruman due to truck traffic congestion and safety concerns.
- Urban-Rural Linkages and transport networks.
- Sparsely populated settlements throughout the province.
- Unreliable rail network to move minerals.
- The high volume of mineral hauling trucks on Provincial roads is not built for the volume and loads.

5.4.1.2 Spatial Opportunities:

- The main route (R31) between Kimberley and Kuruman needs to be upgraded to a national road.
- Explore rural transportation model options.
- Upgrading and maintaining rail infrastructure to enhance the logistics hub in De Aar and encourage a shift from road to rail transportation.
- Upgrade Upington Airport for exporting commodities.
- Improve roads connecting Pofadder to Namibia and Williston to Sutherland.
- Further development of the N14 Development Corridor to attract investment and unlock economic opportunities.
- Traffic Control Instruments (Weighbridges) on provincial and local roads utilised by trucks transporting raw minerals e.g. N10, N8 and R31.
- Development of sustainable tourism Routes.
- Re-reinstatement of rail transport for the movement of mineral deposits.



Map 34: Spatial Challenges & Opportunities – Technology



SPATIAL CHALLENGES TRANSPORT

Legend

- Town/Settlement
- ✱ 2023/2024 Roads Projects
- ✈ Aero Drome
- ✈ Main Airports
- ☀ Harbour
- Railway Line
- Main Rivers
- Secondary Road
- Main Roads
- National Roads
- Iron Ore Railway Line
- Manganese Railway Line
- Intercap Bus Routes
- PRASA Rail Routes
- ▢ Dams
- ▢ Local Municipality
- ▢ District Municipality

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



5.5 PROVINCIAL NATURAL RESOURCES

As the Northern Cape's economy is resource-based, it is crucial to protect and ensure the sustainable use of resources. The Northern Cape is well known for its rich mineral resources, as is evident with the prevalence of mining activities within the province. Natural and agricultural resources both play a crucial role within the province. Both intensive and extensive agricultural activities take place within the Northern Cape, but intensive agriculture tends to be concentrated along the river systems. The natural resources within the province, including national parks and protected regions form the base of the tourism sector and play a key role in the protection of resources and ensuring the sustainable utilisation thereof.

5.5.1 MINING

5.5.1.1 Spatial Challenges:

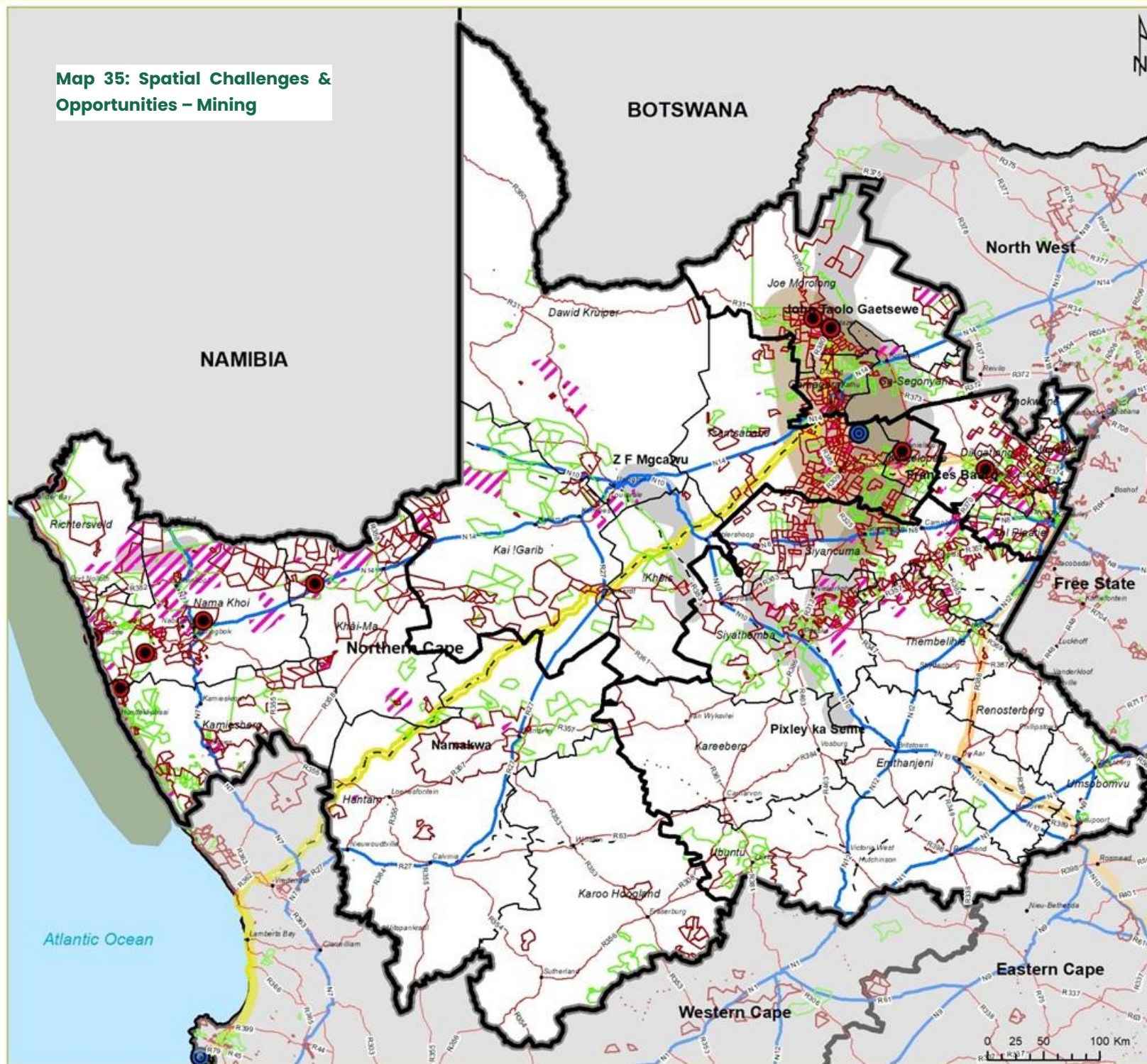
- Sustaining mining towns or settlements can be challenging after mineral deposits are depleted or become financially unsustainable.
- Expanding basic infrastructure near mining activities can be costly.
- Mining and extractive industries use a lot of water and cause environmental degradation.
- Mining companies' income and profits are registered and allocated to the Gauteng Province, where their main headquarters are located.
- Consistent conflict between mining and agricultural land use.
- Mining Vehicles entering urban congested areas.
- Non-Export of Minerals.
- Encroachment of mines onto high-potential agricultural land.
- Pollution of underground water resources.
- Unregulated settlements develop close to mining operations.
- Health complications through mining e.g. asbestos, and other mining particles.
- The influx of foreign nationals searching for employment opportunities within the mining sector.
- Little benefit for local citizens where mining operations occur.

5.5.1.2 Spatial Opportunities:

- Mining is a significant economic driver, creating job opportunities and promoting economic development.
- Promoting manufacturing activities that benefit the mining industry.
- Developed a strategy to prevent the establishment or expansion of mining towns, as well as guidelines for providing mining housing.
- Clear regulations should be developed for extractive industries near agricultural land and water resources.
- Manganese has the longest estimated lifespan among mineral deposits in the province, making it more sustainable to invest in manganese production.
- Diversification of Mining operations such as Copper mining in Prieska and Okiep.



Map 35: Spatial Challenges & Opportunities – Mining



SPATIAL CHALLENGES

MINING

Legend

- Town/Settlement
- Distressed Mining Towns
- Transnet Terminals
- Main Roads
- National Roads
- - Railway Line
- Manganese Railway Line
- Iron Ore Railway Line
- ▨ Active Mines
- Oil & Gas Exploration
- Gamagara Mining Corridor
- Asbestos Mining
- Local Municipality
- District Municipality
- Mining Application Status**
- Granted
- Issued

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



5.5.2 ENVIRONMENTAL RESOURCES

5.5.2.1 Spatial Challenges

- Agriculture and mining activities occur near environmentally sensitive areas.
- Protected areas contain degraded land. The Northern Cape has large areas of degraded land cover. The western coast's sensitive ecological region will be significantly impacted by climate change.
- The nuclear dumping site near Kamieskroon must be carefully monitored to prevent negative effects on community and environmental health.
- Land degradation and overgrazing.
- Ecosystems over-use and destruction of natural resources.

5.5.2.2 Spatial Opportunities:

- Tourism, research and educational-related activities will support and increase awareness and understanding of critically endangered and sensitive ecosystems.
- Expansion and connection of protected areas.
- Implementation and monitoring strategy of pollution levels.
- Municipal-level environmental management frameworks are required.
- Metals and Machinery Master Plan.
- Expansion initiatives of existing protected areas.

5.5.3 TOURISM RESOURCES

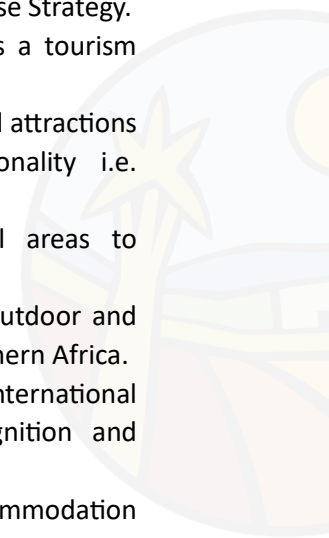
5.5.3.1 Spatial Challenges:

- Long distances between tourist attractions make it difficult to attract visitors to multiple destinations within the province.
- Limited public transportation options near national parks and tourist attractions.
- Road surface conditions limit tourist access to rural areas in the province.

- Limited marketing of the province's tourist attractions.
- Climate change has negative impacts on the Namaqua Flower Region.
- Limited transportation services hinder accessibility.
- Limited tourist services, including travel agents, tour operators, and guides.
- Loss of Heritage sites due to lack of maintenance and protection.
- The majority of attractions and activities exist and operate in isolation.
- Limited number of souvenir shops, arts and crafts, etc. located in major towns and at key attractions.
- Entertainment, recreation and sports facilities are limited to major towns, catering primarily for the local market.

5.5.3.2 Spatial Opportunities:

- Over-landing tourism gateway from Upington.
- Continuous maintenance, upgrading and modernisation of attraction facilities to improve visitor appeal.
- Implementation of the Climate Change Adaptation Response Strategy.
- Promotion of the SARAO and the Astronomy reserve as a tourism destination.
- Upgrading and expanding facilities at existing nature-based attractions and diversifying product offerings to counter seasonality i.e. developing coastal attractions.
- Explore opportunities to unlock underutilised coastal areas to capitalise on tourism potential.
- Appropriate packaging of nature-based attractions and outdoor and adventure activities with other popular attractions in Southern Africa.
- Rehabilitate damaged natural areas and conform to international conservation principles to achieve international recognition and exposure i.e. World Heritage Status, RAMSAR, etc.
- Expand existing capacity, variety and standard of accommodation options.
- Develop accommodation supply around hinterland attractions.
- Expand the supply of speciality restaurants offering local/traditional cuisine, fine dining, etc.



- Explore the potential to capitalise on intangible attributes and untapped potential.
- Unlocking unique tourism-related development and attractions through initiatives such as the Karoo Regional Spatial Development Framework.

5.5.4 AGRICULTURE RESOURCES

5.5.4.1 Spatial Challenges:

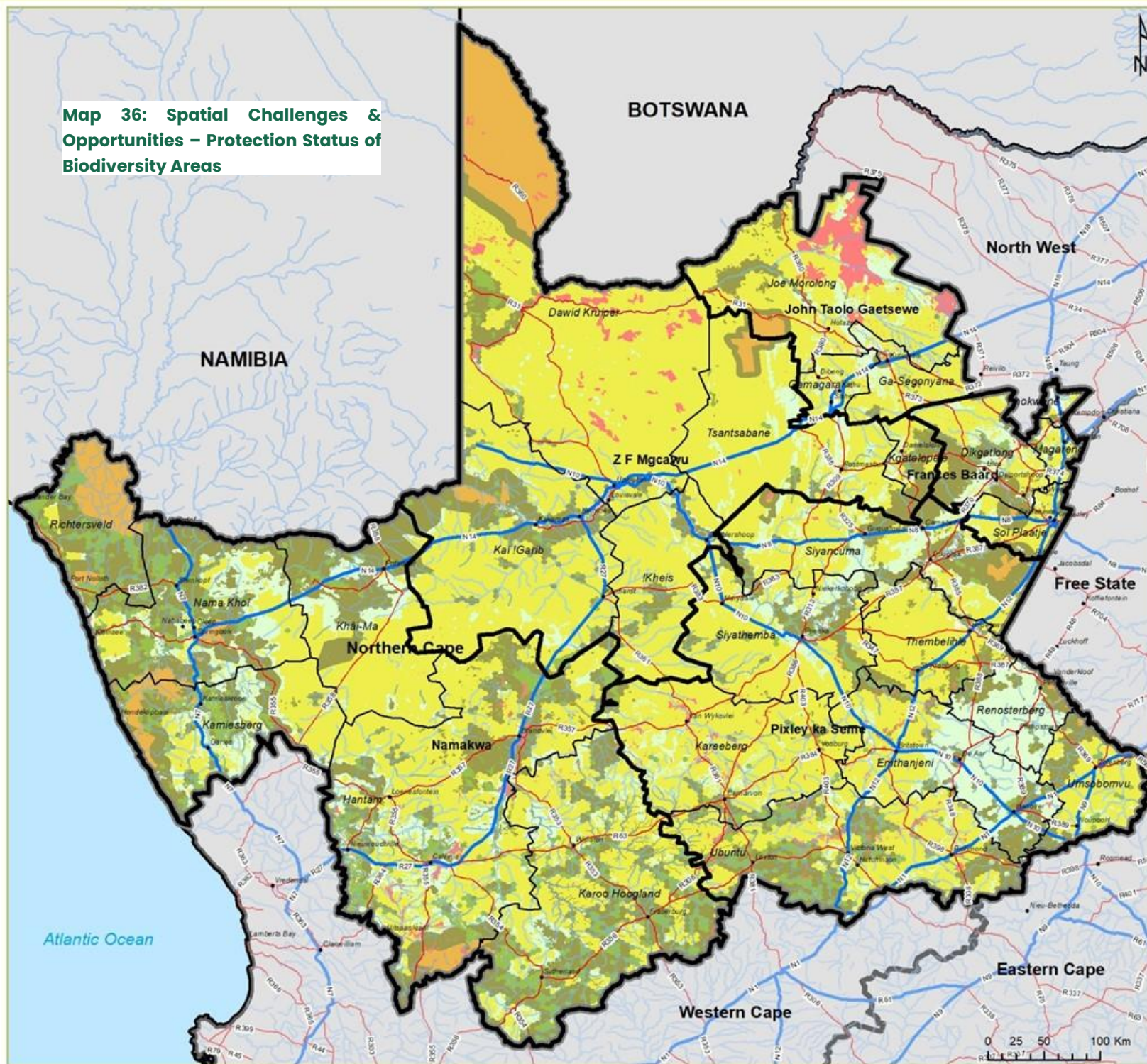
- Agriculture is the largest water user of all economic sectors of the Northern Cape.
- High-potential agricultural land is located along the main river systems.
- Low climate and terrain capability in the central and western regions of the province.
- Climate change impacts on yields and production levels throughout the province.
- Lack of Disaster Management, Drought, Veld Fires, Floods.
- Grazing and land degradation.
- Competing resources in terms of settlement expansion and mining.
- Lack of skills and support from intuitions.
- Agricultural-dependent local economies and employment.

5.5.4.2 Spatial Opportunities:

- Microalgal Technology Development and Demonstration Centre in Upington.
- Protective/restrictive zonings for high-potential agricultural land.
- Investigation of potential new suitable commodities and techniques.
- Agri-Park and value chain development to further unlock the latent potential of the agriculture sector.
- Promotion of urban agriculture initiatives.
- Oceans economy and related enterprises.
- Irrigation and agro-processing opportunities.



Map 36: Spatial Challenges & Opportunities – Protection Status of Biodiversity Areas



SPATIAL CHALLENGES PROTECTION STATUS OF BIODIVERSITY AREAS

Legend

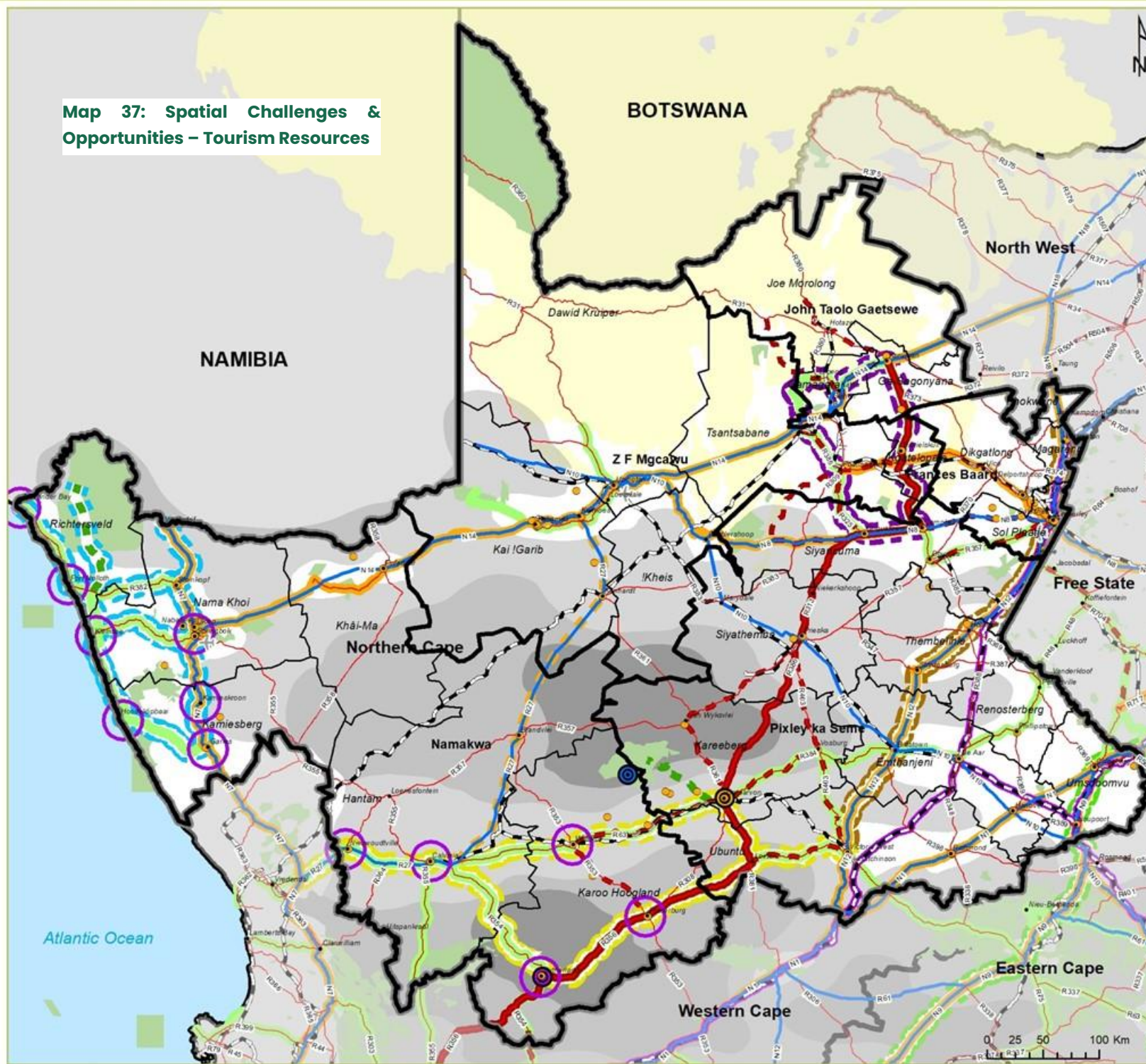
- Town/Settlement
- River Corridors
- Main Roads
- National Roads
- Degraded Land
- Local Municipality
- District Municipality
- Critical Biodiversity Areas**
 - Critical Biodiversity Area One
 - Critical Biodiversity Area Two
 - Ecological Support Area
 - Other Natural Areas
 - Protected Area

Source: Northern Cape PSDF 2020

**NORTHERN CAPE PROVINCIAL
SPATIAL DEVELOPMENT FRAMEWORK**



Map 37: Spatial Challenges & Opportunities – Tourism Resources



SPATIAL CHALLENGES TOURISM RESOURCES

Legend

- Town/Settlement
- Heritage Sites
- ✈ Main Airports
- Tourism Nodes

Technology Tourism Sites

- Meerkat
- SALT
- SKA

- Railway Lines
- Main Roads
- National Roads
- Camdeboo Route
- Karoo Highlands / Loxton Succulent Garden
- Namakwa Coastal / Richtersveld Route
- Karoo Oasis Route
- Go Ghaap Route
- Inter-Regional Tourism Roads
- Regional Tourism Roads
- Local Tourism Roads
- Passenger and Tourism Rail
- Nature Reserve Access Routes
- The Forgotten Highway
- The Forgotten Highway Side Route
- Protected Areas
- Kalahari Basin

Clear Night Skies

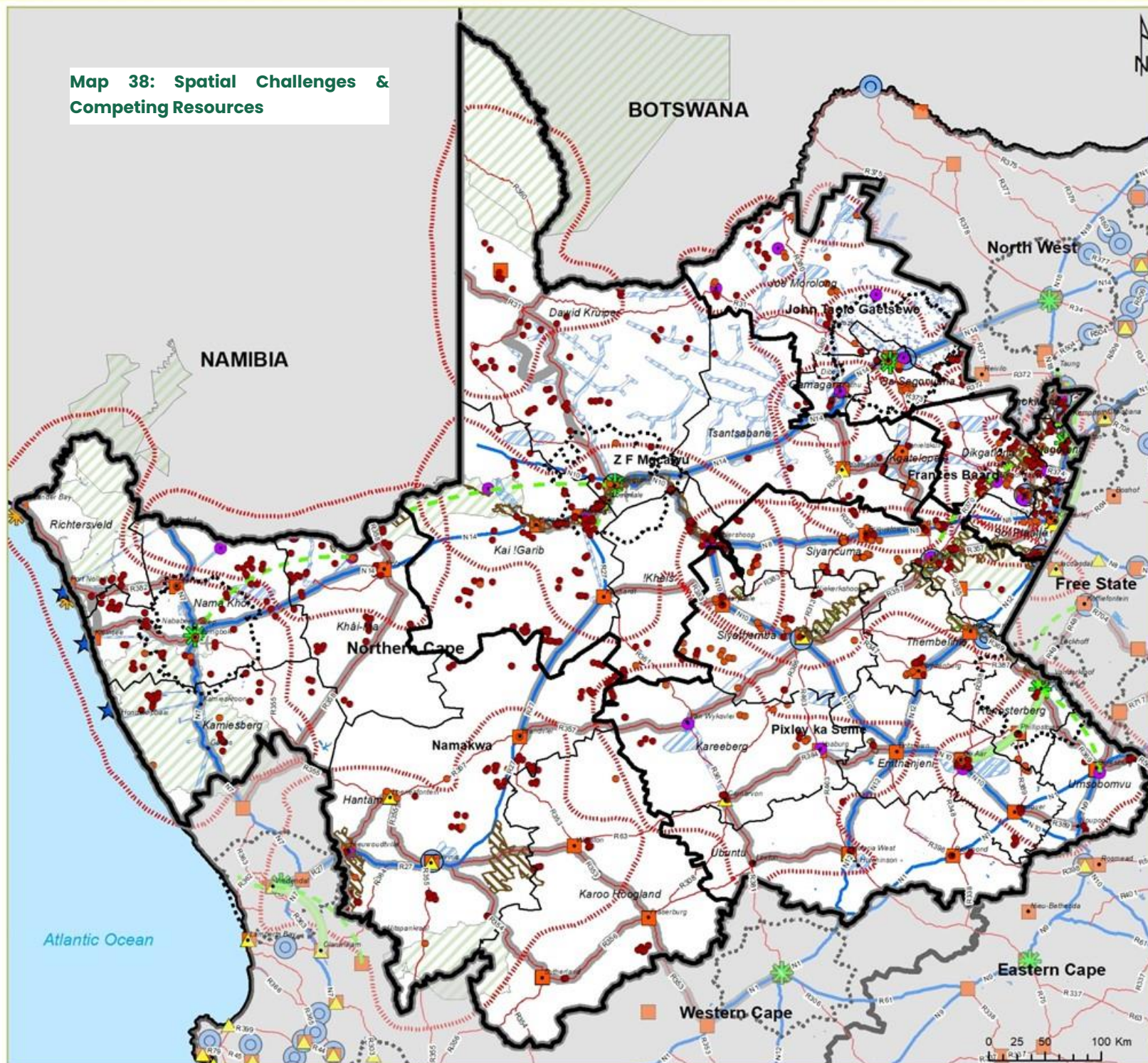
- Highest
- Medium-High
- Medium

Source: Northern Cape PSDF 2020, Karoo RSDF

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



Map 38: Spatial Challenges & Competing Resources



SPATIAL CHALLENGES AGRICULTURAL RESOURCES

Legend

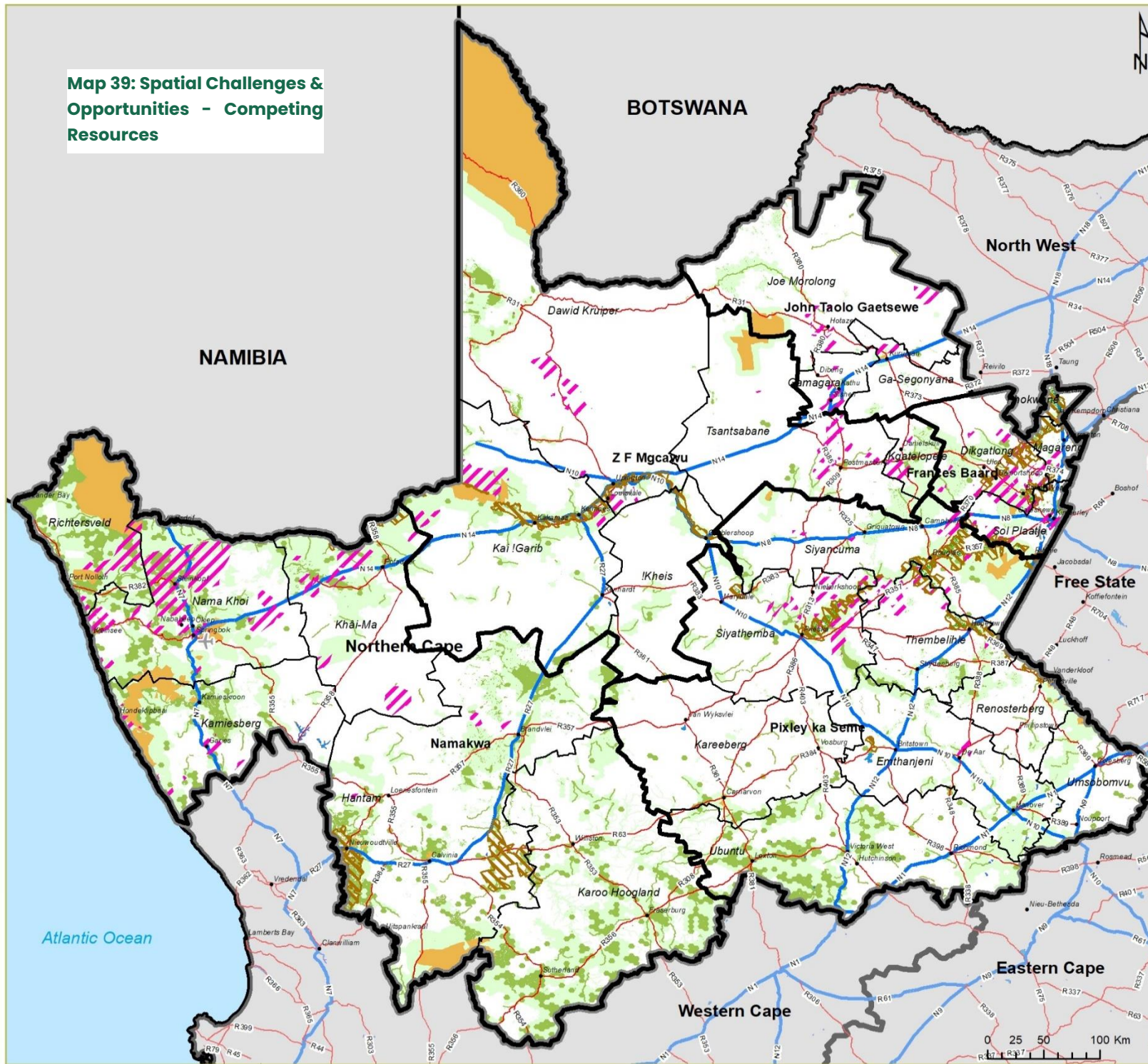
- DRDLR Projects
- Rural Development Projects
- Town/Settlement
- Farmer Production Support Unit
- ✈ Main Airports
- ▲ Foodmarkets
- Abattoirs
- ★ Aquaculture
- ⚓ Harbour
- ✱ Agri Hubs
- ⊙ Silos
- Main Roads
- National Roads
- FPSU to Agri-Hubs
- Agri-Hub to Anchors
- Ring Roads
- ⬢ 60km Agrihub Buffer
- ⬢ Intervention Areas
- Local Municipality
- District Municipality
- ▨ High Potential Agricultural Area
- ▨ Nature Reserve Zones
- ▨ Water Schemes
- ▨ Pivot Irrigation
- ▨ Dams

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



Map 39: Spatial Challenges & Opportunities - Competing Resources



SPATIAL CHALLENGES

COMPETING RESOURCES

AGRICULTURE, ENVIRONMENT & MINING

Legend

- Town/Settlement
- ✈ Main Airports
- Main Roads
- National Roads
- Local Municipality
- District Municipality
- ▨ Active Mines
- ▨ High Potential Agricultural Area
- ▨ Pivot Irrigation
- ▨ Dams
- ▨ Critical Biodiversity Area One
- ▨ Critical Biodiversity Area Two
- ▨ Protected Area

Source: Northern Cape PSDF 2020

NORTHERN CAPE PROVINCIAL

SPATIAL DEVELOPMENT FRAMEWORK



6 REFERENCES

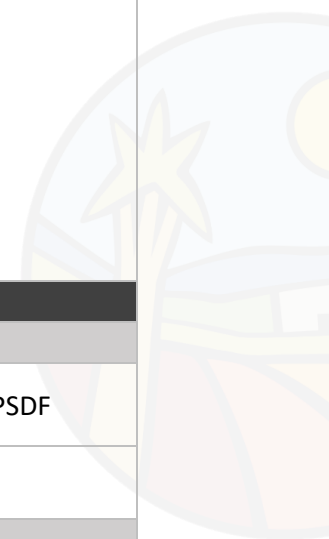
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- Pioneering the Green Economy, 2023
- Enterprise Development Strategy, 2023 – 2028
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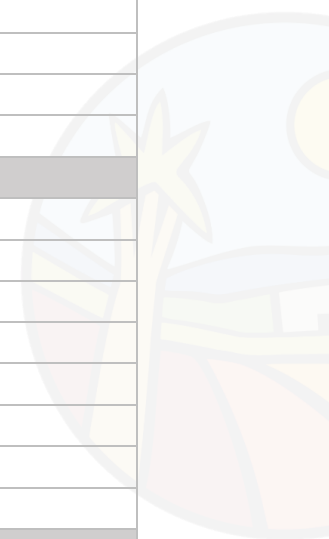
ANNEXURE A: PSDF STATUS QUO REVIEW

PSDF 2020 STATUS QUO ANALYSIS	REVIEWED PSDF 2023 STATUS QUO ANALYSIS
CHAPTER 1 INTRODUCTION	
PURPOSE AND BACKGROUND	Aligned towards to ToR and why the review is necessary
Provincial Growth and Development Plan	Removed from Status Quo Report
Provincial Spatial Development Framework	Moved to the National Policy Context Section
LEGISLATIVE ALIGNMENT	
Provincial Growth and Development Plan	Removed from Status Quo Report
The Constitution of the Republic of South Africa, 1996	Moved to the National Policy Context Section
National Development Plan	Moved to the National Policy Context Section
Expectations of the PGDP	Removed from Status Quo Report
Provincial Spatial Development Framework	Remained the same as in PSDF 2020
SPLUMA, Act No.16 of 2013	Re-Aligned and updated with more context in terms of the SPLUMA principles
METHODOLOGY	Removed from Document will be included in Final PSDF
PSDF Assessment	Removed from Document will be included in Final PSDF
CHAPTER 2 PROVINCIAL CONTEXT	
PROVINCIAL PLANNING OVERVIEW	
INTERNATIONAL PLANNING	Included a section regarding Regional Planning which included policies from SADC
The Sustainable Development Goals (SDG's)	Updated with relevant context
The New Urban Agenda	Remained the same as in PSDF 2020
The African Union Agenda 2063	Remained the same as in PSDF 2020
National Planning	
The National Development Plan	Remained the same as in PSDF 2020
The National Spatial Development Framework	Updated from Draft to Final NSDF, 2022, and unpacked the Arid Innovation Region as well as the Northwestern National Spatial Transformation and Economic Transition Region
The Medium-Term Strategic Framework	Remained the same as in PSDF 2020
The Integrated Urban Development Framework	Remained the same as in PSDF 2020

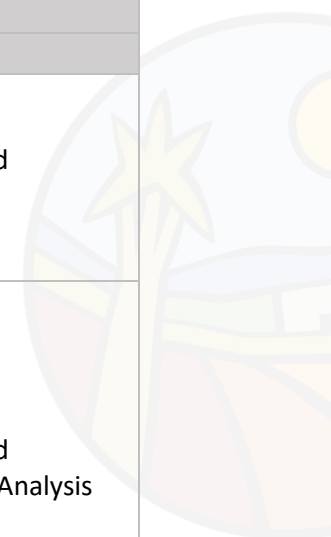
Provincial Planning	Remained the same as in PSDF 2020
District Planning	Included a table to indicate SPLUMA Readiness and compliance of all SDFs within the Province
Local Planning	
Role of the PGDP and PSDF	
LEGISLATIVE ALIGNMENT TOWARDS PROVINCIAL PLANNING SYSTEMS	Updated with the latest information, from Sector departments Action plans, Provincial strategies and policies.
Current governance structure	
Northern Cape Governance Structure and operation	
GOVERNANCE SYNOPSIS	
Overview of Key Issues and Challenges	
SECTOR DEPARTMENT SYNOPSIS	
Agriculture, Land Reform and Rural Development	
Co-operative Governance, Human Settlements and Traditional Affairs	
Economic Development and Tourism	
Education	
Environment and Nature Conservation	
Health	
Provincial Treasury	
Roads and Public Works	
Social Development	
Sports, Arts and Culture	
Transport, Safety and Liaison	
Office of the premier governance structure	
CHAPTER 3 STATUS QUO ANALYSIS APPROACH	
REPORT STRUCTURE	
Status quo synopsis	Aligned towards DALRRD Guidelines, 2017, the structure of a PSDF
Status Quo layout	
Alignment towards the National Guidelines for the Development of Spatial Development Frameworks	
DATA USE	
GIS AND STRATEGIC PLANNING	
GIS DATA MANIPULATION	
Cost Surface Analysis	Removed from Document



Data weighting	Removed from Document
Data visualisation	Removed from Document
CHAPTER 4 ECONOMIC ANALYSIS	
ECONOMIC INFOGRAPHIC	
ECONOMIC OVERVIEW	
Economic Growth	Updated with the Latest Statistics and Information
Economic Base	Updated with the Latest Statistics and Information
Economic Diversification	Updated with the Latest Statistics and Information
Green Economy	Updated with the Latest Statistics and Information
Space Economy	Updated with the Latest Statistics and Information
Knowledge economy	Updated with the Latest Statistics and Information
Oceans economy	Updated with the Latest Statistics and Information
Landscape economy	Updated with the Latest Statistics and Information
Employment and Unemployment	Updated with the Latest Statistics and Information
Unemployment Rate	Updated with the Latest Statistics and Information
Economic active people	Updated with the Latest Statistics and Information
Employment per Sector	Updated with the Latest Statistics and Information
Labour participation rate	Updated with the Latest Statistics and Information
Employment Skills	Updated with the Latest Statistics and Information
Income AND EXPENDITURE	
Household income	Removed from Document
Gini Coefficient	Removed from Document
Disposable income	Removed from Document
Expenditure	Removed from Document
Revenue enhancement	Removed from Document
Equitable Share	Removed from Document
Revenue collection	Removed from Document
SMME Development	Removed from Document
ECONOMIC SECTORS	
Primary	Updated with the Latest Statistics and Information
Agriculture and Forestry	Updated with the Latest Statistics and Information
Mining	Updated with the Latest Statistics and Information



Fishing	Updated with the Latest Statistics and Information
Secondary	Updated with the Latest Statistics and Information
Manufacturing	Updated with the Latest Statistics and Information
Construction	Updated with the Latest Statistics and Information
Utilities	Updated with the Latest Statistics and Information
Tertiary	Updated with the Latest Statistics and Information
Finance	Updated with the Latest Statistics and Information
Transport and storage	Updated with the Latest Statistics and Information
Health and Social work	Updated with the Latest Statistics and Information
Education	Updated with the Latest Statistics and Information
Trade and Investment	Updated with the Latest Statistics and Information
International Relations	Removed From Document
BRICS Initiative	Removed From Document
African Union	Removed From Document
CHAPTER 5 SOCIAL ANALYSIS	
SOCIAL INFOGRAPHIC	
SOCIAL OVERVIEW	
POPULATION	
Population growth	Updated in terms of Stats SA Census data as well as trends and implications within the province
Population group comparison	
Household Size	
Population Structure	
Basic Services	Updated in terms of Stats SA Census data as well as trends and implications within the Province under the Built Environment Analysis
Overview	
Access to piped water	
Access to sanitation	
Access to refuse removal	
Access to electricity	
Access to Housing	
Housing backlogs	
Planned housing projects	
Municipal Infrastructure Grant (MIG)	Updated with the latest information received from Departments



EDUCATION	
Education Overview	Updated with the latest information received from DoE
Learner Teacher Ratio	
HEALTH	
Health OVERVIEW	Updated with the latest information received from Health
District health profiles	
HIV+/AIDS – Northern Cape Province	
Safety and Security	
Crime overview	Updated with the latest information received from SAPS, Annual Crime Statistics 2023
Murder	
Attempted murder	
Sexual crimes	
Assault with the intent to inflict grievous bodily harm	
Robbery with aggravating circumstances	
Burglary at residential premises	
Theft of motor vehicles and motorcycles	
Car hijacking	
Stock theft	
Drug-related crime	
Driving under the influence of alcohol or drugs	
Public Violence	
Public protest	
Protest actors	
Protest motivations	
Protest economic status	
Protest recommendations	
POVERTY POCKETS	
POVERTY Overview	Updated in the Spatial Challenges and Opportunities section within the Phase 3 of the Report
Poverty per local municipality	
Poverty by Settlement type	
Poverty by population group	
Food security	



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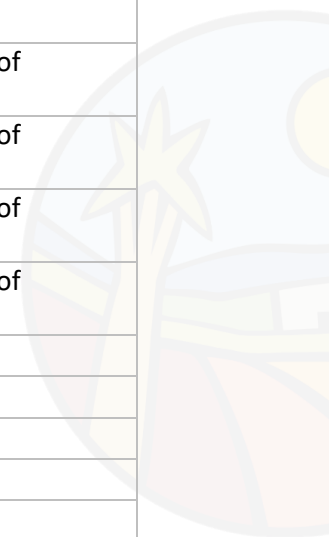


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Social grants	
Vulnerable Groups	
Social cohesion	
CHAPTER 6 ENVIRONMENT	
ENVIRONMENT INFOGRAPHIC	
ENVIRONMENTAL OVERVIEW	
GEOGRAPHY	Removed from Document
Earth System	Removed from Document
BIOSPHERE	Biophysical Analysis
Ecology	Updated with the latest information in regards to the Policies of "Nature Capital"
Threats	Remained the same as in PSDF 2020
Opportunities	Remained the same as in PSDF 2020
Fauna and Flora	Updated with the latest information in regards to the Policies of "Nature Capital"
Nama Karoo Biome	Updated with the latest information in regards to the Policies of "Nature Capital"
Succulent Karoo biome	Updated with the latest information in regards to the Policies of "Nature Capital"
Savanna biome	Updated with the latest information in regards to the Policies of "Nature Capital"
Grassland biome	Updated with the latest information in regards to the Policies of "Nature Capital"
Fynbos biome	Updated with the latest information in regards to the Policies of "Nature Capital"
Centres of endemism	Remained the same as in PSDF 2020
Threats	Remained the same as in PSDF 2020
The economy is unsustainably resource-intensive	
Opportunities	
Critical Biodiversity Areas	Included Marine Biodiversity
Biodiversity features and targets	
Protected Areas	Updated with the latest information in regards to the Policies of "Nature Capital"



Aquatic features	Updated with Marine Spatial Planning Policy
Threats to critical biodiversity areas	Remained the same as in PSDF 2020
Opportunities (protection and expansion of CBAs)	Updated with the latest information in regards to the Policies of "Nature Capital"
Environmental Sensitive Areas	Remained the same as in PSDF 2020
Threats	Remained the same as in PSDF 2020
Opportunities	Remained the same as in PSDF 2020
Pollution	Updated information from Karoo RSDF
Threats	Remained the same as in PSDF 2020
Opportunities	Remained the same as in PSDF 2020
Land Cover	Updated to Latest Land Cover, 2020
ATMOSPHERE	Biophysical Analysis
Climate	Included Climate Change implications to the northern cape, Climate events through the Greenbook
Northern Cape atmospheric conditions and pollution levels	
Climate change	
Temperature	
Increase of fire risk days	
International policies and agreements	
Solar Radiation	
Solar energy potential	
Health Risks associated with solar radiation	
HYDROSPHERE	Biophysical Analysis
Coastal Zone	Update information in certain sections, especially regarding Biodiversity, Ecosystems, Marine Tourism and Hydr Carbon Exploration
South Africa's Exclusive Economic Zone (EEZ)	
Habitat classification	
Marine Protected Areas (MPAs)	
Biozones	
Depth strata	
Marine Biodiversity threats	
River systems	
Rainfall	
GEOSPHERE (LITHOSPHERE)	Biophysical Analysis



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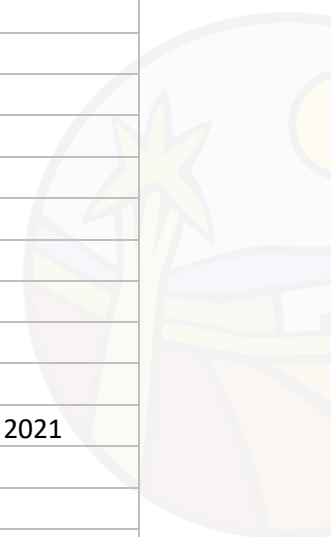


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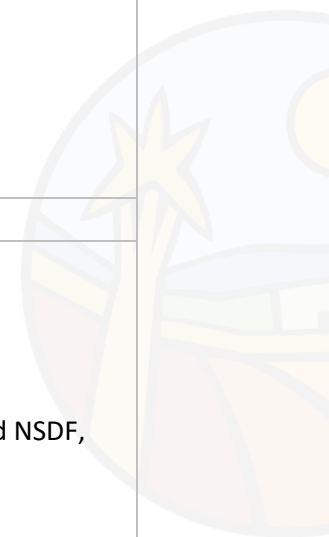


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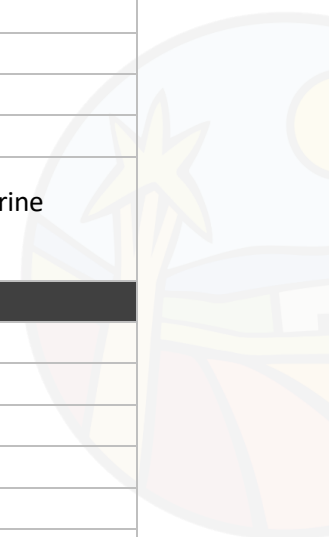
Topography	Remained the same as in PSDF 2020
Topography overview	Remained the same as in PSDF 2020
Pixley ka Seme District	Remained the same as in PSDF 2020
Frances Baard District	Remained the same as in PSDF 2020
John Taolo Gaetsewe District Municipality	Remained the same as in PSDF 2020
Namakwa District	Remained the same as in PSDF 2020
ZF Mgcawu District	Remained the same as in PSDF 2020
Geology	Incorporated Geology from the Ocean along the West Coast
Dolerite	Remained the same as in PSDF 2020
Tillite	Remained the same as in PSDF 2020
Sand	Remained the same as in PSDF 2020
Andesite	Remained the same as in PSDF 2020
Quartzite	Remained the same as in PSDF 2020
Mudstone	Remained the same as in PSDF 2020
Shale	Remained the same as in PSDF 2020
Geo Hazards	Remained the same as in PSDF 2020
Sinkholes	Remained the same as in PSDF 2020
Subsidence	Remained the same as in PSDF 2020
Gully erosion	Remained the same as in PSDF 2020
Water Erosion	Incorporated findings from the NSDF, 2022
Groundwater Vulnerability	Incorporated findings from the NSDF, 2022
Problem soils	Remained the same as in PSDF 2020
Mine related geohazards	Remained the same as in PSDF 2020
Minerals	Remained the same as in PSDF 2020
Summary of primary minerals	Remained the same as in PSDF 2020
Coastal Exploration	Updated information from the Marine Spatial Planning Policy, 2021
Mining and Water	Included latest Mining Information available from DMRE
Mineral rights status	Included latest Mining Information available from DMRE
SUSTAINABILITY	
Overview	
Policies on Sustainable Development	Removed this section from the Status quo report
Approach	



Modelling Sustainability	
Sustainable Investment Model (SIM)	
Results	
No Poverty	
Zero hunger	
Good wealth and well-being	
Quality education	
Gender equality	
Clean water and sanitation	
Affordable and clean energy	
Decent work and economic growth	
Industry, innovation and infrastructure	
Reduced inequalities	
Sustainable cities and communities	
Responsible consumption and production	
Climate action	
Life below water	
Life on land	
Peace, justice and strong institutions	
Partnerships for the goals	
VULNERABILITY	Updated Vulnerability taking into account the Karoo RSDF, and NSDF, 2022
VULNERABILITY INFOGRAPHIC	
Defining vulnerability	
Vulnerability within the Northern Cape	
CRUCIAL RISK ASPECTS OF THE NORTHERN CAPE	
Politics and governance	
Environment	
Social	
Economic	
Resilience	
Disaster risk management	



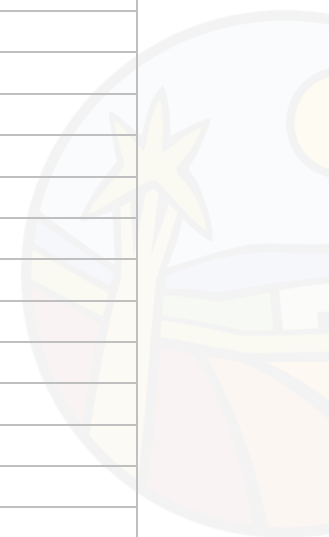
Overall Vulnerability	
TOURISM	
Overview	
Frances Baard District	
Pixley Ka Seme District	
Namakwa District	
ZF Mgcawu District	
John Taolo Gaetsewe District	
Summary of key tourism assets	
TOURISM REGIONS	
TOURISM ROUTES	
Existing Tourism Routes	Aligned and updated with Karoo RSDF
Other proposed Routes:	
TOURISM MARKETS	Remained the same as in PSDF 2020
Avi-tourism	Remained the same as in PSDF 2020
Botanical tourism	Remained the same as in PSDF 2020
Eco-tourism	Remained the same as in PSDF 2020
Adventure and outdoor activities	Remained the same as in PSDF 2020
Agri tourism	Remained the same as in PSDF 2020
Marine and Coastal Tourism	
Heritage tourism	Updated Tourism section with the latest information from Marine Spatial Planning, Karoo RSDF, District SDF's
State of Tourism Infrastructure	
CHAPTER 7 AGRICULTURE AND RURAL DEVELOPMENT	
OVERVIEW	
AGRICULTURE	
Overview	Remained the same as in PSDF 2020
Demographic analysis	Removed from Document
Namakwa District	Remained the same as in PSDF 2020
John Taolo Gaetsewe (JTG) District	Remained the same as in PSDF 2020
Frances Baard District Municipality	Remained the same as in PSDF 2020
Pixley Ka Seme (PKS) District	Remained the same as in PSDF 2020
ZF Mgcawu (ZFM) District Municipality	Updated with information from the Rural Development Sector Plans



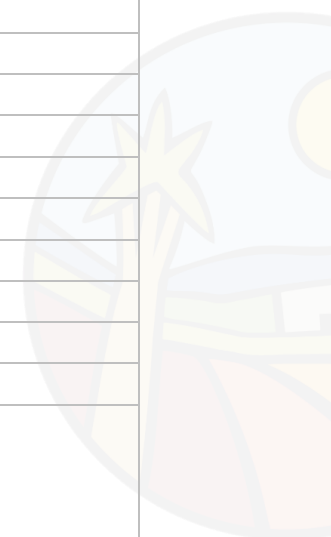
Agricultural potential	Updated with information from the Rural Development Sector Plans
Land capability	Updated with information from the Rural Development Sector Plans
Soil capability	Updated with information from the Rural Development Sector Plans
Climate capability	Updated with information from the Rural Development Sector Plans
Terrain capability	Updated with information from the Rural Development Sector Plans
Grazing potential	Updated with information from the Rural Development Sector Plans
Irrigation potential	Updated with information from the Rural Development Sector Plans
Overall potential	Updated with information from the Rural Development Sector Plans
AGRICULTURAL REGIONS AND KEY STAKEHOLDERS	Updated with information from the Rural Development Sector Plans
COMMODITIES	Updated with information from the Rural Development Sector Plans
Aquaculture and Mari-culture	Updated with information from the Rural Development Sector Plans
Horticulture	Updated with information from the Rural Development Sector Plans
Field crops	Updated with information from the Rural Development Sector Plans
Livestock	Updated with information from the Rural Development Sector Plans
Game farming	Updated with information from the Rural Development Sector Plans
INFRASTRUCTURE	Updated with information from the Rural Development Sector Plans
Agro-processing	Updated with information from the Rural Development Sector Plans
PROJECTS	Updated with information from the Rural Development Sector Plans
Department of Agriculture	Updated with information from the Rural Development Sector Plans
Department of Rural Development and Land Reform	Updated with information from the Rural Development Sector Plans
Agriculture and food security opportunities in the agricultural sector	Updated with information from the Rural Development Sector Plans
RURAL DEVELOPMENT	Updated with information from the Rural Development Sector Plans
Understanding the Rural Space and Dynamics	Updated with information from the Rural Development Sector Plans
Rural livelihoods and poverty	Updated with information from the Rural Development Sector Plans
INSTITUTIONAL LAND ANALYSIS	Updated with information from the Rural Development Sector Plans
Role of Traditional Authorities in Rural Development	Updated with information from the Rural Development Sector Plans
Communal Land	Updated with information from the Rural Development Sector Plans
Land reform	Updated with information from the Rural Development Sector Plans
TRANCRAA/Act 9 Areas	Updated with information from the Rural Development Sector Plans
CHAPTER 8 BUILT ENVIRONMENT	
BUILT ENVIRONMENT INFOGRAPHICS	



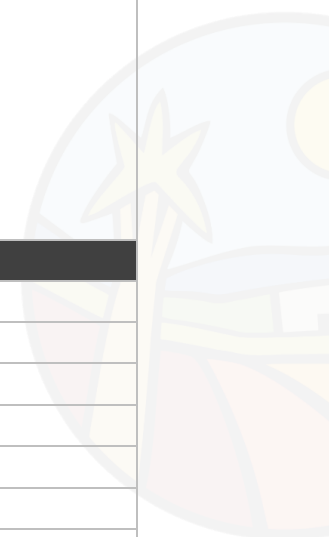
OVERVIEW	
Energy	Updated with the latest information regarding Renewable Energy, Green Hydrogen, etc.
OVERVIEW	Remained the same as in PSDF 2020
Existing infrastructure	Remained the same as in PSDF 2020
Energy sources	Updated with information from Stats SA Census 2022
Transmission	Remained the same as in PSDF 2020
Planned Infrastructure	Remained the same as in PSDF 2020
Renewable Energy	Updated with the latest information regarding Renewable Energy, Green Hydrogen, etc.
Eskom's Transmission Development Plan (TDP)	Included within the Sector analysis and key findings of Chapter 3 of the Report
New generation summary	
Major schemes	
Substation firm capacity	
Underrated equipment	
Provincial summary	
Northern Cape scenario - Impact of the DoE generation scenarios	
WATER	
Overview	Built Environment Analysis
District perspective	Updated with information from Water and Sanitation 2022
Value chain	Updated with information from Water and Sanitation 2022
Water Resources	Updated with information from Water and Sanitation 2022
River systems	Updated with information from Water and Sanitation 2022
Groundwater	Updated with information from Water and Sanitation 2022
Other water sources	Updated with information from Water and Sanitation 2022
Water Management	Updated with information from Water and Sanitation 2022
Water Management Areas (WMA's)	Updated with information from Water and Sanitation 2022
Lower Vaal Water Management Area:	Updated with information from Water and Sanitation 2022
Water Services Areas (WSA's)	Updated with information from Water and Sanitation 2022
Water User Associations (WUA's)	To be assessed and analysed in Phase 3 - Sector Department Analysis
Water Tariffs	
Water Balance	



Water losses	
WATER USAGE	
Water demand	
Future scenario	
Water Infrastructure	
Existing infrastructure	
Planned infrastructure	
WATER QUALITY	Updated with information from Water and Sanitation 2022
Water treatment works	Updated with information from Water and Sanitation 2022
2014 Blue Drop Score	Updated with information from Water and Sanitation 2022
Water treatment works	Updated with information from Water and Sanitation 2022
Wastewater treatment works	Updated with information from Water and Sanitation 2022
Municipal Services Strategic Assessment (MuSSA) for South Africa	Removed from Status Quo Report
Strategic overview	Remained the same as in PSDF 2020
Information and Communication Technology (ICT)	Aligned to NSDF AND RSDF information
Overview	Remained the same as in PSDF 2020
Expanding access to communications technology	Removed from Status Quo Report
National Broadband Policy targets	Remained the same as in PSDF 2020
Broadband capacity	Remained the same as in PSDF 2020
Data storage and management	Remained the same as in PSDF 2020
INSPIRE	Remained the same as in PSDF 2020
Square Kilometre Array (SKA)	Aligned to the latest Information in the NSDF and Karoo RSDF
Karoo array telescope (MeerKAT)	Remained the same as in PSDF 2020
Southern African Large Telescope (SALT)	Remained the same as in PSDF 2020
ROADS AND TRANSPORT	Built Environment Analysis
Overview	
Main roads	
Railway	
Airports and Airfields	Updated and Aligned with NSDF, 2022
Small Harbours	
Development implications	
Road MANAGEMENT	



Road classification	
NATIONAL TRANSPORT MASTER PLAN -NATMAP 2050	
NATMAP priorities	
Medium- to Long-Term Priorities	Addressed in Policy Context
Land Use, Transportation and the Economy	
Key Issues Relevant to Land Use Planning	
NATMAP 2050 Future Spatial Vision	
Focus Areas	
Spatial Integration of NATMAP 2050 with Policies	
Freight	Updated and aligned with the NSDF and Karoo RSDF within the Built Environment Analysis
Freight Transport Issues	
Freight Transport Analysis and Forecasting	
Road Freight Corridors	
Analysis of Aviation Freight Transport	
National Freight Transport Strategic Imperatives: Rail Freight Strategies	To be Addressed in Phase 3 Sector Department Analysis
National freight transport strategic imperatives: Road freight strategies	
Aviation freight transport	
Proposed Freight Interventions Proposed	
Air Passenger Transport	
PROPOSED INTERVENTIONS	
Proposed Interventions for Passenger Transport Include the Following:	
CHAPTER 9 SPATIAL CONTEXTUALISATION	
OVERVIEW	
guiding policies and legislation	Addressed in Policy Context
THE NATIONAL DEVELOPMENT PLAN	Addressed in Policy Context
SPATIAL PLANNING AND LAND USE MANAGEMENT ACT	Addressed in Policy Context
INTEGRATED URBAN DEVELOPMENT PLAN (IUDF)	Addressed in Policy Context
KEY FINDINGS	
Settlements	
CURRENT SETTLEMENT TRENDS	
Formal Settlement Distribution	Updated with the Latest data
Informal Settlements Distribution	Updated with the Latest data



Urbanisation and Migration	Updated with the Latest data
Upgrading of informal settlements	Updated with the Latest data
Resilient and sustainable human settlements	Updated with the Latest data
Settlement specialisation	Updated with the Latest data
Settlement hierarchy	Updated and Aligned with NSDF, 2022
Spatial and land use management mechanism analysis	All District SDFs are analysed and aligned towards the new PSDF.
Provincial Spatial Development Framework	
Existing District Spatial Development Frameworks	
Local Spatial Development Framework Analysis	
Land Use Schemes and Management Systems (LUS and LUMS)	
Spatial Planning Categories (SPC's)	
Spatial structuring elements	Updated and Aligned with NSDF, 2022
Alignment of spatial strategies	
Cross-Municipal Boundary Planning and Alignment	To be Addressed in Phase 3 Sector Department Analysis
Horizontal and Vertical alignment (Transversal Alignment)	
CHAPTER 10 CONCLUSION	
OVERVIEW	Remained the same as in PSDF 2020
Summary of key findings	Updated with the Latest Information

