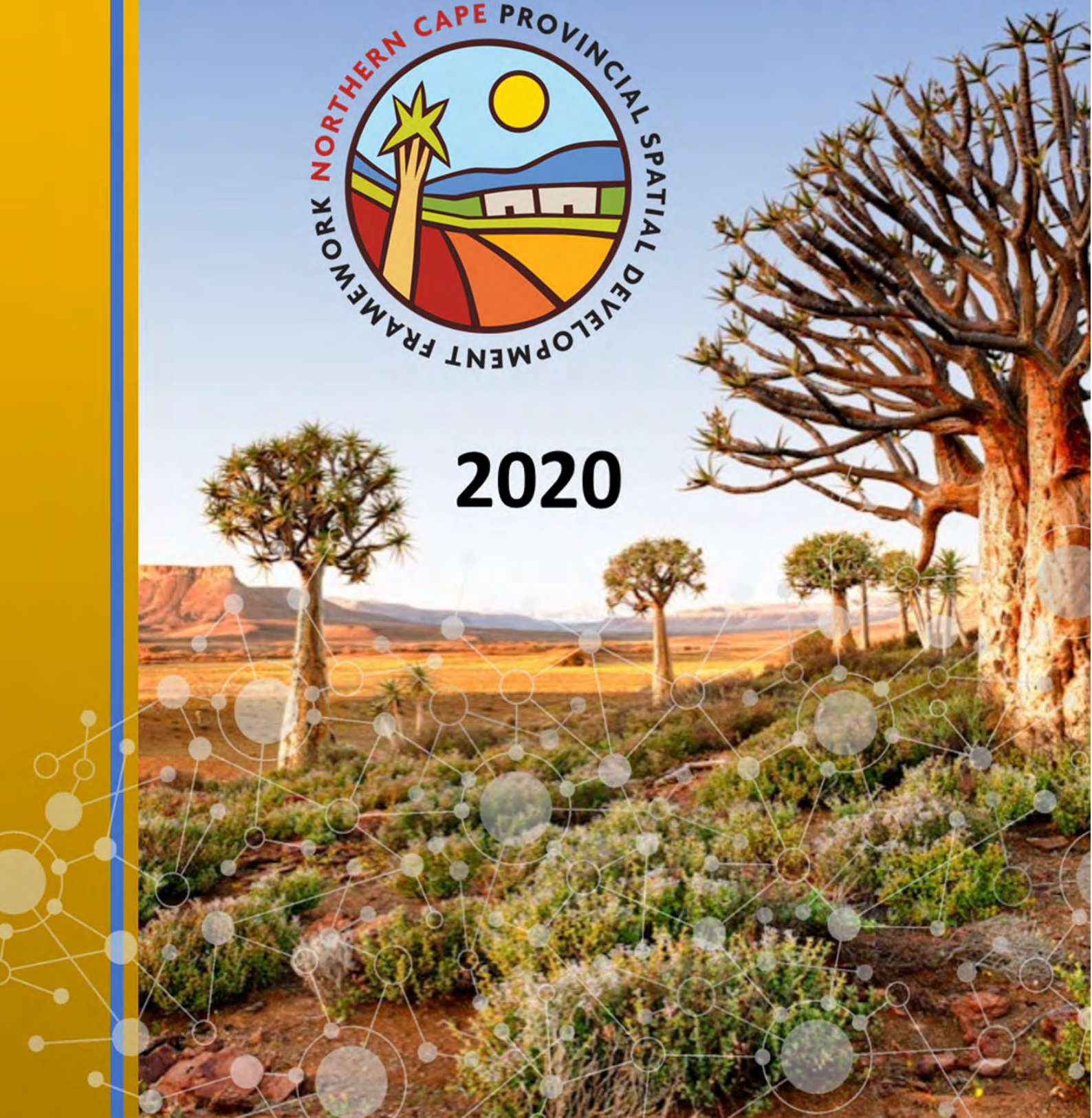
NORTHERN CAPE

PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



2020

PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (PSDF)
FOR THE NORTHERN CAPE PROVINCE

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October 2020

FOREWORD

The Northern Cape Province is a unique part of the globe. This is primarily due to its rich endowment of natural, cultural, economic and human resources. As a consequence, our province has become an international economic, scientific and environmental focal area, as is demonstrated by inter alia the designation of the Square Kilometre Array (SKA, *now referred to as SARAO*) project, UNESCO's registration of both the Richtersveld Botanical and Landscape as well as the ǂKhomani Cultural Landscape World Heritage Sites, and the growing investors' interest in the Gamagara Development Corridor.

The international focus and the need to utilise the resource base of the province in order to grow both the provincial and the national economy poses a huge challenge to the people of the Northern Cape. The core of the challenge is to implement innovative and best-practice strategies to create a 'developmental state' as advocated by the South African Constitution whilst, simultaneously, giving effect to our global obligations pertaining to social, economic and environmental sustainability.

The Northern Cape Provincial Spatial Development Framework (further referred to as the PSDF) presented herewith, and our commitments regarding its implementation, are our response to the above challenge. The PSDF expresses our core values, principles and strategies in terms of which the challenge will be addressed in the long-term and it confirms our commitment to ensuring productive partnerships with our key partners in this process, namely the private sector.

The reviewed PSDF is the end-product of a 16-month process commissioned by the Office of the Premier of the Northern Cape. It is a critical step towards giving effect to a sustainable future for our province and all its people. The document complies with, and responds to, all applicable international agreements, conventions and protocols, as well as the relevant national and provincial legislation and policy related to sustainable use of resources for the benefit of all.

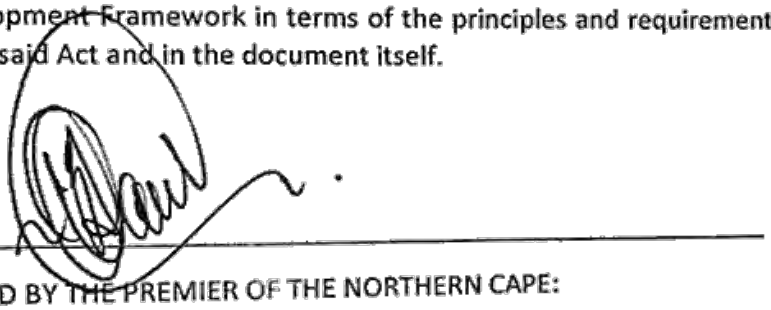
The PSDF evolved through an integrated planning process facilitated by a dedicated organisational structure which, collectively, represented and addressed the interests and mandates of the full spectrum of government departments, district and local municipalities, and key non-governmental organisations. All of the institutions that formed part of the organisational structure have endorsed the PSDF and are accordingly committed to the implementation thereof. The planning process furthermore incorporated a broad stakeholder consultation process which provided all concerned the opportunity to participate in the preparation of the document. The reviewed PSDF was built on the Provicial Growth and development Plan (PGDP) which provides the key outline of growth and development in the Province. The PSDF is effectively a spatial expression of the wishes and aspirations of the people of the Northern Cape as presented through the development drivers of the PGDP.

The PSDF does not create, or take away, land-use rights and it is to be applied in a flexible and pragmatic manner which takes into account the merits and particular circumstances of each case as required by law. However, the approval of the PSDF in terms of Sections 15 and 16 of SPLUMA (Act 16 of 2013) means that the PSDF has statutory status as the common spatial vision and strategy around which to align the future development and management of the province. Compliance with the PSDF in this regard is therefore mandatory.

The Northern Cape Government recognises that the transformation of the Northern Cape into a global model for sustainability and a place where all its people would be able to live with dignity and pride, has a long-term horizon. The PSDF is therefore the expression of a 20-year vision that is totally

dependent upon the commitment of all spheres of government and the true custodians of our future, namely our people. Government accordingly appeal to all concerned to help give effect to the intent of our PSDF.

In accordance with my mandate vested in the Section 15 of the Spatial Planning and Land Use Management Act (Act 16 of 2013), I hereby approve the reviewed Northern Cape Provincial Spatial Development Framework in terms of the principles and requirements and for the period stipulated in the said Act and in the document itself.



SIGNED BY THE PREMIER OF THE NORTHERN CAPE:

DR. ZAMANI SAUL

DATE: 26/03/2021

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LIST OF ABBREVIATIONS

ACSA	-	Airports Company South Africa
AP	-	Agri-Parks
APPs	-	Annual Performance Plans
CAADP	-	Comprehensive Africa Agriculture Development Programme
CARA	-	Conservation of Agricultural Resources Act
CASP	-	Comprehensive Agricultural Support Programme
CBA	-	Critical Biodiversity Area
CBD	-	Central Business District
COGHSTA	-	Cooperative Governance, Human Settlements and Traditional Affairs
CRDP	-	Comprehensive Rural Development Programme
CSIR	-	Council for Scientific and Industrial Research
DAFF	-	Department of Agriculture, Forestry & Fisheries
DCoGTA	-	Department of Cooperative Governance and Traditional Affairs
DEAT	-	Department of Environmental Affairs
DEDaT	-	Department of Economic Development and Tourism
DENC	-	Northern Cape Department of Environment and Nature Conservation
DM	-	District Municipality
DPME	-	Department of Planning, Monitoring and Evaluation
DRDLR	-	Department of Rural Development and Land Reform
DSDF	-	District Spatial Development Plan
DTI	-	Department of Trade and Industry

DWA	-	Department of Water Affairs
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
EMS	-	Environmental Management System
ESA	-	Ecological Support Area
ESSP	-	Environmental Sector Skills Plan
FEPA	-	Freshwater Ecosystem Priority Areas
FPSU	-	Farmer Production Support Unit
GEF	-	Global Environment Facility
GIS	-	Geographic Information System
GVA	-	Gross Value Added
GWh	-	Gigawatt Hours
HIA	-	Health Impact Assessment
ICT	-	Information and Communications Technology
IDP	-	Integrated Development Plan
IDZ	-	Industrial Development Zone
IGR	-	Inter Governmental Relations
IPP	-	Independent Power Producer
IRP	-	Integrated Resource Plan
ISO	-	International Organisation for Standardisation
IT	-	Information Technology
IUCN	-	International Union for Conservation of Nature
IUDF	-	Integrated Urban Development Framework
KGNP	-	Kalahari Gemsbok National Park
LED	-	Local Economic Development
LM	-	Local Municipality
LUS	-	Land Use Scheme
MaB	-	Man and Biosphere Programme
MBA	-	Marine Biological Area
MISA	-	Municipal Infrastructure Support Agency
MOSS	-	Municipal Open Space System
MSDF	-	Municipal Spatial Development Plan
NATMAP	-	National Transport Master Plan
NBF	-	National Biodiversity Framework
NBSAP	-	National Biodiversity Strategy and Action Plan
NC	-	Northern Cape
NC SPLUMB	-	Draft Northern Cape Spatial Planning and Land Use Management Bill
NCCCRS	-	Northern Cape Province Climate Change Response Strategy
NCCR	-	National Climate Change Response
NCPDA	-	Northern Cape Planning and Development Act 7 of 1998;
NDP	-	National Development Plan
NEMA	-	National Environmental Management Act
NEMPA	-	National Environmental Management Protected Areas
NEPAD	-	New Partnership for Africa's Development
NGO	-	Non-Government Organisation
NLTA	-	National Land Transport Act
NPAES	-	National Protected Area Expansion Strategy
NSDF	-	National Spatial Development Framework
NSSD	-	National Strategy for Sustainable Development

OTP	-	Office of the Premier
PGDP	-	Provincial Growth Development Plan
PICC	-	Presidential Infrastructure Coordinating Commission
PRASA	-	Passenger Rail Agency of South Africa
PSDF	-	Provincial Spatial Development Framework
REDZ	-	Renewable Energy Development Zone
RIA	-	Rural intervention Area
RIPTNs	-	Rural Integrated Public Transport Networks
RSDF	-	Regional Spatial Development Framework
S.A.L.T	-	South African Large Telescope
SAHRA	-	South African Heritage Resources Agency
SALGA	-	South African Local Government Agency
SANParks	-	South African National Parks
SANRAL	-	South African National Road Agency
SDF	-	Spatial Development Framework
SDG	-	Sustainable Development Goals
SDI	-	Sustainable Development Initiative
SETA	-	Skills Education Training Authorities
SEZ	-	Special Economic Zone
SIM	-	Sustainable Investment Model
SIP	-	Strategic Infrastructure Projects
SARAO	-	South African Radio Astronomy Observatory (previously known as SKA)
SKEP	-	Succulent Karoo Ecosystem Programme
SMME	-	Small Medium and Micro Enterprises
SOEs	-	State Owned Enterprises
SPC's	-	Spatial Planning Categories
SPISYS	-	Spatial Planning Information System
SPLUMA	-	Spatial Planning and Land Use Management Act
TDP	-	Transmission Development Plan
TRANCRAA	-	Transformation of Certain Rural Areas Act
UNCCD	-	United Nations Convention to Combat Desertification
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNFCCC	-	United Nations Framework Convention on Climate Change
WWF	-	World Wildlife Foundation
WWTW	-	Wastewater treatment works

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CHAPTER 1 : INTRODUCTION

1 BACKGROUND

1.1 TERMS OF REFERENCE

The review of the Northern Cape Spatial Development Framework 2020 was commissioned by the Office of the Premier, Northern Cape Province. The review is necessitated by both the promulgation of the Spatial and Land Use Management Act 2013 and the need to provide a spatial representation of the Provincial Growth and Development Plan. The plan further necessitates alignment with national, provincial, regional and municipal spatial plans, policies and strategies.

KEY REQUIREMENTS OF THE PSDF REVIEW INCLUDED:

- The PSDF must be consistent with the PGDP, NDP and draft NSDF (representation of key national and provincial strategies, policies and plans);
- Application of the SPLUMA principles;
- Review and update of the Northern Cape Socio Economic Potential of Towns Study completed in 2011 towards the development of the 2012 PSDF document;
- Promotion of Sectoral involvement in the development of the reviewed PSDF;
- Update and review of the Implementation Framework, as proposed in the 2012 PSDF;
- Evaluation of the current PSDF, looking at core challenges and recommendations;
- Co-ordination of Municipal Spatial Development Frameworks;
- Update, review and improve current data (spatial and non-spatial) used for the 2012 PSDF;
- Verify or update desired and undesired land use patterns;
- Assess and update current strategy(ies) of the 2012 PSDF;
- Identify and/or update issues deemed to be of provincial, regional and national interest together with strategic interventions; and
- Addressing the issue of spatial governance.

1.1.1 PROJECT TEAM

The PSDF is the product of an integrated process facilitated by a dedicated organisational structure. The latter comprised two forums which collectively represented and addressed the interests and mandates of the full spectrum of government departments, district and local municipalities, and key Non-Governmental Organisations (NGOs). All the institutions that formed part of the project forums have endorsed the PSDF and are accordingly committed to the implementation thereof.

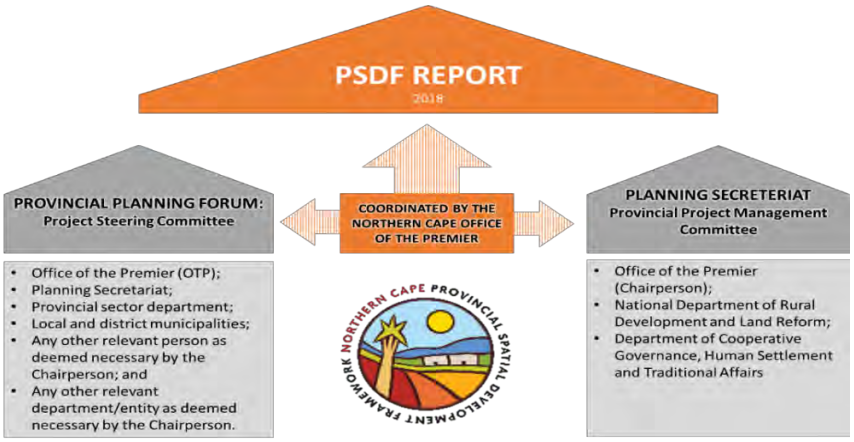


Figure 1: PSDF Project management structure

1.2 DOCUMENT STATUS

1.2.1 MANDATE

The Constitution assigns provincial and regional planning as exclusive responsibilities of provincial government. In terms of Section 15 of SPLUMA 2013. The Premier is required to compile and publish a spatial development framework (SDF) for the province. This PSDF must coordinate, integrate and align to:

- provincial plans and development strategies with policies of national government;
- the plans, policies and development strategies of provincial departments; and
- the plans, policies and development strategies of municipalities.

IN TERMS OF SECTIONS 15 AND 16 OF SPLUMA A PSDF MUST COVER THE FOLLOWING ASPECTS:

- A description of the process followed preparing the PSDF;
- An assessment of a province's spatial development status and the key spatial challenges it faces;
- Provincial spatial implications of applicable national development strategies;
- A provincial spatial vision that articulates desired land use patterns;
- Provincial land development objectives, principles, strategies, policies and priorities (specifically addressing sustainable development and considering climate change);
- A coordinated and integrated spatial reflection of the plans of provincial departments; and
- A coordinated framework for Regional and Municipal SDFs.

Whilst the Constitution assigns shared and exclusive spatial responsibilities to each sphere of government, it is evident that Provincial Government's PSDF mandate requires coordination, integration and alignment between all spheres of government.

The legal status of PSDFs is clarified in the following sections of SPLUMA (DRDLR, SDF Guidelines, 2017:35):

- Section 12 (6) prescribes that SDFs must outline specific arrangements for prioritising, mobilising, sequencing and implementing public and private infrastructural and land development investment in the priority spatial structuring areas identified in SDFs.
- Section 17 (2) prescribes that all provincial development plans, projects and programmes must be consistent with the PSDF.
- Section 22 (3) prescribes that where a PSDF is inconsistent with a Municipal SDF, the Premier must take the necessary steps (including the provision of technical assistance) in accordance with the Intergovernmental Relations Framework Act to support the revision of those SDFs in order to ensure consistency between the two.

1.2.2 IMPLEMENTATION CHALLENGE

Whilst the PSDF has jurisdiction over provincial departments, it is also mandated to coordinate, align and integrate the spatial plans of national and municipal government – institutions over which it has ***no direct jurisdiction***. Herein lies it's major challenge. To address this challenge, it needs to present the ***logic of coherent spatial development***, demonstrate the value to be added by applying sound planning principles, and use inter-governmental forums as platforms for the perusal of the cooperative spatial governance agenda. In this regard the PSDF cannot dictate to other government spheres, but ***it has considerable scope to influence spatial investment decisions***.

2 USING THE DOCUMENT

2.1 REPORT STRUCTURE

The PSDF comprises the following chapters:

- Chapter 1: Introduction. Background and Purpose of the Report which outlines the purpose of the report, the PSDF policy context and points of departure
- Chapter 2: Governance.
- Chapter 3: Spatial Challenges and Opportunities. *(as supported by the status quo analysis report developed to inform this chapter)*
- Chapter 4: Spatial Agenda.
- Chapter 5: Spatial Development Framework *(as supported by the reviewed Socio-Economic Potential of Towns review, 2018)*
- Chapter 6: Land Use Management (*as supported by the Spatial Planning Categories*).
- Chapter 7: Implementation Framework *(See Annexures).*

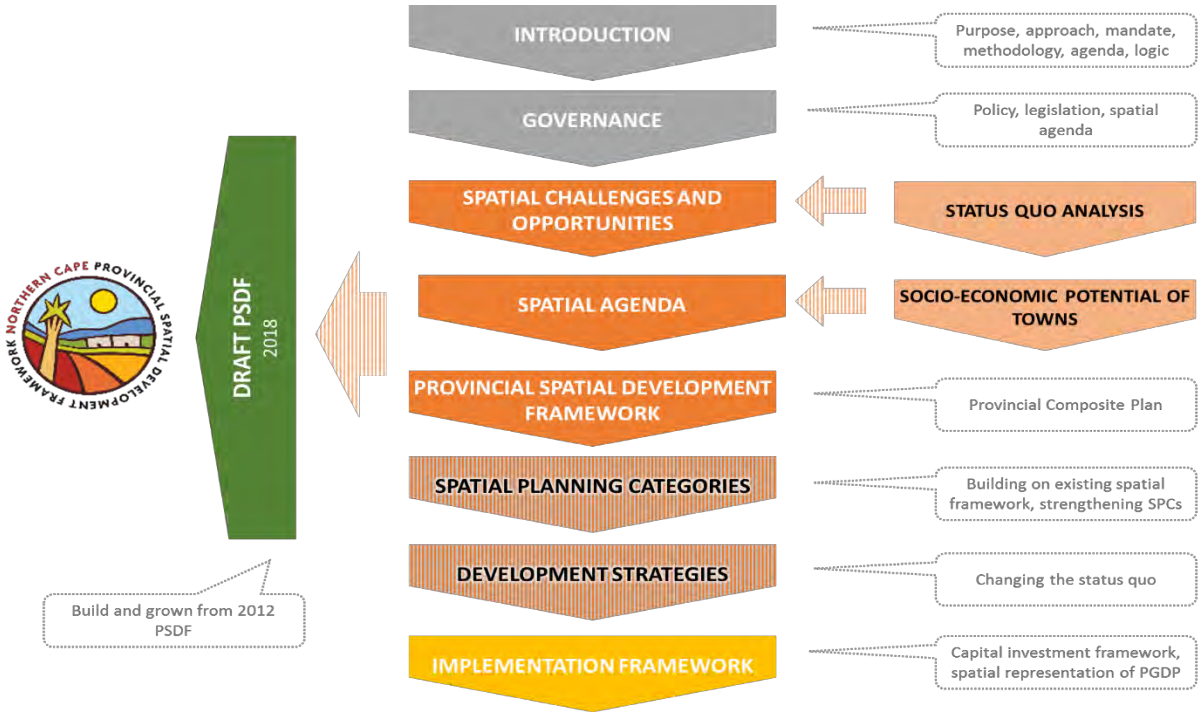


Figure 2: PSDF Report Structure

2.2 BACKGROUND AND PURPOSE

The Northern Cape PSDF will act as an enabling mechanism that responds and complies with, in particular, the National Spatial Development Framework (NSDF). The latter encourages lower sphere spatial development plans and frameworks (such as the PSDF) to create an environment that enables a developmental state. The PSDF aims to give effect to the commitment above and address the current situation in the Northern Cape which is described in the Provincial Growth and Development Plan – Vision 2040. The PSDF builds on the notion that such a scenario requires innovative economic intervention, which can only result from a dynamic and effective developmental state and effective governance.

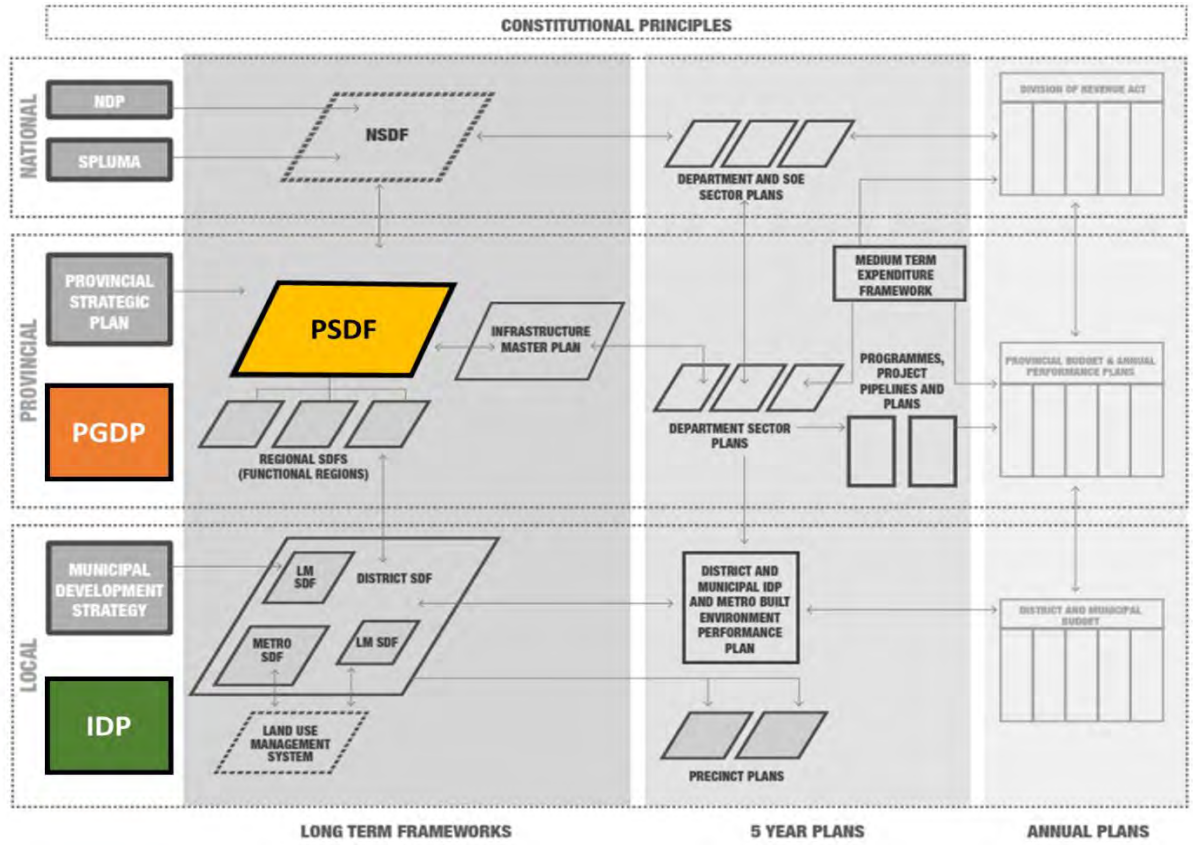


Figure 3: The relationship between spatial frameworks and implementation plans at the various scales of planning

The PSDF is to function as an innovate strategy that will apply sustainability principles to all forms of land use management throughout the Northern Cape as well as to facilitate practical results, as it relates to the eradication of poverty and inequality and the protection of the integrity of the environment. In short, the PSDF is to serve as a mechanism towards enhancing the future of the Northern Cape and its people by ensuring that:

- All land-uses enable people to have sustainable livelihoods and enhance the integrity of the environment; through effective resource management;
- Innovative management skills and technologies are employed to bring human demands for resources into balance with the carrying capacity of the environment. In this regard the PSDF is premised on the principle that shared resources can only be sustainable if the ethic of environmental care applies at all the applicable levels, ranging from the international to the local; and;
- To capitalise on the comparative and competitive advantages, in a sustainable manner, which the Northern Cape holds over its bordering provinces and the neighbouring countries abutting the Northern Cape.

The PSDF is a policy framework that applies the conformity principle. It does not bestow or remove land use rights. However, upgrading or amendment of existing rights will have to conform to the PSDF. This means that organs of state and officials must take account of, and apply relevant provisions of the PSDF, when making decisions that affect the use of land within the province. However, the PSDF is mainly a guideline, which must not be applied rigidly, but rather consider the merits and particular circumstances of each case in a site-specific manner as is required in terms of the bioregional planning approach and the Spatial Planning and Land Use Management Act, 16 of 2013.

THE PURPOSE OF THE PSDF IS TO: *(as informed by Chapter 4, Section 26 of the Northern Cape SPLUMB)*

- Provide spatial land-use directive which aims to promote environmental, economic, and social sustainability through sustainable development;
- To give affect to the Principles of SPLUMA;
- To elaborate on any national or international initiatives which may impact development in the Northern Cape Province;
- To set development standards towards public and private sector investment;
- A guide towards reducing business risk (by providing clarity and certainty on where public infrastructure investment will be targeted) thereby opening-up new economic opportunities in these areas;
- Guide towards the location and form of public investment in the Northern Cape's urban and rural areas;
- Basis for prioritising, aligning and integrating governmental programmes and projects;
- Premise for governmental performance management; and
- Manual for integrated land-use planning.

2.2.1 REASON FOR THE REVIEW

The main motive for the review of the PSDF is to give effect to the standards and principles set out in the Spatial Planning and Land Use Management Act, 16 of 2013. The Department of Rural Development and Land Reform: Spatial Planning and Land use management services branch, in collaboration with the Department of Cooperative Governance, Human Settlements and Traditional Affairs (COGHSTA), Municipal Infrastructure Supporting Agency (MISA) and South African Local Government Agency (SALGA), assessed the 2012 PSDF and highlighted the following short-comings of the 2012 PSDF document:

- Limited alignment with policy and legislation is needed due to the limited linkage between the PSDF and NDP. Along with SPLUMA the new policy and legislation needs to be incorporated such as the Integrated Urban Development Framework, among others.
- Limited alignment with departmental sector plans as well as the clear definition of roles and functions of departments.
- Outdated statistical data (2001 Census data) was utilised to inform the proposals made within the document.
- Monitoring and evaluation tools and mechanisms are required in order to assess the level of implementation of the PSDF strategies.
- The spatial proposals need to be amended in order to portray the true developmental realities of the province.

2.2.2 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (SPLUMA)

Whilst the Constitution assigns shared and exclusive spatial responsibilities to each sphere of government, it is evident that provincial government's PSDF mandate requires coordination, integration and alignment between all spheres of government. **According to Section 16 of SPLUMA**, a provincial SDF provides "a spatial representation of the land development policies, strategies and objectives of the province" and indicates the desired/intended land-use development, including areas where development would not be appropriate. It also provides a framework for coordinating SDFs of adjacent municipalities. All provincial development plans, projects and programmes must be consistent with the provincial SDF. Where a provincial SDF is inconsistent with a municipal SDF, the Premier must, in accordance with the Intergovernmental Relations Framework Act, 2005 take the necessary steps to ensure consistency between the two SDFs. In response to the quest of reversing

the spatial effects of apartheid and infusing a new South African spatial perspective, SPLUMA was gazetted on the 5th of August 2013, with the following aims:

- This act, consequently, ultimately paves the way for municipalities to become the primary regulators of land use;
- The implementation of this act will assist the transformation agenda and progressively engineer South Africa's spatial planning and land use management systems in a way that promotes social and economic inclusion; and
- Furthermore, it provides for the sustainable and efficient use of land resources and the redress spatial inequalities.

The Spatial Planning and Land Use Management Act (SPLUMA) was signed into law by the President on 02 August 2013, and formally came into effect on the 1st of July 2015. This Act provides a framework for all spatial planning and land use management legislation and processes in South Africa. It seeks to promote consistency and uniformity in procedures and decision-making regarding spatial planning across the country. SPLUMA embodies the constitutional imperatives relating to the protection of the environment and property rights; the right of access to housing and the rights to sufficient food and water. The preamble to SPLUMA specifically refers to sustainable development, which requires the integration of social, economic and environmental considerations in future planning and ongoing land use management. The intent of the legislature is that municipalities must participate in national and provincial development programmes.

2.2.2.1 NORTHERN CAPE SPATIAL PLANNING AND LAND USE MANAGEMENT BILL, 2017

The draft Northern Cape SPLUMB defines the Provincial PSDF as follow:

> "Northern Cape Provincial Spatial Development Framework" means a framework prepared and adopted in terms of this Act for the Province or a framework prepared and adopted in terms of an Act repealed by this Act;

The following principles, norms and standards apply to Spatial Planning and land development in the Province[2]:

- To promote sustainable development according to international standards;
- Give effect to the principles enshrined in the Constitution of South Africa;
- Adhere to the principles of bioregional planning;
- To promote efficient and integrated sustainable development; and
- To incorporate the principles of spatial justice; efficiency and good administration.

[2] Summary of key principles, norms and standards as proposed under Chapter 2 of the Northern Cape SPLUMB. The detail of each of the principles, norms and standards are outlined in this Chapter.

2.2.2.1.1 PREPERATION OF A PSDF

The following sections of the NC SPLUMB gives direction towards the preparation of a PSDF:

- Section 10 (1), A long terms Provincial Spatial Development Framework spanning thirty years must be prepared for the Province as prescribed, and adopted or amended, as the case may be, by the Executive Council of the Province.
- Section 10 (2), A Provincial Spatial Development Framework may be amended from time to time and must be reviewed at least every five years.
- Section 10 (3), A Provincial Spatial and Development Framework or any amendments thereto will come into effect after it has been adopted by the Executive Council and published.
- Section 10 (4), Any additional measures pertaining to the form, content, compilation, public participation and finalisation of a Provincial Spatial Development Framework must be as prescribed.
- Section 10 (5), Any Provincial Spatial Development Framework prepared or adopted by the Province in terms of the Northern Cape Planning and Development Act No. 7 of 1998 (NCPDA) prior to the commencement of SPLUMA or the Act shall be deemed to have been drafted and formulated and published in term of the Act and shall remain as such until such time as it is amended or replaced by a Provincial Spatial Development Framework adopted or amended, as the case may be, in terms of the Act.
- Section 10 (6), The preparation or amendment of a Provincial Spatial Development Framework shall include consultation with all provincial departments of the Province; all municipalities situated within the Province; all other organs of state who might have an interest in the process; and any other persons or bodies which may be appropriate.

2.2.2.2 ROLE AND RESPONSIBILITIES OF THE PREMIER ACCORDING TO SPLUMA

The Office of the Premier must ensure that all provincial departments apply the development principles and monitor the implementation thereof. The following development principles apply to spatial planning, land development and land use management:

- Spatial justice;
- Spatial sustainability;
- Efficiency;
- Spatial resilience; and
- Good administration.

Chapter 4 enables the Premier to publish a Provincial Spatial Development Framework (PSDF) that guides spatial distribution of current and desired land uses within the provincial sphere in order to give effect to the development vision, goals and objectives. Ultimately, the Office of the Premier is obligated to ensure alignment of all provincial strategic plans, Annual Performance Plans (APPs) and sector plans to the Provincial Spatial Development Framework and monitor the implementation thereof.

2.2.2.3 SPLUMA PRINCIPLES

One of the main objectives of SPLUMA is to provide a framework for spatial planning and land use management to address past spatial and regulatory imbalances. SPLUMA further sets out the following five(5) main development principles applicable to spatial planning, land use management and land development:

2.2.2.3.1 SPATIAL SUSTAINABILITY

- Past spatial and other development imbalances must be redressed through improved access to land and the use thereof;
- Spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded; and
- Spatial planning mechanisms, including land use schemes, must incorporate wall to wall provisions that enable redress in access to land.

2.2.2.3.2 SPATIAL JUSTICE

- Promote land development that is within the fiscal, institutional and administrative means of the Republic;
- Ensure that special consideration is given to the protection of prime and unique agricultural land;
- Uphold consistency of land use measures in accordance with environmental management instruments;
- Promote and stimulate the effective and equitable functioning of land markets;
- Consider all current and future costs to all parties for the provision of infrastructure and social services in land developments;
- Promote land development in locations that are sustainable and limit urban sprawl; and
- Result in communities that are viable.

2.2.2.3.3 EFFICIENCY

- Land development optimises the use of existing resources and infrastructure;
- Decision-making procedures are designed to minimise negative financial, social, economic or environmental impacts; and
- Development application procedures are efficient and streamlined and timeframes are adhered to by all parties.

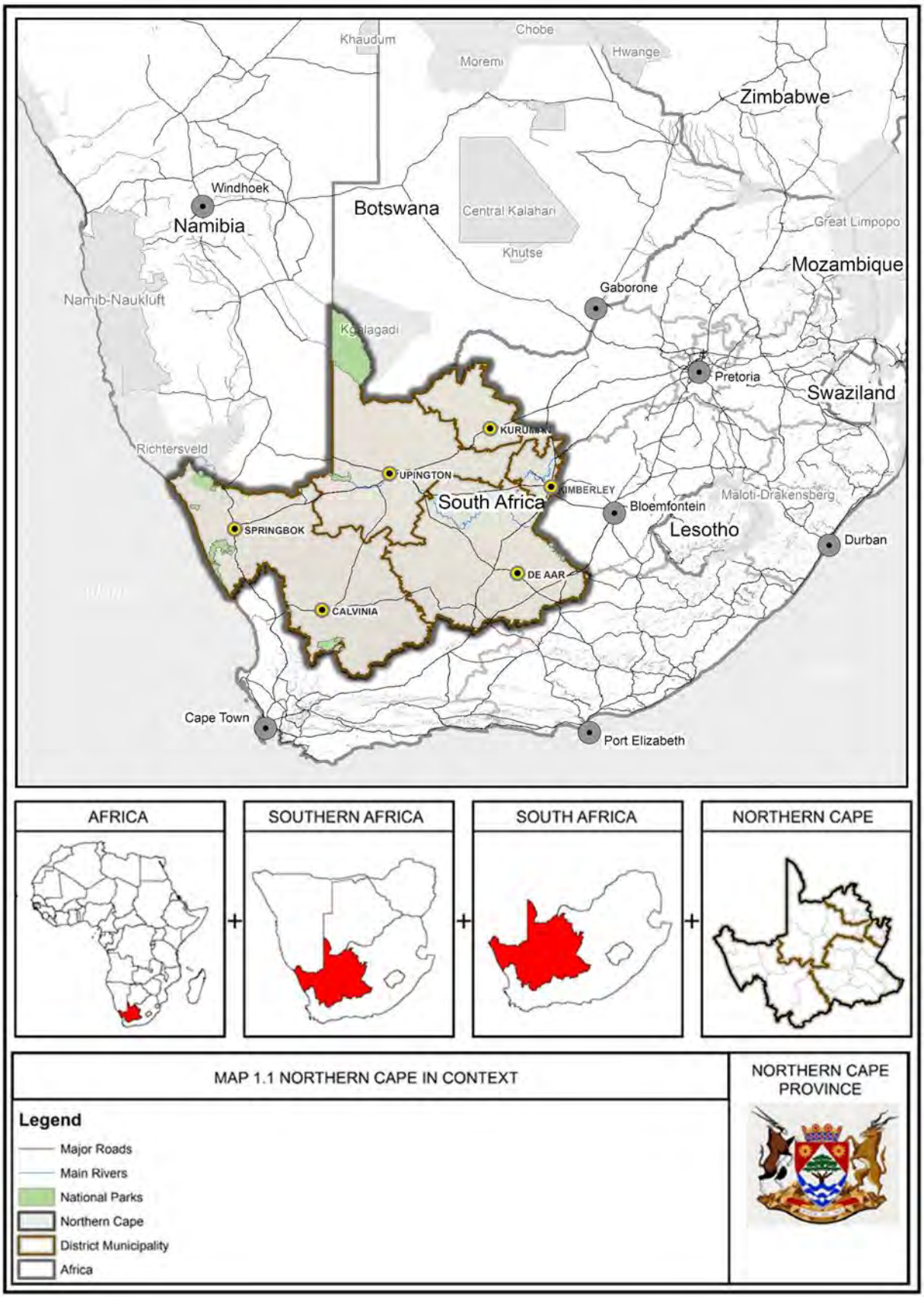
2.2.2.3.4 SPATIAL RESILIENCE

- Flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.

2.2.2.3.5 GOOD ADMINISTRATION:

- All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act;
- All government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendment of spatial development frameworks;
- The requirements of any law relating to land development and land use are met timeously;
- The preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them policies, legislation and procedures must be clearly set in order to inform and empower members of the public.

3 THE NORTHERN CAPE PROVINCE



Map 1: Northern Cape Province in context

3.1 NORTHERN CAPE CONTEXT

3.1.1 INTERNATIONAL

On the world stage the Northern Cape it is estimated to have the world's fifth-largest mining sector in terms of gross manganese and iron ore, copper and silver deposits located within the Northern Cape. The Square Kilometre Array (SARAO), which is a multi-billion-rand, joint international project, which has highlighted South Africa's and the Northern Cape's role in contributing to information and technology on a global scale. SARAO will make use of thousands of radio dishes across Africa and Australia to gather information from space by monitoring faint radio signals given off by stars and galaxies, allowing scientists to expand the understanding of the Universe.

Figure 4: Overview of the Northern Cape

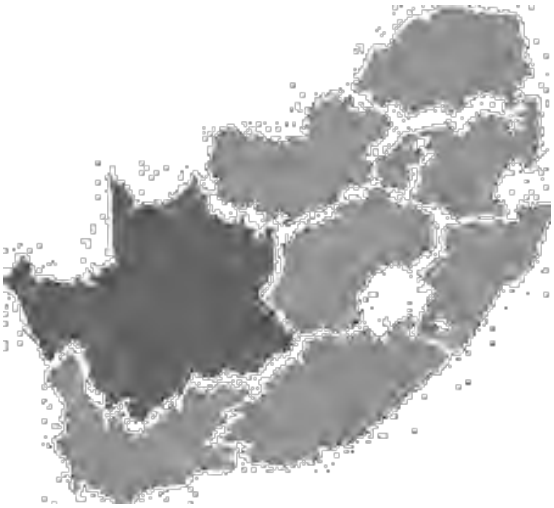
Yet another international project located within the Northern Cape is the Bloodhound Project, which aims to break the world land speed record. The project is located on the Hakskeenpan, within the Dawid Kruiper Municipality, and is expected to attract large spectator crowds. The Northern Cape's extreme heat conditioned accompanied by high quality roads, with limited traffic has placed the Northern Cape as the ideal location, to road test new motor vehicles. Furthermore, dried fruit produced within the Northern Cape are exported worldwide.

3.1.2 NATIONAL

The Northern Cape is South Africa's largest province, with sparse population concentrations distributed over vast distances. The Northern Cape is mostly known for the significant deposits of diamonds, iron, lead-zinc ores associated with copper and silver. Furthermore, it is known for cultural and natural heritage, encapsulated within the six(6) National Parks situated within the province.

The major river system is the Orange (or Gariep) River Basin, draining the interior of South Africa westwards into the Atlantic Ocean. The principal tributary of the Orange is the Vaal River, which flows through part of the Northern Cape from the vicinity of Warrenton. The river system within the Northern Cape is crucial to sustain life within the province and is also a crucial component required for a thriving dominant primary economic sector.

Due to the vast open spaces, high levels of radiation and non-cloudy days, experienced within the Northern Cape, makes it ideally suited for solar energy production. From a national point of view, the Northern Cape along with Mpumalanga can be known as the main energy producers of South Africa.



Overall the province is recognized as being part of the Karoo and Kalahari Deserts regions, known for its lamb production. Various other livestock commodities are also produced within the province. Another prominent agricultural product of the Northern Cape is table grapes, as well as desert wines,dates and nuts due to the combination of an arid climate, with access to a river.

3.2 ADMINISTRATIVE OVERVIEW

The Northern Cape is located in the north-western corner of South Africa and has a shoreline of approximately 313 km, along the Atlantic Ocean. The Northern Cape is the largest of the nine provinces of South Africa – it covers approximately 372 889 km² which is 30.5% of the total land surface of the country. The Northern Cape is bordered by the North West, Free State, Eastern Cape and Western Cape Provinces. In the north, the Northern Cape shares a common international border with Namibia and Botswana respectively. The Northern Cape has a pivotal function as a linkage between the remainder of South Africa and Namibia. The province is bisected by the Orange River which has its origins in the Drakensberg Mountains in Lesotho. The Orange River forms the international border between the Northern Cape and Namibia and flows into the Atlantic Ocean at Alexander Bay. The Northern Cape Planning Area Consist of five (5) district Municipalities and twenty-six (26) Local Municipalities as indicated in **Table 1** below:

Table 1: Administrative overview of the Northern Cape Province

DISTRICT MUNICIPALITY	LOCAL MUNICIPALITY	MAIN TOWN	MAIN ECONOMIC ACTIVITY
Frances Baard District Municipality	Dikgatlong Local Municipality	Barkly West	Mining
	Magareng Local Municipality	Warrenton	Agriculture
	Phokwane Local Municipality	Jan Kempdorp	Agriculture
	Sol Plaatje Local Municipality	Kimberley	Regional Centre
John Taolo Gaetsewe District Municipality	Gamagara Local Municipality	Kathu	Mining
	Ga-Segonyana Local Municipality	Kuruman	Service Centre
	Joe Morolong Local Municipality	Hotazel	Mining
Namakwa District Municipality	Hantam Local Municipality	Calvinia	Service Centre
	Kamiesberg Local Municipality	Garies	Small Service Centre
	Karoo Hoogland Local Municipality	Frasersburg	Small Service Centre
	Khai-Ma Local Municipality	Pofadder	Small Service Centre
	Nama Khoi Local Municipality	Springbok	Service Centre
	Richtersveld Local Municipality	Port Nolloth	Transportation
Pixley Ka Seme District Municipality	Emthanjeni Local Municipality	De Aar	Transportation
	Kareeberg Local Municipality	Carnarvon	Small Service Centre
	Renosterberg Local Municipality	Petrusville	Small Service Centre
	Siyancuma Local Municipality	Douglas	Agriculture
	Siyathemba Local Municipality	PrieSARAO	Service Centre
	Thembelihle Local Municipality	Hopetown	Small Service Centre
	Ubuntu Local Municipality	Victoria West	Small Service Centre
	Umsobomvu Local Municipality	Colesberg	Service Centre
ZF Mgcawu district Municipality	!Kheis Local Municipality	Groblershoop	Small Service Centre
	Dawid Kruiper Local Municipality	Upington	Regional Centre
	Kai !Garib Local Municipality	Kakamas	Service Centre
	Kgatelopele Local Municipality	Danielskuil	Mining
	Tsantsabane Local Municipality	Postmasburg	Mining

4 METHODOLOGY

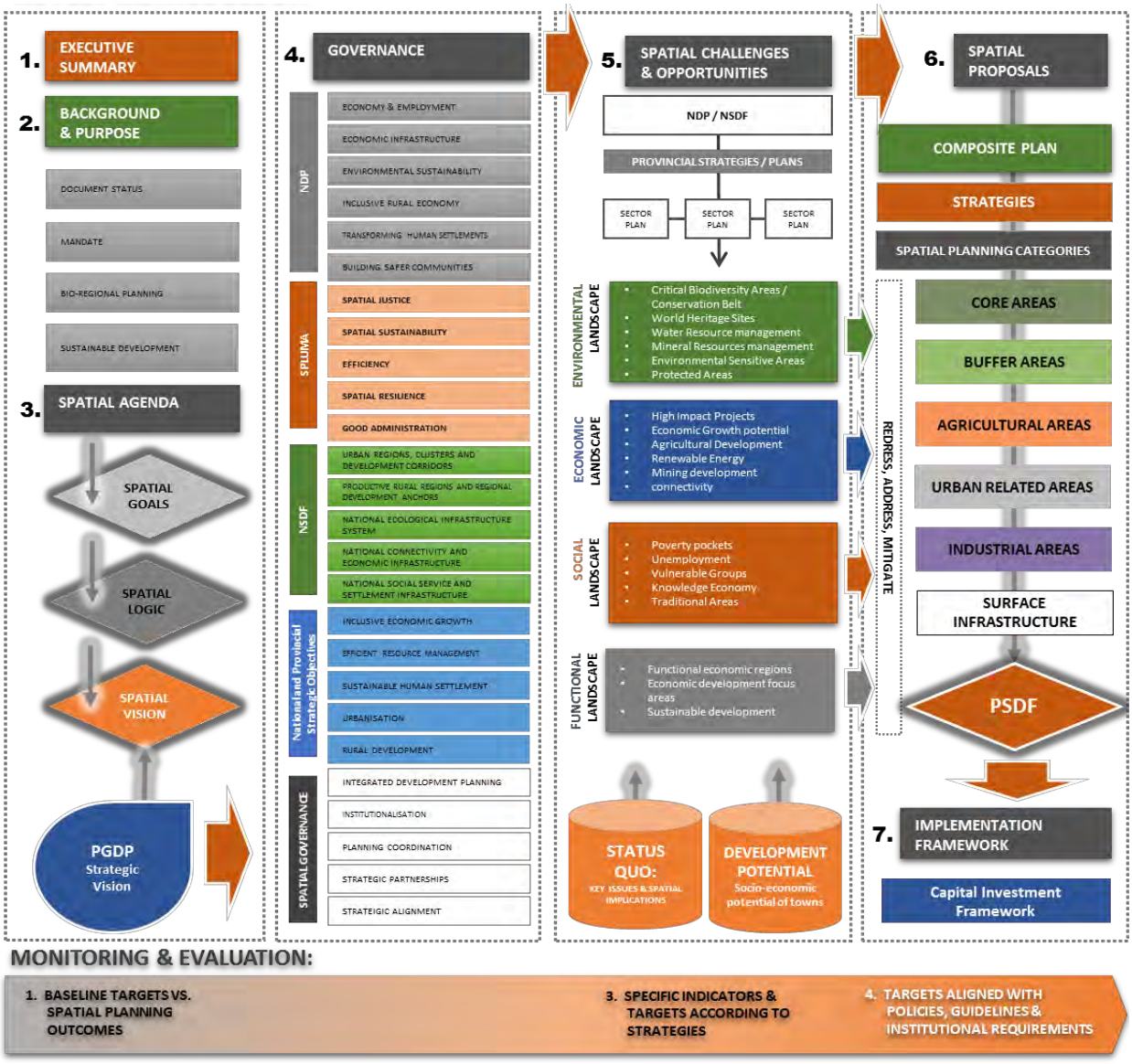


Figure 5: PSDF Methodology

Figure 5 above provides a snapshot of the PSDF process followed towards the review and restructuring of the Northern Cape PSDF. The PSDF is further guided and informed by the national legal framework; international, national and provincial spatial policy directives; and municipal Spatial Development Frameworks. SPLUMA provides South Africa with a single land development process and regulates the compilation and review processes of national, provincial, regional and municipal SDF's. All spheres of government must prepare and adopt SDF's, guided by the development principles of spatial justice, spatial sustainability, efficiency, spatial resilience and good administration. The review process strived towards obtaining a good balance between the National 2017, SDF guidelines developed by the National Department of Rural Development and Land Reform and the Northern Cape PSDF, 2012. Direction was taken by including and strengthening the provincial Spatial Planning Categories (SPC's) to ensure that existing planning strategies and objectives remain intact and not to contradict any existing or planned policy making that was built on the SPC's. The review process also makes provision towards aligning the Northern Cape PSDF with the draft National Spatial Development Framework with specific focus on strategies that affects planning in the Province.

5 APPROACH

"Living-in-place means following the necessities and pleasures of life as they are uniquely presented by a particular site, and evolving ways to ensure long-term occupancy of that site. A society which practices living-in-place keeps a balance with its region of support through links between human lives, other living things, and the processes of the planet — seasons, weather, water cycles — as revealed by the place itself. It is the opposite of a society which makes a living through short-term destructive exploitation of land and life" - *(Berg and Dasmann, 1997:399-401)*

5.1 BIO-REGIONAL PLANNING

As with the 2012 PSDF, the reviewed PSDF (2020) was prepared (reviewed) in accordance with the principles of bioregional planning adapted to suit the requirements of the Northern Cape. The objective is to ***provide a coherent and place-specific methodology*** for the planning and management of the Northern Cape as a distinct and unique place and to facilitate its management in accordance with local and global best-practice. The implementation of bioregional planning principles as promoted by the PSDF does not require any major adjustments from institutions or stakeholders - in essence, it merely ***requires a paradigm shift towards a more sustainable and integrated approach*** to all aspects of governance, economic growth facilitation and land-use.

The bioregional principles as applied in the PSDF are in compliance with the national and provincial legislation and policy that direct spatial planning in South Africa, including the Spatial Planning and Land-Use Management Act (Act 16 of 2013), the draft National Spatial Development Framework (NSDF), and the National Strategy for Sustainable Development (NSSD).

Birkeland and Walker point out that bioregional planning turns conventional planning on its head. "Conventional planning systems are processes for 'choosing between' development proposals or land uses according to the highest economic use of land." They tend to "accommodate growth or 'progress' in a sense of transforming nature." Bioregional planning on the other hand recognizes that "humans are biological entities and therefore need systems for living that are designed to meet their cultural, economic, and physical needs, but in ways that foster symbiotic relationships with the complex ecological systems of the bioregion."

Bioregional planning recognises that no region or area should be planned and managed as an 'island' in isolation from its surroundings. Each unit is an important part of the broader environment within which it is located, and the mutual relationships and linkages between adjacent units must be understood and applied when planning and managing any particular unit (NC PSDF, 2012). It is also referred to as an organised process that enables people to work together, think carefully about the potential and challenges of their region, set goals and objectives, define activities, implement projects, take actions agreed upon by the communities, evaluate progress and refine their approach. The bioregional framework supports the goal of accelerating change toward improved well-being for nature and society for a number of reasons, (NC PSDF, 2012):

- Bioregionalism identifies areas similar in transport-trade, communication networks, natural resource reliance, cultures, recreational desires, natural ecosystems, governance, and societal issues of concern.
- It makes little sense to discuss the topic of sustainability at the global scale if insufficient thought is given to the local places and scales where human life actually occurs. Societal actions that are sustainable for humans, other life-forms, and earthly systems can best be achieved by means of a spatial framework in which people live as rooted, active, participating members of a reasonably scaled, naturally bounded, ecologically defined "place."

- Considering problems and solutions from a bioregional perspective offers an opportunity to engage in comprehensive, adaptively managed change improving society's overall opportunity to achieve sustainability at a scale not possible within a single community effort. One can discern patterns that diminish the quality of life, sense of place, and sustainability, as well as patterns that enhance these features, by adopting community convergence activities or a bioregional view.
- National and international communities of people will have to undergo significant adaptive change to deal with a transition brought on global warming. But large-scale social change will only happen where people share common concerns, goals, and core values. Acknowledging that community-by-community change is too slow, the bioregion offers an example of where communities with common ecology, culture, and economy can converge for a greater good. Likewise, challenges to social change are certainly more easily overcome in a converging of local communities at the bioregion than by trying to encourage action at the national level.
- Bioregions are governed by nature not politics. So, once we understand the inherent physical, biological, and ecologic relationships of a bioregion, we can count on actions judged to be sound according to the theory of the three-legged stool or three-overlapping circles to be much more predictable, enduring, and supportive, as well as less costly, to society than the unending quest to find technological fixes for all our problems that governing bodies can promote their next election on.
- Because of the many common threads that weave through the landscape tapestry of a bioregion, which we can personalize by calling home, the concentric circles of environment, society, and economy relationships become much easier to traverse, affording us the opportunity to leave home a little better off than we might have found it.
- Bioregional-based planning and action can help society narrow problems and solutions and help participants to acknowledge the limitations of a place and its resources so that they will not continue to overestimate the carrying capacity of the regions they inhabit and live more sustainably.
- This convergent, bioregional approach, can influence the larger world mainstream by its regeneration of local cultures, ecosystems, and resources into the indefinite future, contributing to the more global needs of life on Earth, more effectively than a national or global scale initiative ever could.
- For every bioregion, there may be a unique set of practices, tools, models, and successes within individual organizations that supports planning, design, and management. Instead of "reinventing the wheel" with each new initiative, project, or campaign the bioregional scale of sustainability work will enhance the transfer of knowledge and technology for the betterment of the entire region.

5.1.1 SPATIAL DIMENSION

The spatial dimension of bioregional planning constitutes the identification and mapping of logical form determinants (including spatial patterns and resources). This generally suggests ***a logical spatial form that promotes sustainability***. Bio-cultural regional patterns provide solutions pertaining to where to develop and where not to develop. This can help policy-makers to set goals that are within the capacities of the natural systems, and at the same time, are more likely to meet social values for an area.

5.1.2 PRINCIPLES APPLICABLE TO THE NORTHERN CAPE

There is a perception that globalization may create economic insecurity and increase the gap between rich and poor in a primarily rural economy such as that of the Northern Cape. It is furthermore suspected that globalization may undermine cultural diversity and may turn complex ecosystems into

streams of standardized commodities. In contrast to this, a bioregional economy has the following characteristics:

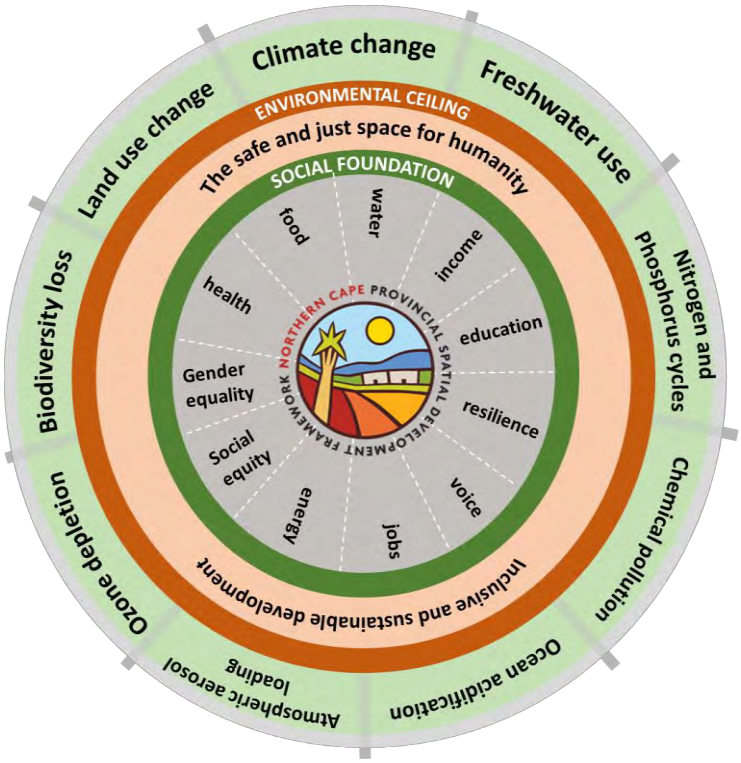
- It reflects the capacities and limitations of ecosystems, honours the diversity and history of local cultures, and meets human needs as locally as possible.
- It is diverse, resilient, and decentralized.
- It minimizes dependence on imports while focusing on high value-added exports. Paradoxically, this gives a bioregional economy an important competitive advantage in a global economy, allowing it to trade on favourable terms without sacrificing its economic sovereignty in the process.
- It recognizes the need for fair trade, refraining from importing or exporting goods produced unfairly or in an ecologically-destructive manner.
- It makes a transition to true cost pricing, building actual social and environmental costs into market prices. In order to provide independent certification of product attributes (e.g. sustainably harvested, fair trade, organic, shade grown, green energy, etc.), a bioregional economy promotes product labelling (i.e. product labelling sends a clear message to the customer about the broader life-cycle impacts of a product).
- It does not deplete its own society, nature, or capital. It exports only their sustainable surplus, most often taking the form of intellectual property or high-value products and services rather than bulk commodities. Its sense of place becomes the key component of brand identity.
- It is spatially orientated by a network of connected natural areas, the availability of productive rural areas, and the distribution of settlements and towns. This allows the bioregional economy to substitute ecosystem services for more expensive imported alternatives.

5.2 TOWARDS SUSTAINABLE DEVELOPMENT

The PSDF needs to respond and give practical effect to the overarching objective stipulated in the both the Draft National Spatial Development Framework (NSDF) as well as the Northern Cape PGDP to ensure integration of development processes and, in particular, to facilitate sustainable development throughout the province. In order to achieve sustainable development, it is imperative that all parties (public sector, private sector and end users) involved in development, have an agreed common vision and strategy for the Spatial Structure of the Province. To this end it is important that there is a common Vision, Objectives and understanding of the preferred Spatial Structure of the Province. This requires agreement on "Structuring Elements".

Humanity's 21st century challenge is to **meet the needs of all within the means of the planet**. In other words, to ensure that no one falls short on life's essentials (from food and housing to healthcare and political voice), while ensuring that collectively we do not overshoot our pressure on Earth's life-supporting systems, on which we fundamentally depend – such as a stable climate, fertile soils, and clean water. The ***Doughnut*** (see **Figure 8**) (Raworth, 2012) of social and planetary boundaries is a playfully serious approach to framing that challenge, and it acts as a compass for human progress this century.

Figure 6: Visit the link to obtain more information on the Doughnut of social and planetary boundaries



The outer ring presents a set of nine Earth-system processes (like freshwater use, climate regulation, and the nitrogen cycle) that are critical for keeping this planet in the stable state which has been so beneficial to humankind over the past 10,000 years (it gave us agriculture, and all that has followed). Putting excessive stress on these critical processes could lead to tipping points of abrupt and irreversible environmental change, so (Rockström, 2009) proposed a set of boundaries for avoiding those danger zones. Together, the nine boundaries constitute an environmental ceiling – what their authors call 'a safe operating space for humanity'.

Figure 7: The Doughnut of social and planetary boundaries (2017)

That's a compelling approach to environmental sustainability, but humanity is glaringly absent from the picture. After all, an environmentally safe space could be compatible with appalling poverty and injustice. The inner ring combines the planetary boundaries together with the concept of social boundaries. Just as there is an environmental ceiling, beyond which lies unacceptable environmental degradation, so too there is a social foundation, below which lies unacceptable human deprivation.

Human rights provide the cornerstone for defining and identifying the top priorities towards the debate over renewing the Millennium Development Goals after 2015 and creating Sustainable Development Goals at the UN Conference on Sustainable Development. A first glimpse of 21st century consensus on unacceptable deprivations comes from the issues raised by governments in their submissions (Rio) where they prioritised 11 dimensions of human deprivation, and so these form the inner ring of **Figure 8**. Between the social foundation and the planetary ceiling lies an area – shaped like a doughnut – which is the **safe and just space for humanity to thrive** in. The 21st century's unprecedented journey is to move into that space from both sides: to eradicate poverty and inequity for all, within the means of the planet's limited resources.

The environmental ceiling consists of nine planetary boundaries, as set out by Rockstrom *et al*, beyond which lie unacceptable environmental degradation and potential tipping points in Earth systems. The twelve dimensions of the social foundation are derived from internationally agreed minimum social standards, as identified by the world's governments in the Sustainable Development Goals in 2015.

"Between social and planetary boundaries lies an environmentally safe and socially just space in which humanity can thrive" (Raworth, 2012)

CHAPTER 2 : GOVERNANCE

We are continuing the long walk that Nelson Mandela began, 'to build a society in which all may be free, in which all may be equal before the law and in which all may share in the wealth of our land and have a better life.' Pres. Cyril Ramaphosa (News24, 2018).

1 POLICY ALIGNMENT

Policy alignment plays a key role in spatial governance, as a holistic approach needs to be followed to ensure all stakeholders play their roles, in order to create a conducive developmental state. As it the goal to achieve a developmental state, it is crucial for all spheres of government to coordinate and function effectively. As South Africa and the Northern Cape, have regional economies that extend across borders. International as well as national and provincial policies need to align to a certain extent, as indicated by the figure below, to effectively contribute to international, national and local development goals.

Figure 8: Vertical and Horizontal Policy alignment

1.1 INTERNATIONAL

1.1.1 UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS 2030

In September 2015, the United Nations General Assembly adopted Resolution 70/1, Transforming our World: the 2030 Agenda for Sustainable Development. This agenda "is a plan of action for people, planet and prosperity" which recognises that eradicating poverty is "the greatest global challenge and an indispensable requirement for sustainable development". It contains 17 SDG's to be achieved by 2030 that are aimed at ending poverty, fighting inequality and injustice, and tackling climate change. These goals build upon the Millennium Development Goals 2015. International agreements, protocols and conventions between the South African Government and the international community both globally, continentally and regionally are binding on all spheres of government and will support integrated development on a global and regional scale. The following International agreements, protocols and conventions play a key role in the developmental transformation of the Northern Cape:

Figure 9: Understanding the SDG's

Table 2: International policy considerations

INTERNATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
Agenda 21	• The objectives of Agenda 21 are the alleviation of poverty, hunger, sickness and illiteracy worldwide, while halting the deterioration of ecosystems, which sustain life. The forum provides a platform for considering issues relating to the three core elements of sustainable development (namely economic, social and environmental). • Agenda 21 focuses on partnerships involving the public and all relevant stakeholders to resolve developmental problems and to plan strategically for the future. It also tries to address the practicalities of applying sustainable development principles in human activity and development.
UNESCO's Man and Biosphere Programme (MaB).	• The MaB programme provides for an internationally recognized biosphere reserve network. Both the Richtersveld Cultural and Botanical Landscape and the ǂKhomani Cultural Landscape is identified as a World Heritage Sites. Biosphere reserves consist of three components, namely: o Core areas: are securely protected areas for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (education) e.g. National Parks, Nature Reserves, World Heritage Sites and Ramsar Sites; o Buffer zone: usually surrounds or adjoins the core areas, and is used for co-operative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism and applied basic research; and o Transitional area: contains a variety of agricultural activities, settlements and other uses in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interest and other stakeholders work together to manage and sustainably develop the area's resources.
UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage	• The Richtersveld Cultural and Botanical Landscape is identified as a World Heritage Site. This site sustains the semi-nomadic pastoral livelihood of the Nama people, reflecting seasonal patterns that may have persisted for as much as two millennia in southern Africa. It is the only area where the Nama still construct portable rush-mat houses (*haru om*) and includes seasonal migrations and grazing grounds, together with stock posts. The pastoralists collect medicinal and other plants and have a strong oral tradition associated with different places and attributes of the landscape (UNESCO, 2007). • The ǂKhomani Cultural Landscape is located at the border with Botswana and Namibia coinciding with the Kalahari Gemsbok National Park (KGNP). The large expanse of sand contains evidence of human occupation from the Stone Age to the present and is associated with the culture of the formerly nomadic ǂKhomani San people and the strategies that allowed them to adapt to harsh desert conditions (UNESCO, 2017).
United Nations Framework Convention on Climate Change (UNFCCC).	• The Sustainable Development Goals (SDG's), Sendai Framework and Paris Agreement are three key outputs of the UNFCCC. • The SDG's are 17 Global Goals required in order to achieve sustainable development on a global scale. Each goal is well defined and accompanied with a subset of objectives, strategies and indicators. • Both the Sendai Framework and Paris Agreement objective is to combat climate change. The Paris Agreement places focus on obtaining carbon neutrality whereas the Sendai Framework promotes resilience, by ensuring disaster risk reduction, and climate change adaptation strategies are included in national and provincial planning and considerations.

INTERNATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
The UN Convention on Wetlands of International Importance - the Ramsar Convention	• The Orange River Mouth (2000ha) is identified as a Trans-boundary area of extensive saltmarshes, freshwater lagoons and marshes, sand banks, and reed beds shared by South Africa and Namibia. Which is Important for resident birds and for staging locally migrant water birds. • The upper Orange River serves as a domestic water source and is experiencing increasing demand. This could severely restrict the amount of water reaching the site (UN Ramsar, 2013).
United Nations Convention to Combat Desertification (UNCCD)	• The aim of the Convention's 196 parties collaborates to improve the living conditions for people in drylands, to maintain and restore land and soil productivity, and to mitigate the effects of drought (UNCCD, 2017). As the Northern Cape is a water-stricken area, it is crucial to combat further desertification where possible. The UNCCD is particularly committed to a bottom-up approach, encouraging the participation of local people in combating desertification and land degradation. The main themes emphasized within the strategy for Africa is as follows: o Integrated water management o Agro-forestry o Soil conservation o Rangeland management o Ecological monitoring and early warning systems o New and renewable energy sources and technologies o Sustainable agricultural farming systems
African Union (AU) Agenda 2063	• The framework focuses on a social, economic and political renaissance that links the past, present and future. Overall, Agenda 2063 seeks to strengthen industrialisation, linked with agriculture and food security and aims to build on the continent's comparative advantages, such as its human development potential, natural resources and geographic location. Some of the proposed key flagship projects include (African Union, 2014): o Establishment of the Continental Free Trade Area o Development of an Africa Outer Space Strategy o Establishment of a Single African Air Transport Market o Integrated High Speed Train Network
New Partnership for Africa's Development (NEPAD).	• The NEPAD Planning and Coordinating Agency (NEPAD Agency) was established in 2010 as an outcome of the integration of NEPAD into African Union structures and processes (NEPAD, 2010). The NEPAD Agency is the implementing agency of the African Union that advocates for NEPAD, facilitates and coordinates the development of NEPAD continent-wide programmes and projects, mobilises resources and engages the global community, regional economic communities and member states in the implementation of these programmes and projects. The four main investment programmes are as follow: o Human Capital Development (Skills, Youth, Employment and Women Empowerment). o Industrialisation, Science, Technology and Innovation o Regional Integration, Infrastructure (Energy, Water, ICT, Transport) and Trade o Natural Resources Governance and Food Security

INTERNATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
United Nations Conference on Housing and Sustainable Urban Development (Habitat III)	• A new model of urban development that envisions an urbanising world that integrates all facets of sustainable development, to promote equity, welfare and shared prosperity (UNHABITAT, 2017). Sustainable development should be achieved through strengthening national, regional and local development planning, including provision of affordable housing, transport, safe and accessible public spaces, safeguarding cultural and natural heritage, with a special focus on slums' upgrading.

1.2 NATIONAL

Table 3: National policy considerations

NATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
Constitution of South Africa	• Schedule 4 of the Constitution lists the concurrent or shared competencies of national and provincial government (i.e. both spheres can enact laws in these functional areas). These include "regional planning and development", "urban and rural development" in Part A. Part B concerns local government matters and includes "municipal planning". The Constitution gives municipalities "the executive authority and the right to administer the local government matters assigned to it", including the power to make and execute by-laws. • In addition, in Schedule 5(A), "provincial planning" is one of the exclusive provincial functions, these include provisions for the following spatial planning and land use management competences: o Environment and services (sections, 4a,4b and 5b) o Planning (sections 4a, 4b and 5a) o Roads and Transport (sections 4a,4b and 5b)
The National Development Plan (NDP), 2012	• The NDP acknowledges the lack of effective spatial governance throughout the country and identifies this to be a result of: Constitutional ambiguities in spatial planning responsibilities; parallel, outdated and sometimes conflicting legislation; along with capacity constraints in all three spheres of government. Due to the lack in effective governance, the private sector often determines spatial growth patterns, whereas this is mainly government's responsibility. • **The NDP emphasises building capabilities for effective spatial decision-making and implementation** and acknowledges that this will take time. To develop the necessary capabilities, the National Planning Commission recommends: o reform of legislation and institutions, so as to provide platforms for integration between spatial planning, transport and infrastructure planning, environmental management, and finance regimes; o improved spatial planning coordination (i.e. transversal approach); o spatial data assembly, analysis and dissemination; o strengthening planning capabilities within local government; developing a capability framework for spatial governance with professional bodies, educational institutions and government; o introducing spatial compacts, from neighbourhood to city level, to build consensus over spatial futures and mediate spatial conflicts; and o supporting and incentivising active citizenry in spatial development.

NATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
National spatial Development Framework (NSDF) 2018 (Draft)	• Along with the NDP, the NSDF (currently a draft) provides guidance on the role of national and provincial spheres of government, as well as what is identified, spatially, as a priority on a national level. The five main themes of the NSDF is as follow: o **Urban Regions, Clusters and Development Corridors** as engines of national transformation: To ensure and sustain national economic growth, drive inclusive economic and derive maximum transformative benefit from urbanisation and urban living. o **Productive Rural Regions and Regional Development Anchors** as foundation of national transformation: To ensure national food security, rural transformation and rural enterprise development and quality of life in rural South Africa through a set of strong urban-rural development anchors in functional regional-rural economies. o **National Ecological Infrastructure System** as enabling infrastructure for a shared and sustainable resource foundation: To enable sustainable and just access to water and other national resources for quality livelihoods of current and future generations o **National Connectivity Infrastructure Networks** as enabling infrastructure for a shared, sustainable and inclusive economy: To develop, expand and maintain a transport, trade and communication network in support of national, regional and local economic development; and; o **National Social Service Infrastructure Network** as enabling infrastructure for national well-being: To ensure effective access to the benefits of high quality basic, social and economic services in a well-located system of vibrant rural service towns, acting as urban-rural anchors and rural-rural connectors).
National Infrastructure Plan (NIP) 2012	• The National Infrastructure Plan aims to transform the economic landscape while simultaneously creating significant numbers of new jobs and strengthen the delivery of basic services. The plan also supports the integration of African economies. Strategic Infrastructure Projects are derived from the NIP which aims to unlock economic opportunities in the Northern Cape. These projects has a direct impact on the development and spatial planning of the Northern Cape Province
National Strategy for Sustainable Development (NSSD)	• The National Strategy for Sustainable Development (NSSD) promotes the development of effective tools, processes and frameworks to manage the integration between social demands, natural resource protection, sustainable use and economic development. The objectives of the NSSD include the following: o Protect the natural resource base as a priority in order to achieve a sustainable supply of environmental goods and services. o Ensure sustainable livelihoods and food security. o Align policy and legislation that integrates and gives effect to sustainable development at the levels/spheres where it matters most.
The Comprehensive Rural Development Programme (CRDP)	• The Comprehensive Rural Development Programme (CRDP) has the ultimate vision of creating vibrant, equitable and sustainable rural communities through a three-pronged strategy based on: o A coordinated and integrated broad-based agrarian transformation which includes the establishment of rural business initiatives, agro-industries, co-operatives, cultural initiatives and vibrant local markets in rural settings, the empowerment of rural people and communities (especially women and youth), and the revitalisation of old, and revamping of new economic, social, and information and communication infrastructure, public amenities and facilities in villages and small rural towns. o Strategically increasing rural development. o An improved land reform programme aiming at tenure reform, restitution and land redistribution.

NATIONAL POLICY CONSIDERATIONS	
POLICY/STRATEGY	**SUMMARY**
National Transport Master Plan (NATMAP) 2016	• The National Transport Master Plan (NATMAP) 2016 consolidated all current and proposed transport infrastructure development on a national scale in order to deliver a dynamic, long-term, and sustainable transportation systems framework. • The following NATMAP 2050 objectives are aimed at facilitating the vision: o A much-improved sustainable public transport system that is appropriately funded, with a reduction in the subsidy burden, with better and safer access, more frequent and better-quality services and facilities to an agreed standard; o Greater mobility options, particularly for those who do not have cars; o Non-motorised transport network development; o A transport system that promotes better integration between land use planning and transport planning to encourage densification and sustainable development in supporting high volumes of travel required for public transport; o Better infrastructure, better maintained road and rail networks, with proper management and operations practices that link and provide interchange opportunities for different modes of transport; o A transport system that is consistent with the real needs of people living in different parts of South Africa and with differing abilities to afford travel o A transport system that charges the traveller a fair reflection of the costs of making a journey or transporting a product, financially, socially and environmentally; o A transport system that supports focused funding of transport priorities; o A transport system that has sufficient human capital to drive the vision of transport; and o A transport system that enables and supports rural development.

Transport has major spatial and developmental implications, and thus it plays an emphasised role in spatial and land use planning. The NDP and the NSDF are the main national policies guiding the PSDF and PGDP, although various other National Policies, Strategies and Frameworks have been assessed and incorporated within the Status Quo Report, and thus also incorporated into the PSDF.

1.3 PROVINCIAL

Various provincial policies, legislation and strategies influences the provincial planning function and processes, as indicated by the figures below. Although the main guiding document on provincial level is the Northern Cape Provincial Growth and Development Plan (PGDP).

- The PGDP is based on four drivers in order to bring about the desired level of change and development within the Northern Cape Province, by integrating and consolidating all relevant provincial plans and strategies.
- The PSDF aims to spatially prioritise, manage and implement the strategies and projects identified by the PGDP.
- The objective is to reform provincial spatial planning legislation and policies so that they complement the PSDF and give effect to provincial government's strategic objectives. The recommended approach is to balance regulatory requirements with incentivising the desired spatial outcomes. As part of this agenda the following actions are required:
    - Provincial planning legislation needs to be aligned to SPLUMA and the NC SPLUMB.
    - Mechanisms need to be provided in provincial planning legislation for the Provincial Minister to further regulate on provincial and regional planning, support, coordination & monitoring functions.
    - Promote, as far as possible, uniformity in Municipal Planning Bylaws that encapsulate all legislative requirements and simplify procedural requirements.

- Promote the development of an effective, transparent and simple (i.e. reduce red tape) municipal land use management system, with attention to incorporating measures to incentivise the desired land use change in strategic locations (e.g. areas earmarked for solar etc.).
- Intensify provincial planning support to municipalities in applying new planning legislation, executing their Municipal Planning function, and aligning to provincial and regional plans.

1.3.1 DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY

Driver 1 of the PGDP aims to ensure economic growth that will lead to increased development and prosperity for the people of the Northern Cape Province, a conscious effort is required to change the economic trajectory of the Province. To achieve this, the following developmental themes have been identified as priorities:

- Agriculture and Agro-Processing;
- Mining and Mineral Beneficiation;
- Tourism Market Development;
- Development of the Energy Sector;
- Manufacturing and Trade;
- Competitive Infrastructure Development;
- Employment and Skills Development;
- Innovation and the Knowledge Economy; and
- The Maritime Economy.

In order to align and complement the PGDP and provide a spatial representation of the proposals outlined within the PGDP. The following section indicates which data was utilised, as indicated by the table below, in order to determine the ideal and existing locations for the various projects and initiatives proposed by the PGDP.

Table 4: PGDP Driver 1 alignment and coordination: Agriculture and Agro-processing

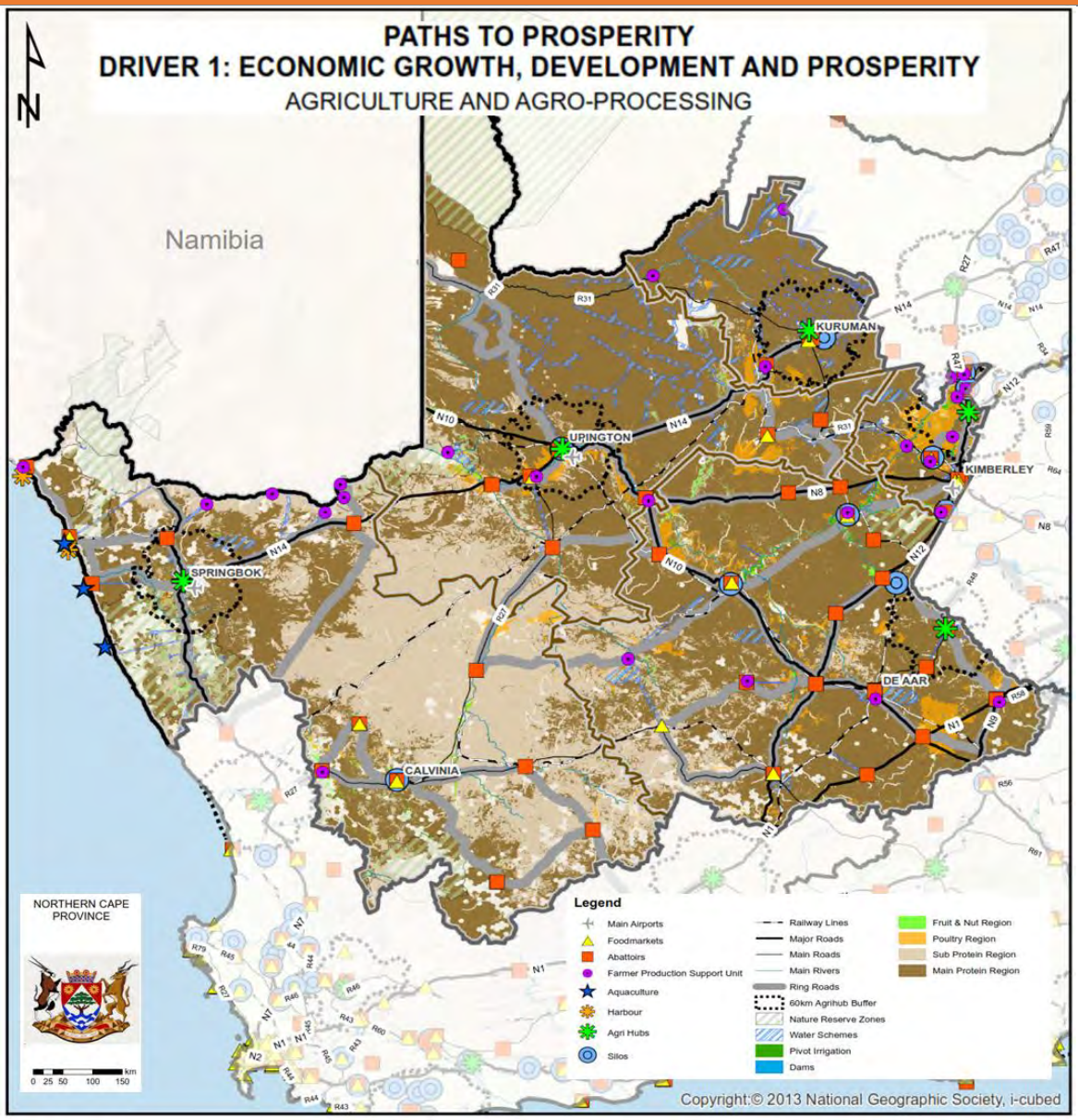
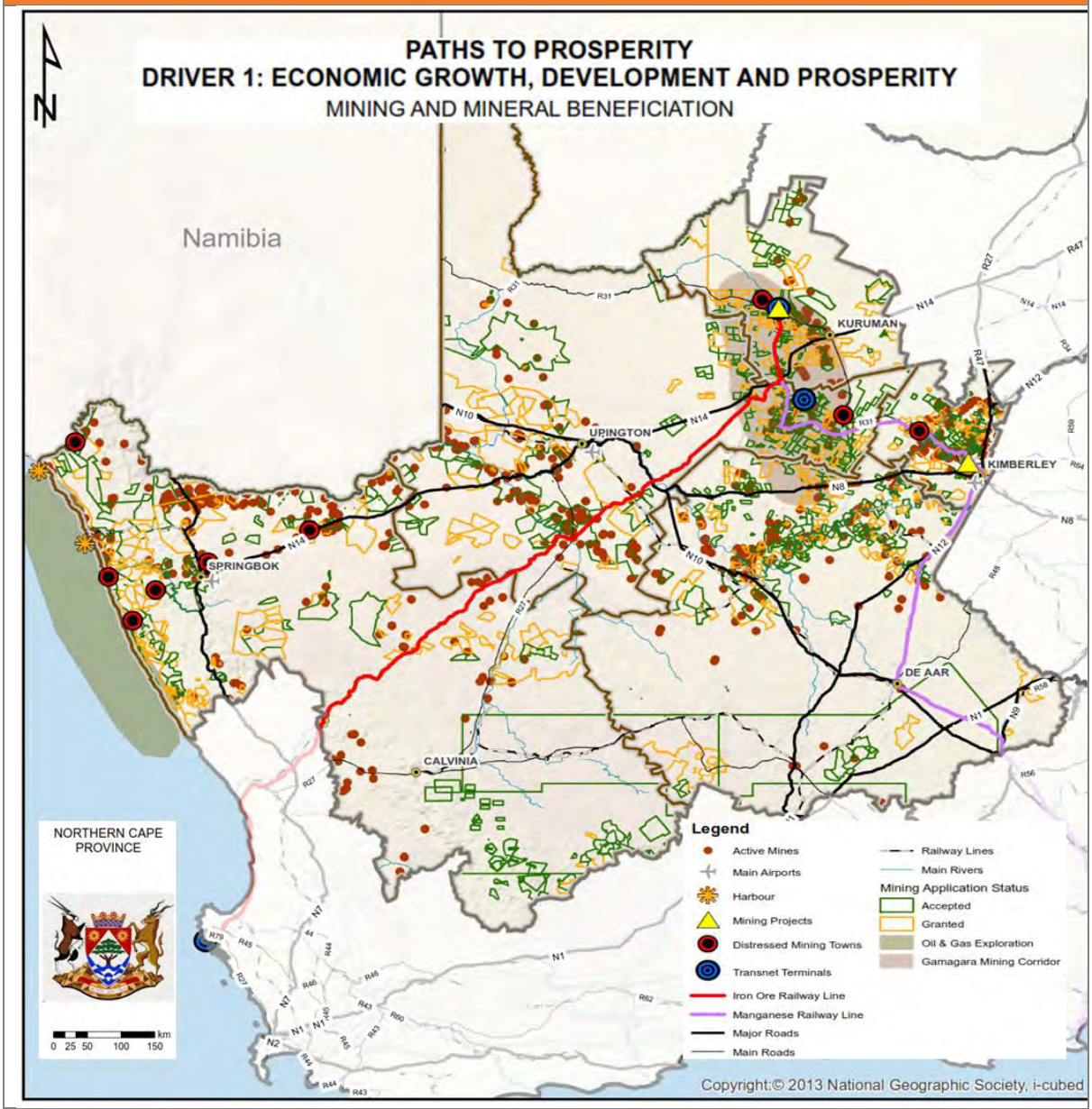
DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY PATH TO PROSPERITY: AGRICULTURE AND AGRO-PROCESSING

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Commodity regions • Agri-hub and FSPU unit locations and buffers • Main transportation routes • Proposed distribution routes of the DRDPs • Location of existing supporting infrastructure such as abattoirs • Location of food markets • Protected areas • Water schemes

Table 5: PGDP Driver 1 alignment and coordination: Mining and Mineral beneficiation

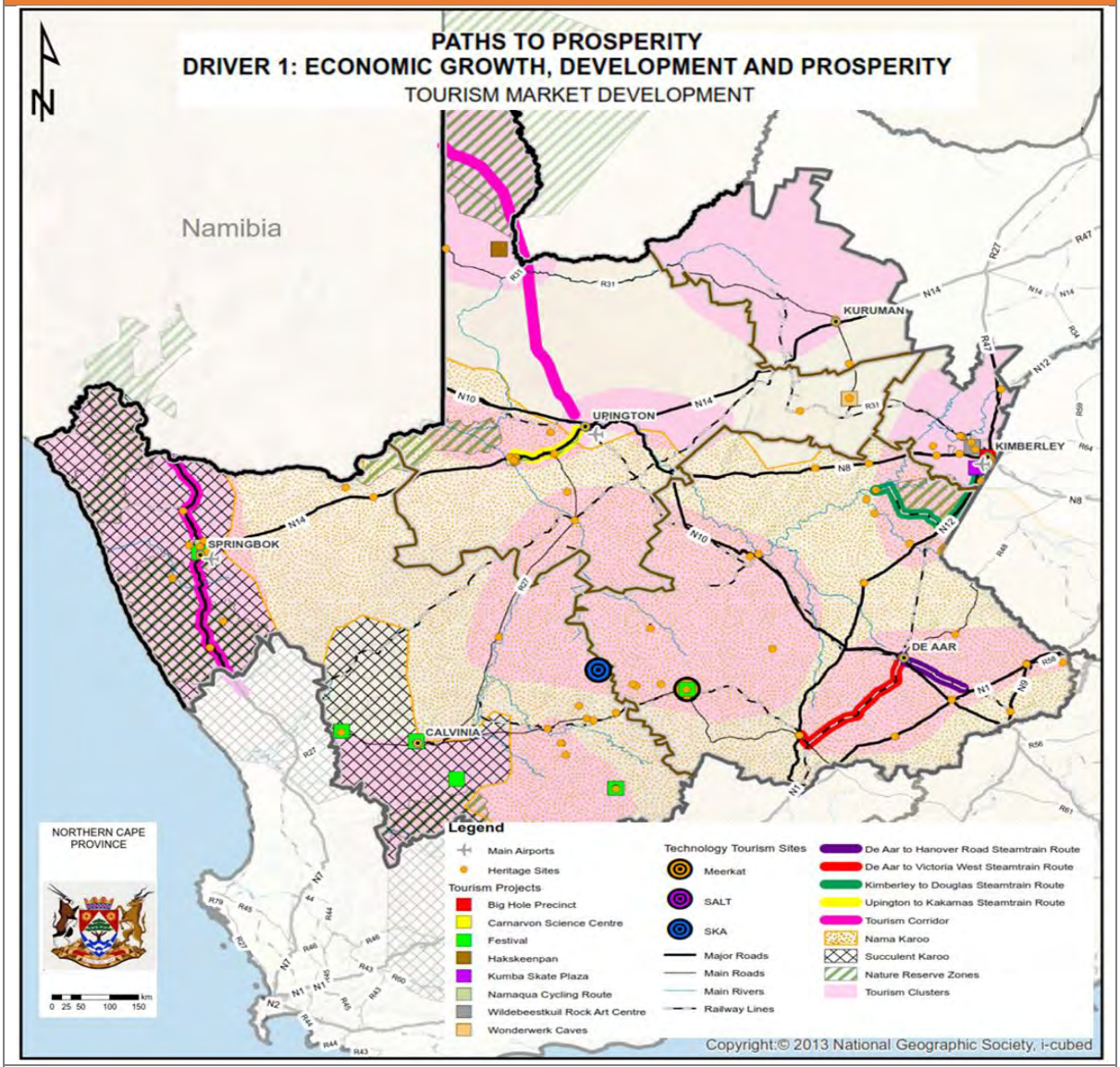
DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY
PATH TO PROSPERITY: MINING AND MINERAL BENEFICIATION



In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Granted and accepted mining applications
- Areas marked for exploration
- Gamagara mining corridor
- Supporting transport infrastructure
- Locations of distressed mining towns
- Active mines

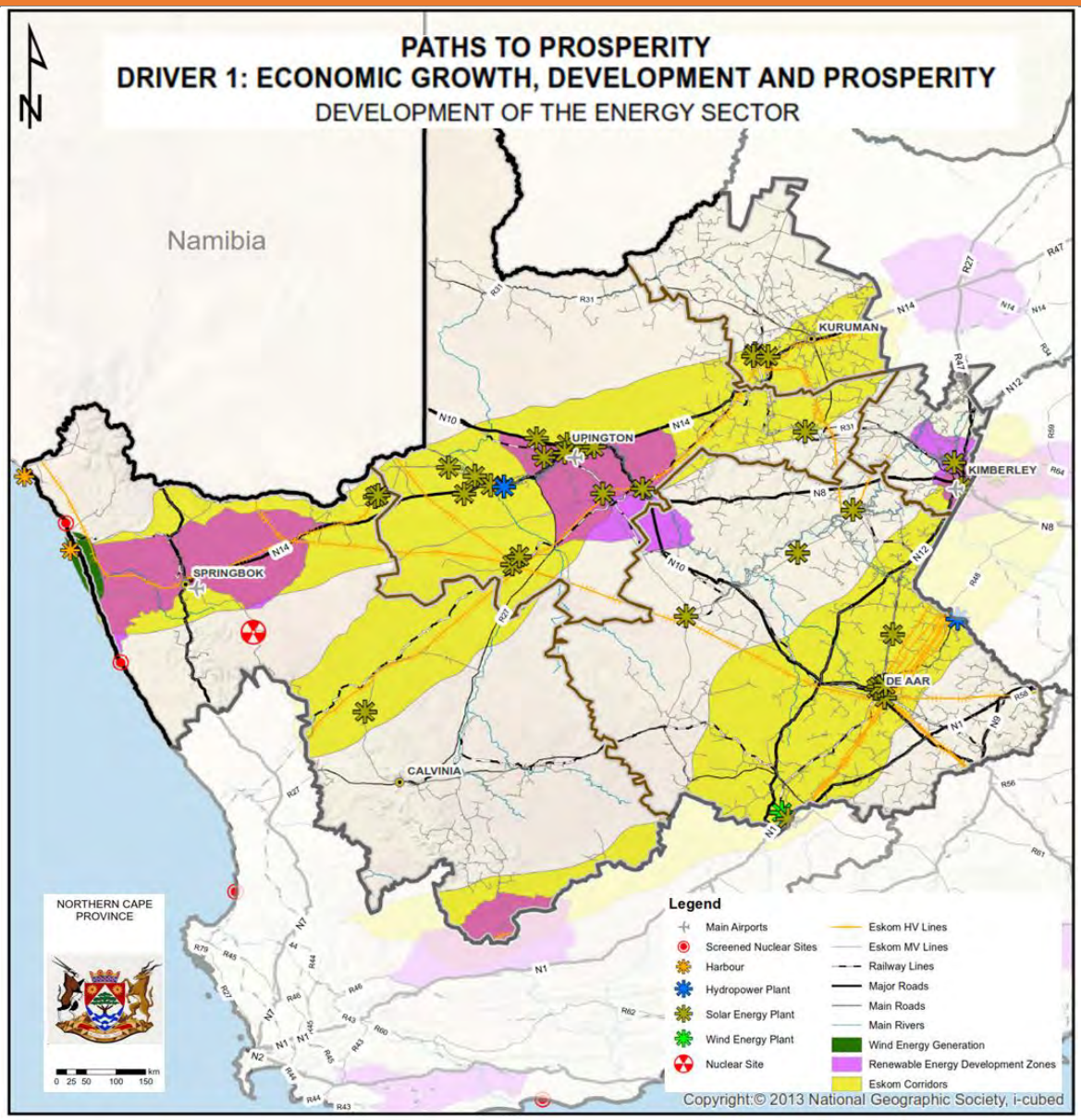
Table 6: PGDP Driver 1 alignment and coordination: Tourism market development

DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY PATH TO PROSPERITY: TOURISM MARKET DEVELOPMENT

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Tourism clusters, routes and activities • National Parks and Provincial Nature Reserves • Karoo region Boundary (proposed Karoo Regional Spatial Development Framework) • World Heritage Sites and Wildebeestkuil Rock Art Centre • Namqualand Flowers region • Orange and Vaal River Systems • Meerkat, SALT, SARAO regions (Astronomy tourism) • Vanderkloof Dam, Boegoeberg Dam • Big hole precinct and Kumba skate Plaza • Steam Train Initiative: Beaconsfiled Railway yard to Kimberley station and Upington to Kakamas • Wonderwerk Caves • Proposed Carnarvon Science Visitor Centre

- Haksteenpan Bloodhound Development
- Namaqua Coastal Cycling Route (Okiep)
- Festival locations (Calvinia, Tankwa Karoo Africa Burn, Springbok liggie fees, Carnarvon, Niewoudtville Bolplant Fees, Frasersburg Dinosaur festival)

Table 7: PGDP Driver 1 alignment and coordination: Development of the Energy sector

DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY
PATH TO PROSPERITY: DEVELOPMENT OF THE ENERGY SECTOR

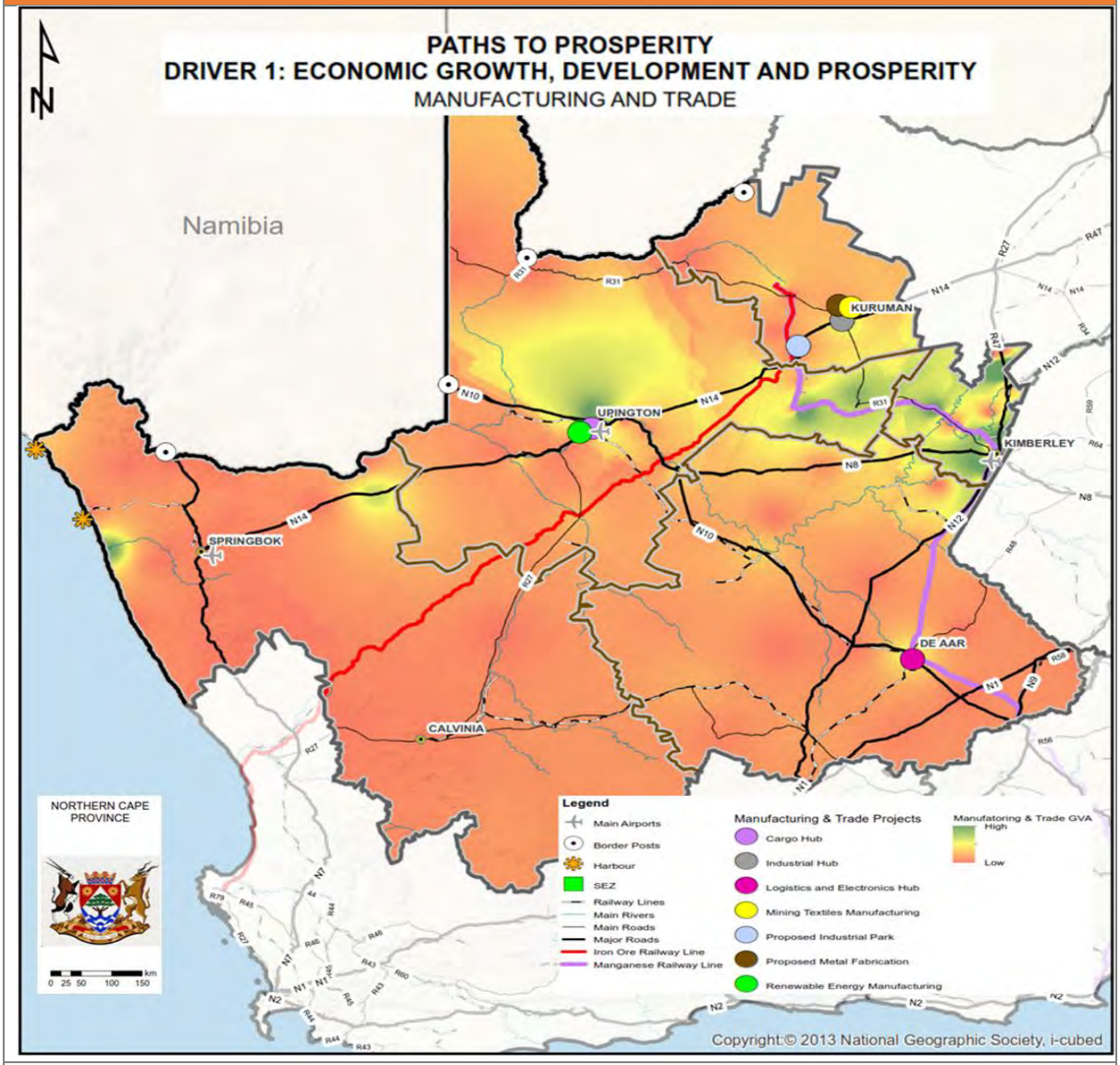


In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Eskom solar Corridors
- Renewable Energy Development Zones (REDZ's)
- HV and MV Lines
- Nuclear Waste Facility
- IPP projects
- Screened Sites for Nuclear Power Stations

Table 8: PGDP Driver 1 alignment and coordination: Manufacturing and Trade

DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY
PATH TO PROSPERITY: MANUFACTURING AND TRADE



In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Border Posts
- Manufacturing and Trade Mesozone GVA concentrations
- Railways system
- Upington Special Economic Zone (SEZ)
- Proposed Kathu Industrial Park
- Kuruman Industrial Hub
- Logistics and Electronics Hub (De Aar)
- Upington Cargo Hub
- Proposed Metal fabrication factory (Kuruman)
- Renewable Energy Manufacturing facility (Upington)
- Mining Textiles manufacturing (Kuruman)

Table 9: PGDP Driver 1 alignment and coordination: Competitive Infrastructure Development

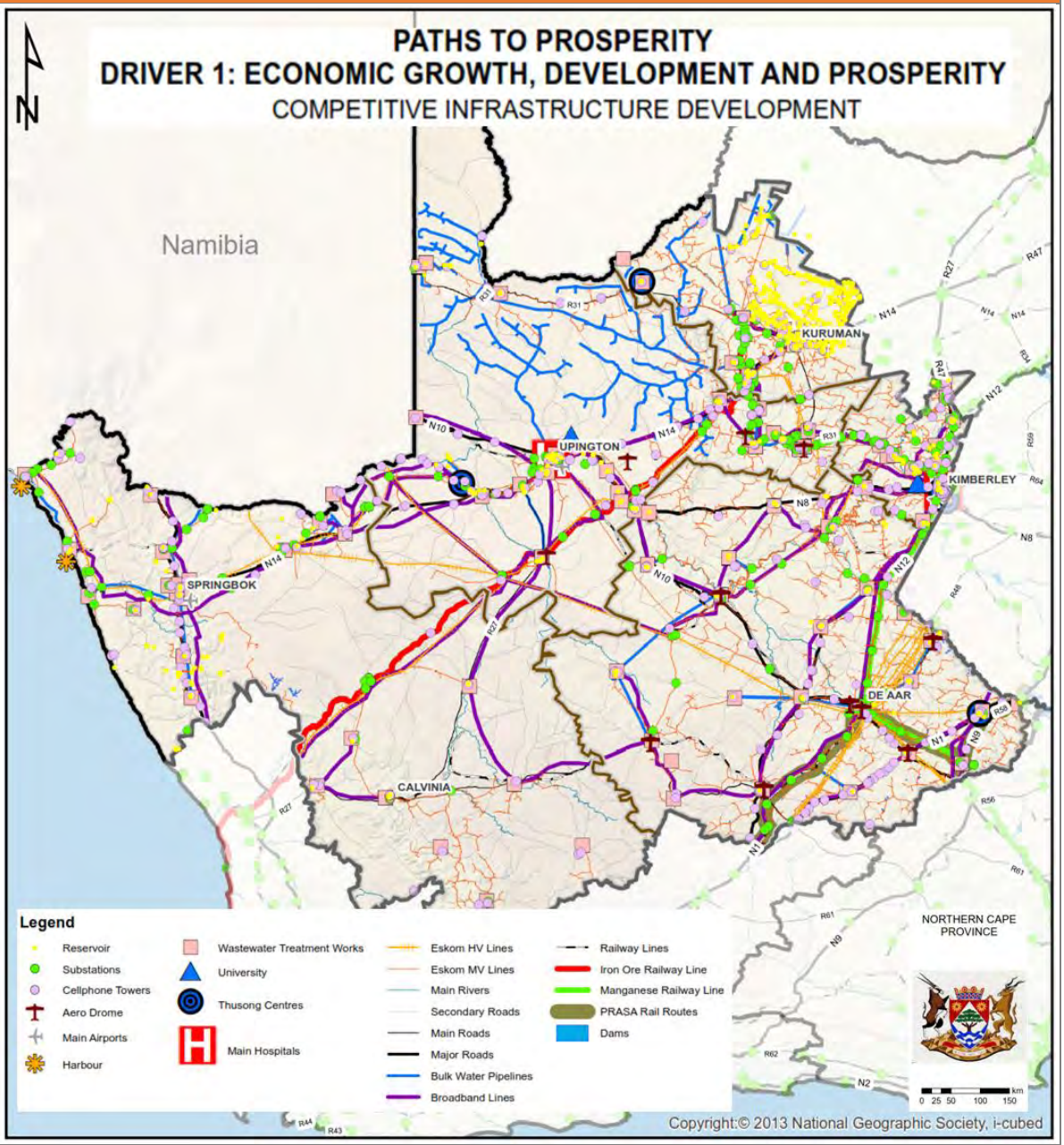
DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY
PATH TO PROSPERITY: COMPETITIVE INFRASTRUCTURE DEVELOPMENT

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Bulk infrastructure (Roads, Water and Electrical) • Wastewater treatment works • Health Infrastructure • ICT Infrastructure • Transport Infrastructure • Dams/water storage infrastructure

Table 10: PGDP Driver 1 alignment and coordination: Employment and Skills development

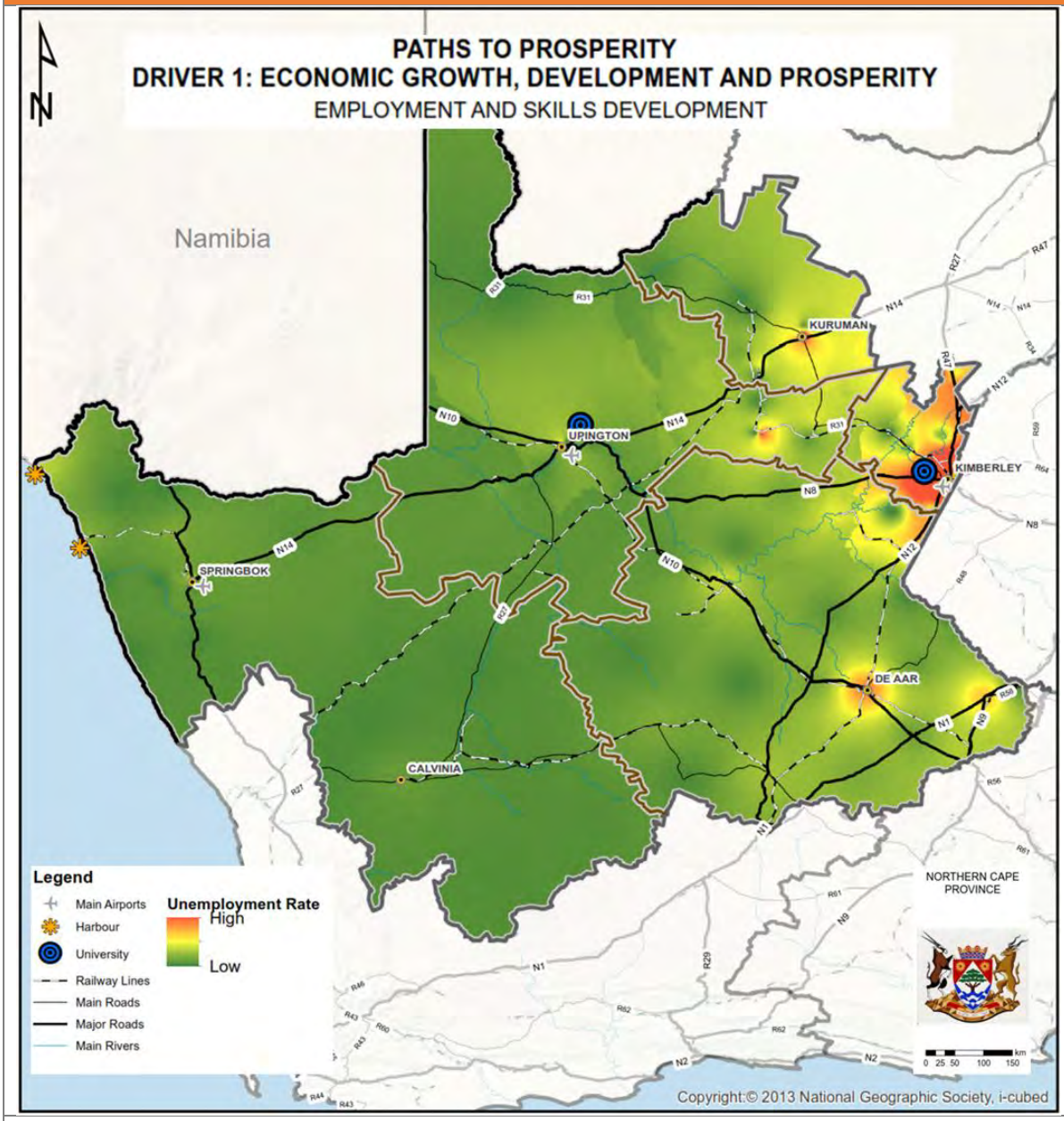
DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY PATH TO PROSPERITY: EMPLOYMENT AND SKILLS DEVELOPMENT

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • University (Sol Plaatje) • Concentration of unemployment

Table 11: PGDP Driver 1 alignment and coordination: Innovation and the Knowledge Economy

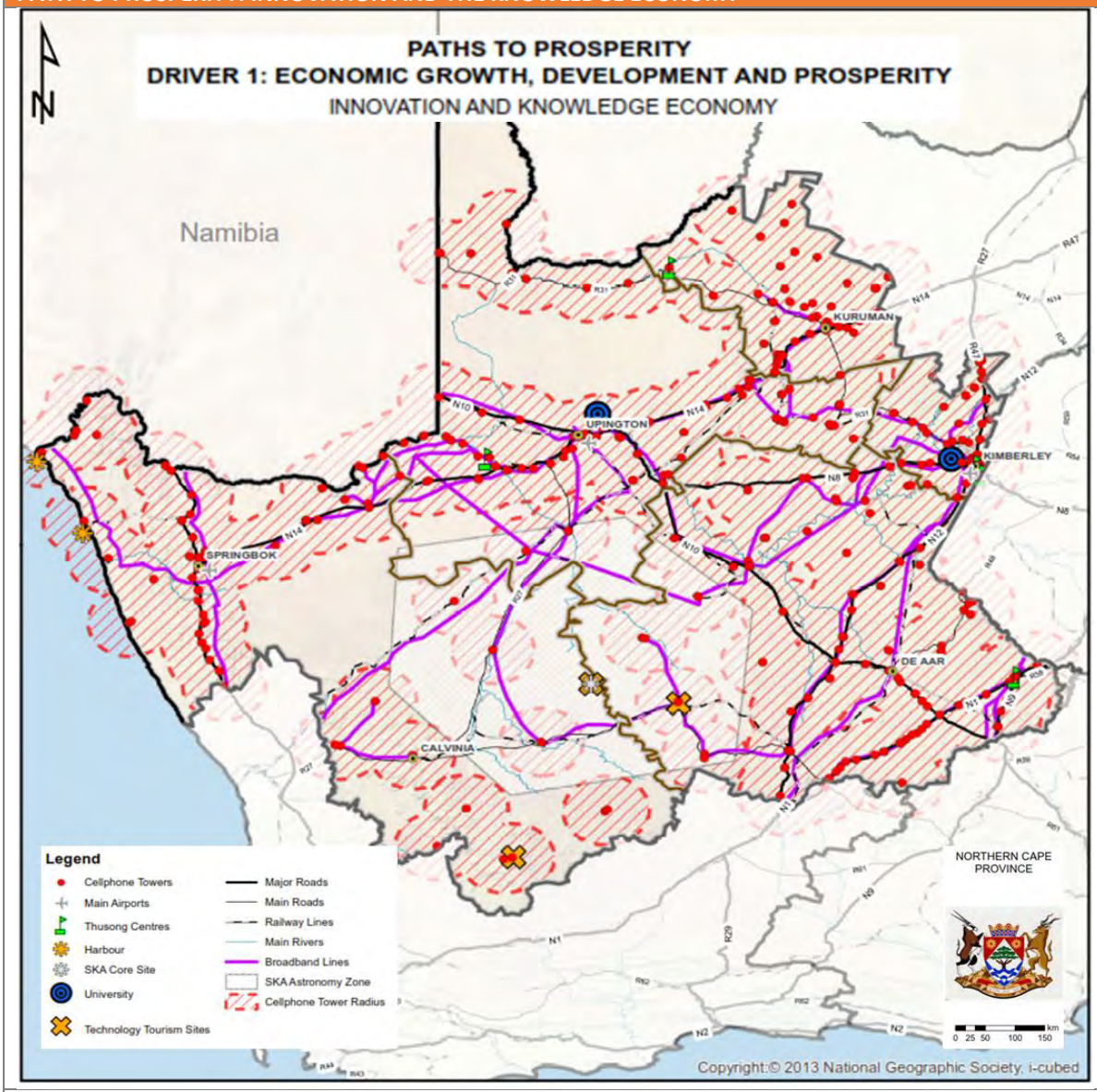
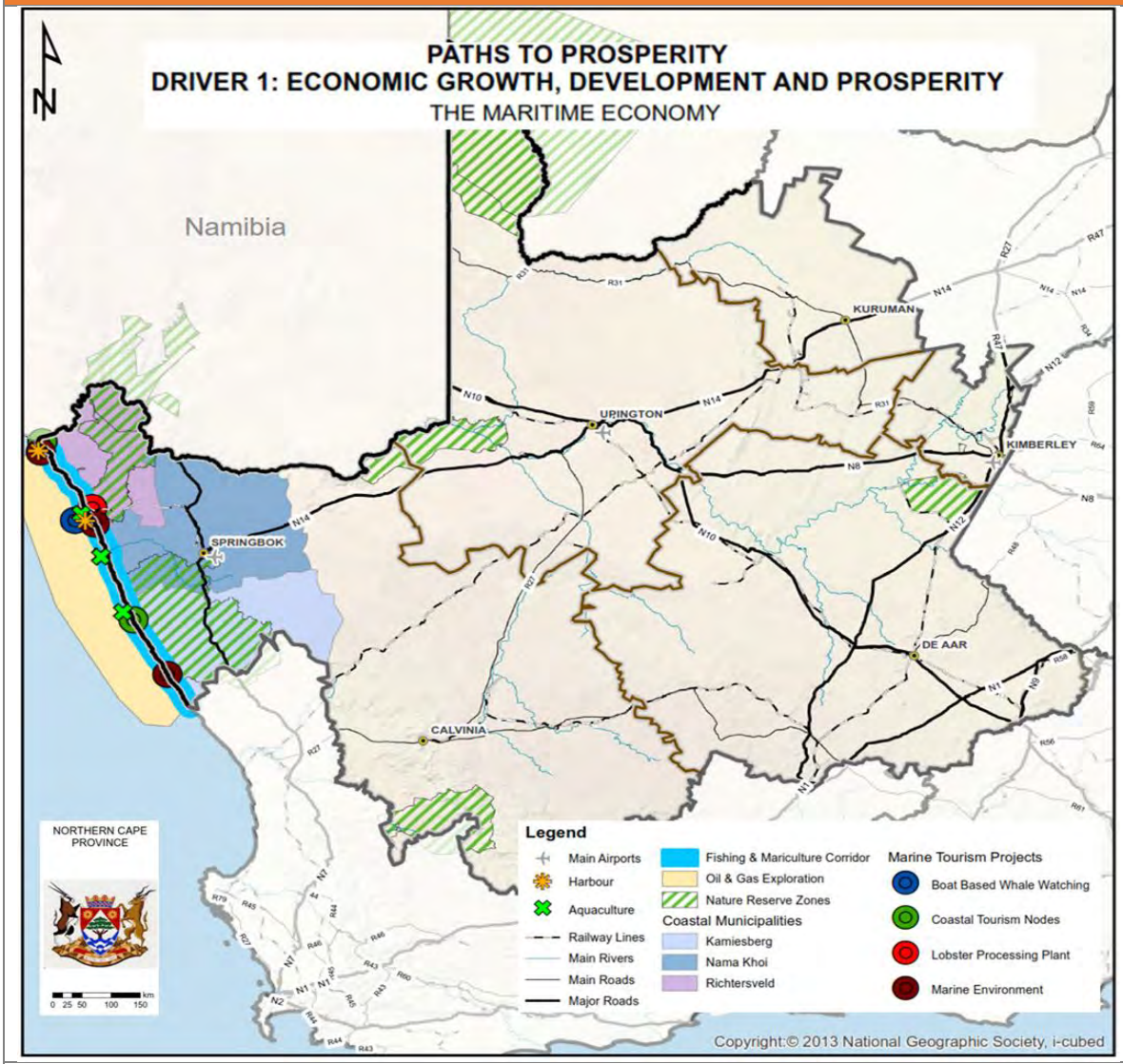
DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY PATH TO PROSPERITY: INNOVATION AND THE KNOWLEDGE ECONOMY

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • SARAO boundary and core site • Broadband • Cell phone towers (radius) • Sol Plaatje University • Thusong Centres • Access to Internet • Bloodhound initiative • Science Tourism (SARAO, SALT) • Planetarium (Carnarvon)

Table 12: PGDP Driver 1 alignment and coordination: the Maritime Economy

DRIVER 1: ECONOMIC GROWTH, DEVELOPMENT AND PROSPERITY PATH TO PROSPERITY: THE MARITIME ECONOMY


In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Fishing and mariculture corridor
- Aquaculture (Operation Phakisa) – Port Nolloth and Kleinzee
- Offshore Gas
- Small harbours
- Marine Tourism
- National Parks
- Coastal Municipalities
- Lobster processing Plan
- Coastal tourism nodes
- Boat based whale watching
- Coastal mining

1.3.2 DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE

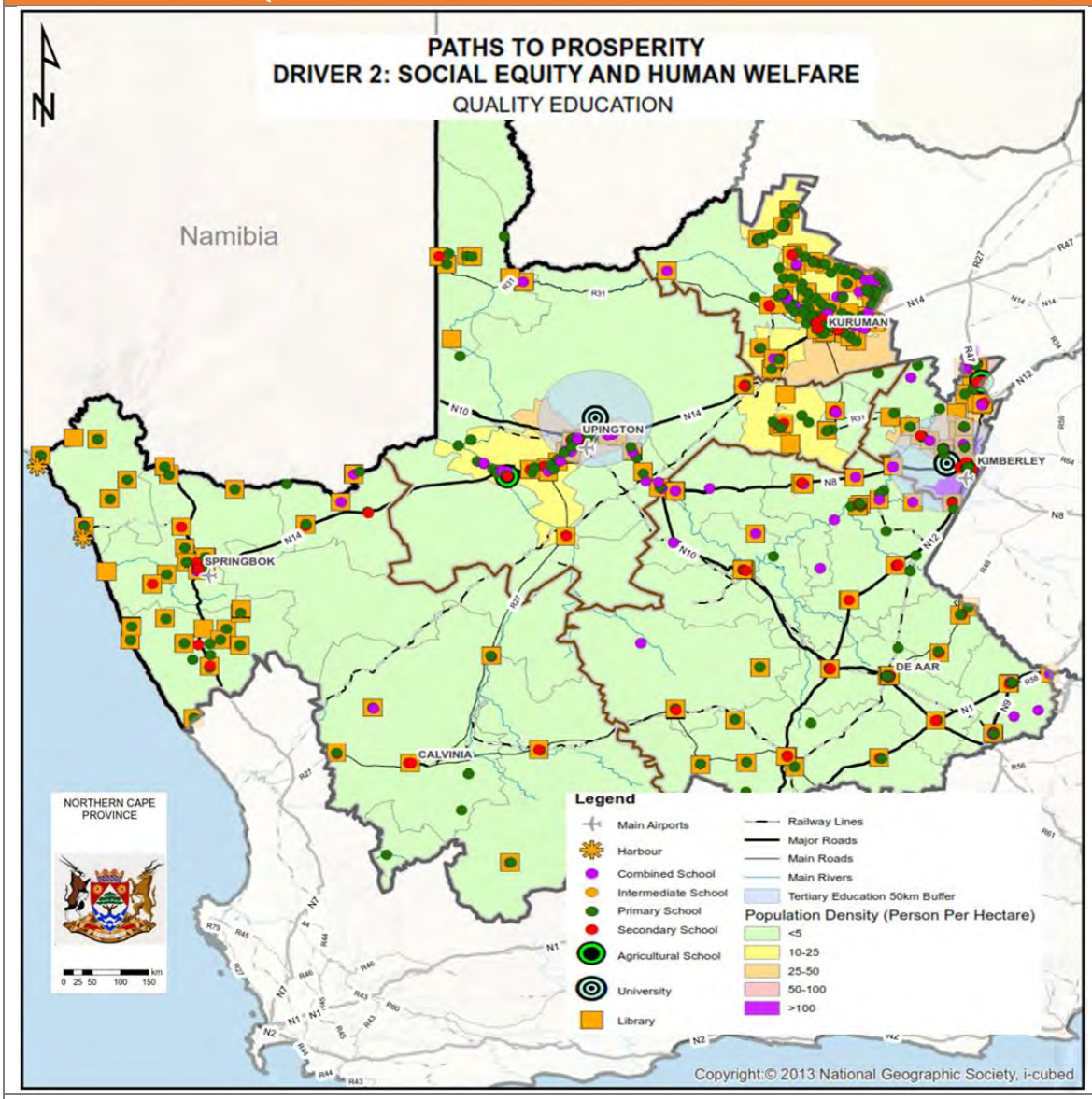
Driver 2 aims to unlock economic growth for those who are currently excluded (including the youth and vulnerable groups) and create an environment that is conducive to economic empowerment, entrepreneurship and self-enrichment. To achieve this, the following developmental themes have been identified:

- Quality Basic Education;
- Social Cohesion and Community Participation;
- Social Protection and Safety;
- Health; and
- Rural Development, Land Reform and Food Security.

In order to align and complement the PGDP and provide a spatial representation of the proposals outlined within the PGDP the following data was utilised, as indicated by the table below, in order to determine the ideal and existing locations for the various projects and initiatives proposed by the PGDP.

Table 13:PGDP Driver 2 alignment and coordination: Quality Basic Education

DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE
PATH TO PROSPERITY: QUALITY BASIC EDUCATION



In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- FET, TVET Colleges
- Secondary Schools
- Primary Schools
- Special Schools
- Libraries
- Agricultural School
- Sol Plaatje University
- Settlement density

Table 14:PGDP Driver 2 alignment and coordination: Social Cohesion and Community Participation

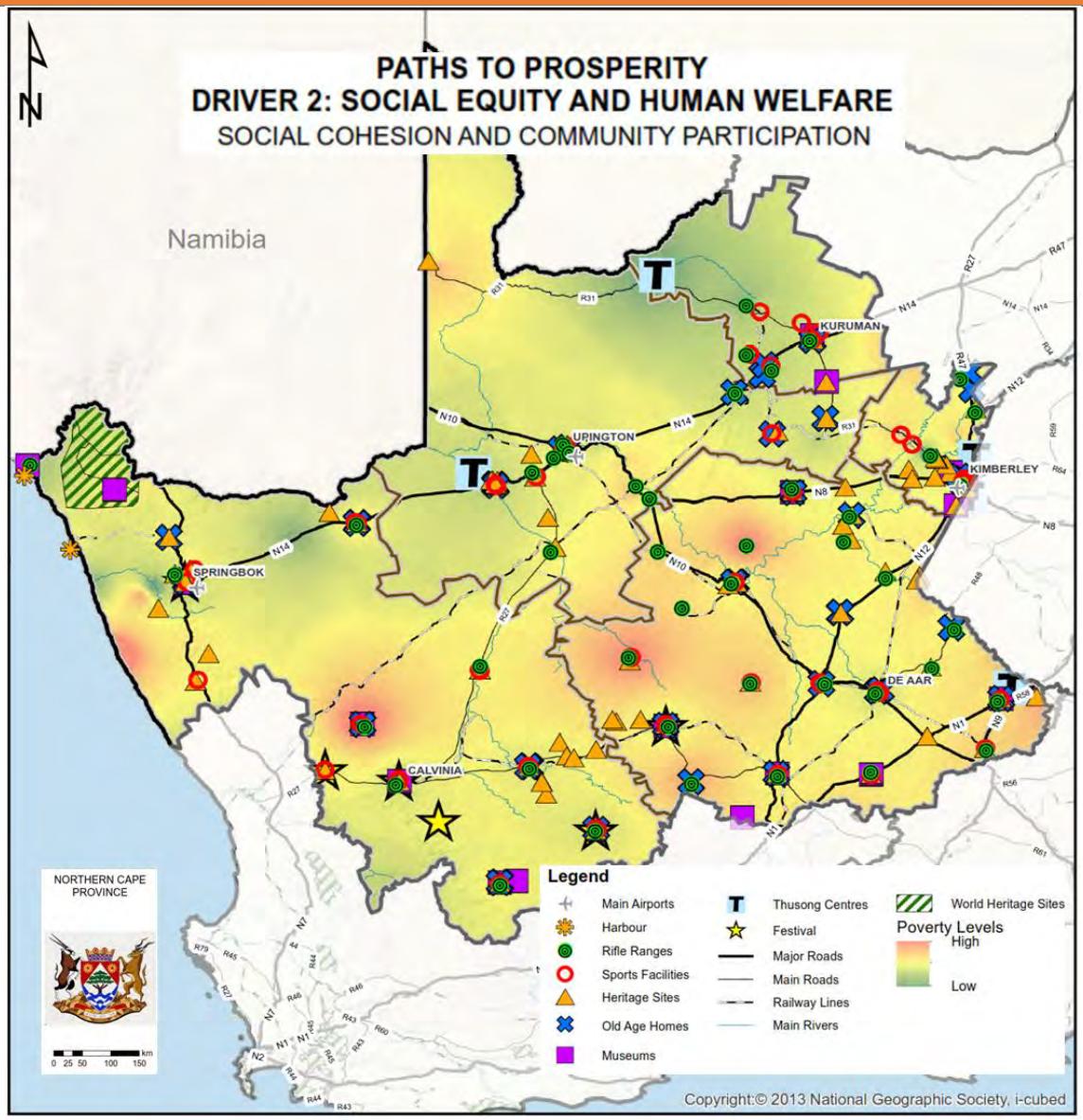
DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE PATH TO PROSPERITY: SOCIAL COHESION AND COMMUNITY PARTICIPATION

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Sport facilities • Heritage sites • Cultural Heritage sites • Museums • Poverty concentrations • Old age homes • Thusong Centres

Table 15:PGDP Driver 2 alignment and coordination: Social Protection and Safety

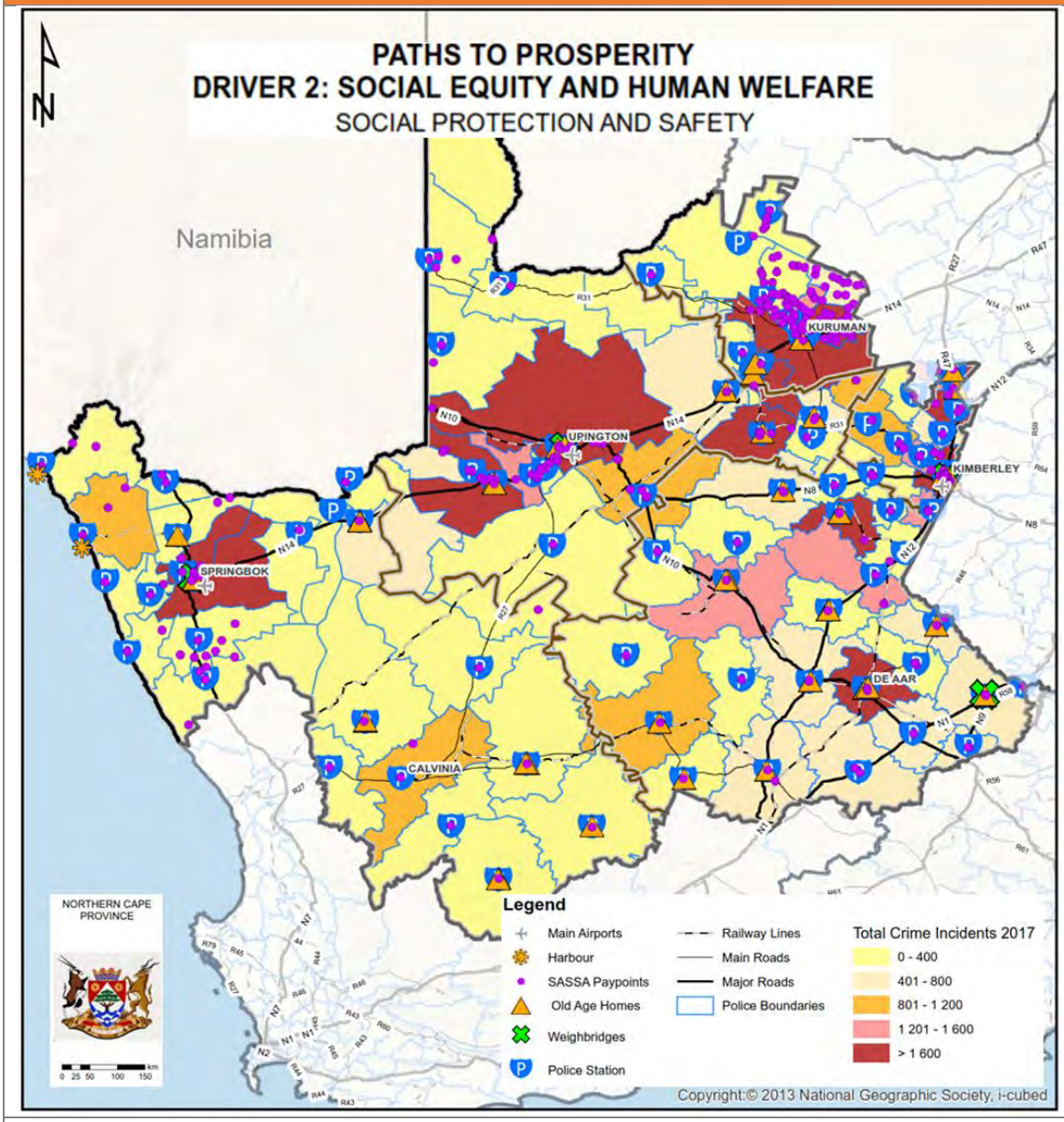
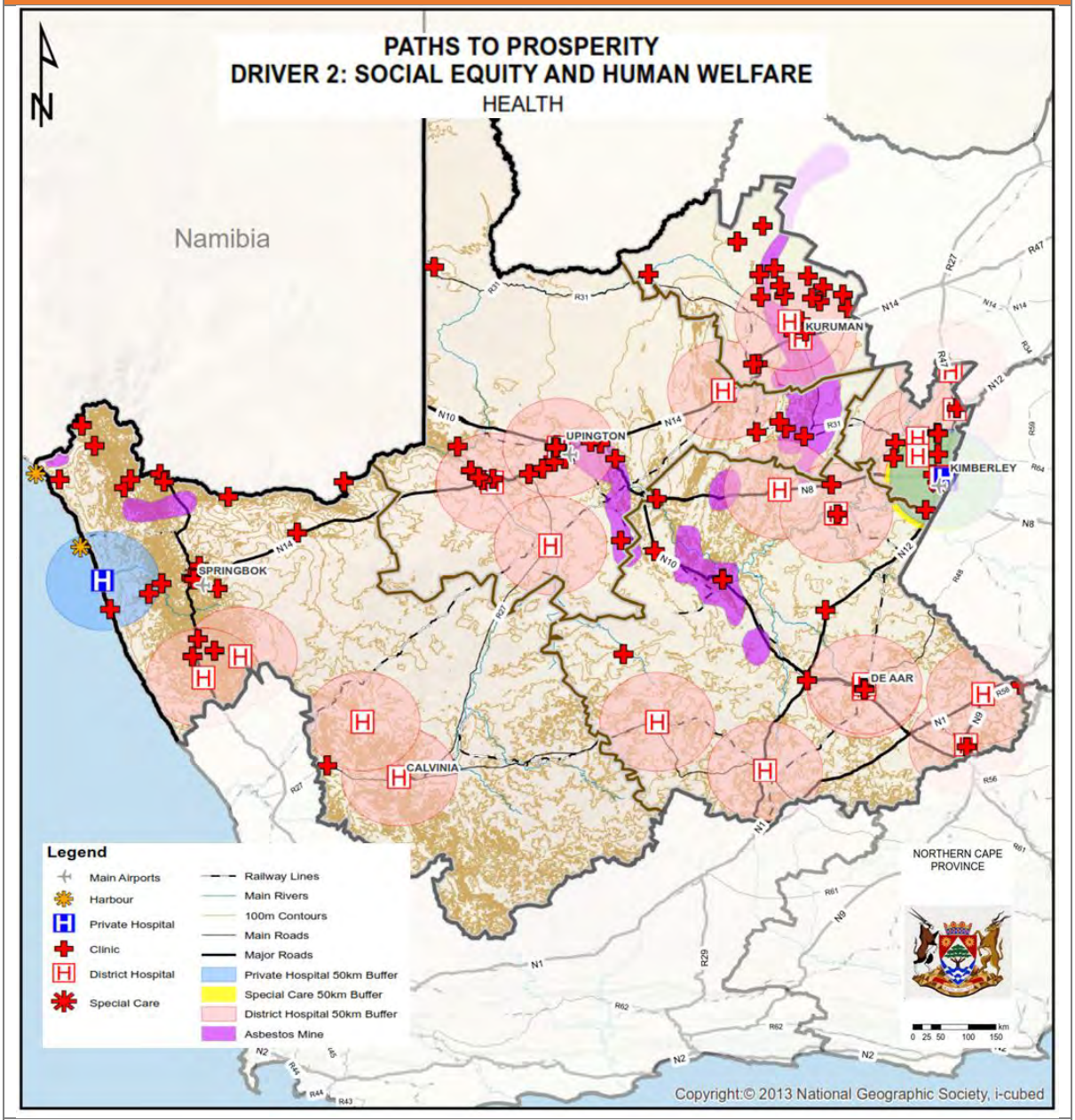
DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE PATH TO PROSPERITY: SOCIAL PROTECTION AND SAFETY

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Police regions • Police Stations • Total reported crimes per police district • SASSA Offices • Youth Centres • Weigh bridges

Table 16:PGDP Driver 2 alignment and coordination: Health

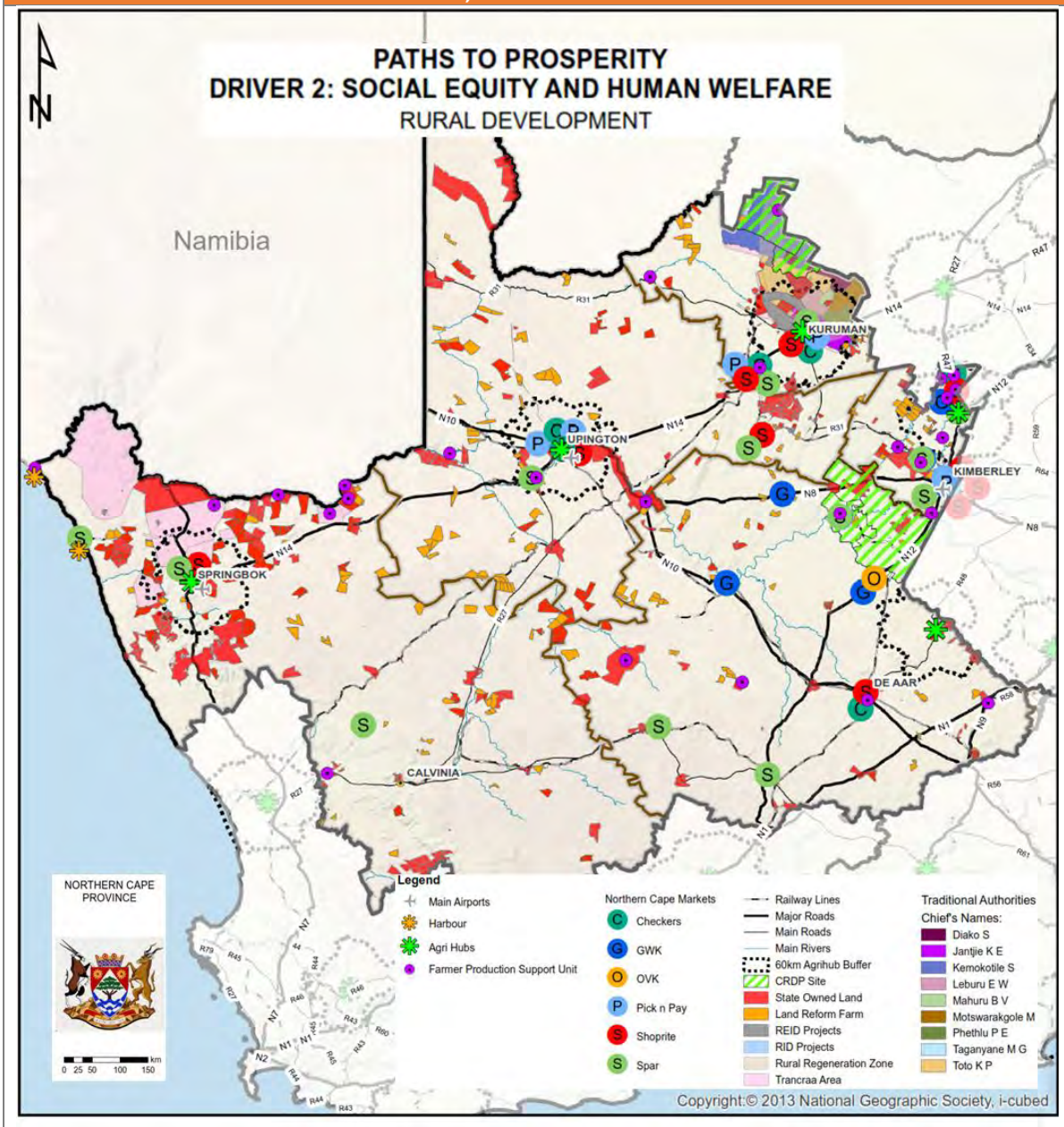
DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE
PATH TO PROSPERITY: HEALTH



In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Private hospitals
- District hospitals
- Clinics
- Special care centres
- Asbestos mines
- Transport routes

Table 17:PGDP Driver 2 alignment and coordination: Rural development, Land Reform and Food Security

DRIVER 2: SOCIAL EQUITY & HUMAN WELFARE PATH TO PROSPERITY: RURAL DEVELOPMENT, LAND REFORM AND FOOD SECURITY

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • State owned land • Land Reform Farm parcels • DRDLR and DARDLR projects • Agri-park projects • TRANCRAA and Tribal Authority areas • Grocery shopping centres

1.3.3 DRIVER 3: ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE

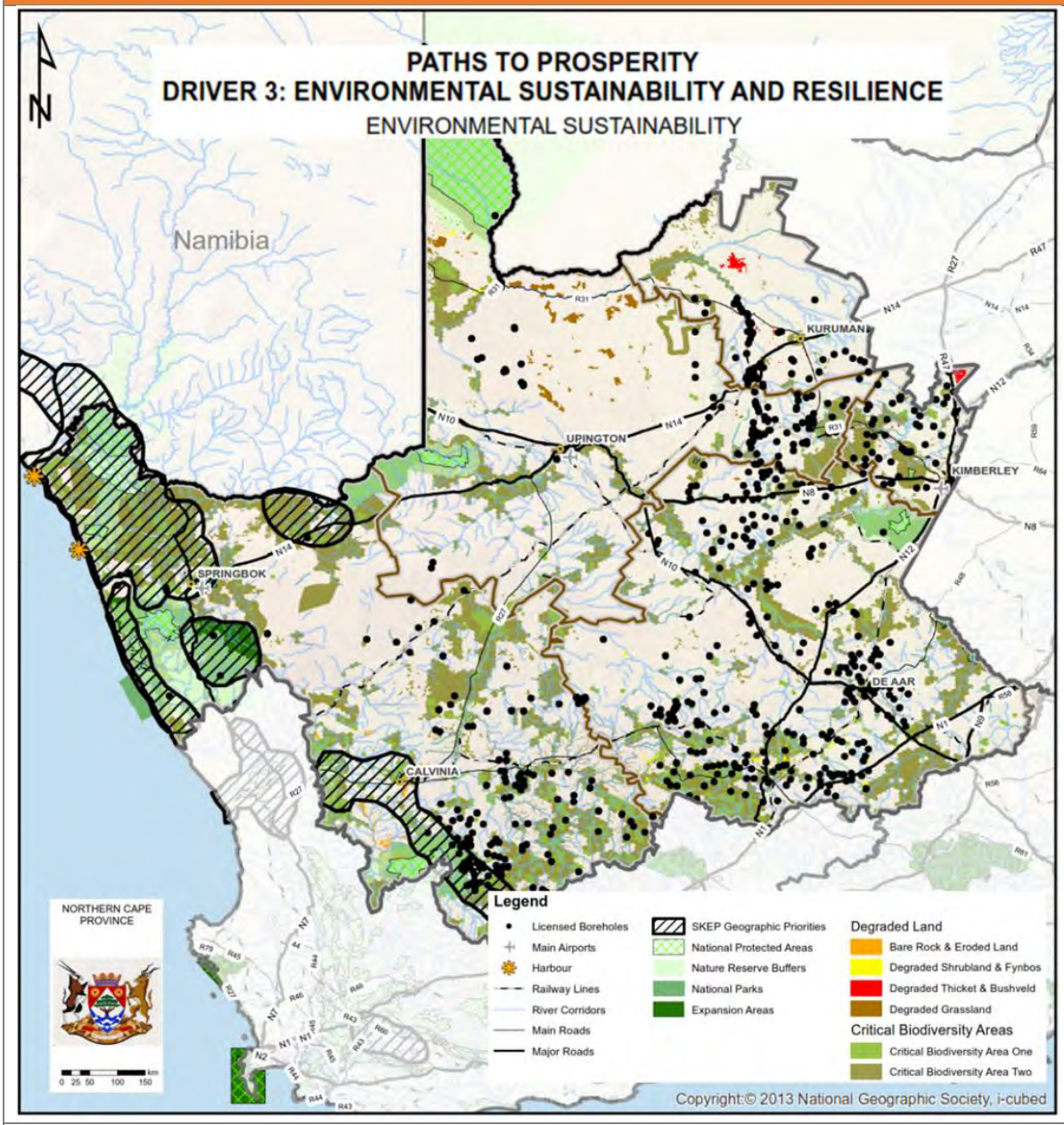
Driver 3 highlights the Northern Cape's abundance of natural resources and environmental assets. While these present a plethora of economic opportunities, a concerted effort must be made to ensure that these are protected and enhanced. At the same time, the Province must ensure that enough is done to protect communities against the potential threats of environmental harm and unsustainable resource exploitation. To achieve this, the following developmental outcomes have been identified:

- Improving Environmental Sustainability; and
- Sustainable Human Settlements (incl. small towns).

In order to align and complement the PGDP and provide a spatial representation of the proposals outlined within the PGDP the following data was utilised, as indicated by the table below, in order to determine the ideal and existing locations for the various projects and initiatives proposed by the PGDP.

Table 18: PGDP Driver 3 alignment and coordination: Improving Environmental Sustainability

DRIVER 3: ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE
PATH TO PROSPERITY: IMPROVING ENVIRONMENTAL SUSTAINABILITY

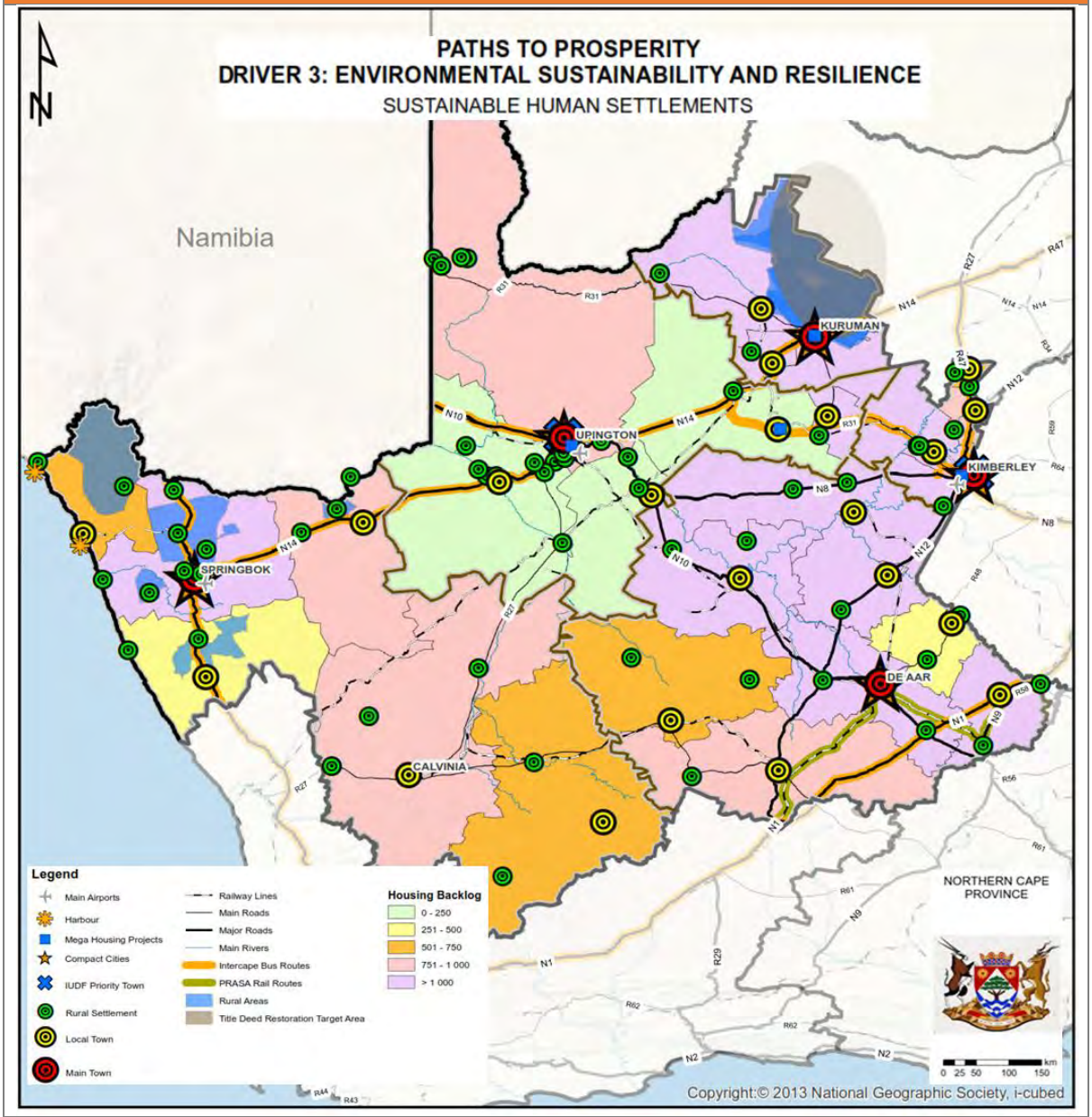


In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- National Parks
- Nature Reserves (Provincial)
- Critical Biodiversity areas
- Degraded land areas
- FEPA rivers
- SANParks/SANBI Expansion areas
- SKEP
- Boreholes

Table 19: PGDP Driver 3 alignment and coordination: Sustainable Human Settlements

DRIVER 3: ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE
PATH TO PROSPERITY: SUSTAINABLE HUMAN SETTLEMENTS



In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation.

- Main transport routes and infrastructure
- Mega housing projects
- Compact cities and IUDF Priority towns
- Rural Settlements
- Local Towns
- Main towns
- Public bus and rail routes
- Rural areas
- Title deed restoration target areas
- Housing backlogs

1.3.4 DRIVER 4: ACCOUNTABLE & EFFECTIVE GOVERNANCE

Driver Northern Cape's Province need for a capable and accountable governance system, with the focus placed on streamlining inter-governmental relationships while strengthening participatory governance with civil society. To achieve this, the following developmental outcomes have been identified:

- Accountable Local Government;
- Development Orientated Public Services;
- Intergovernmental Relations; and
- Human Resource Development.

In order to align and complement the PGDP and provide a spatial representation of the proposals outlined within the PGDP the following data was utilised, as indicated by the table below, in order to determine the ideal and existing locations for the various projects and initiatives proposed by the PGDP.

Table 20: PGDP Driver 4 alignment and coordination: Accountable Local Government

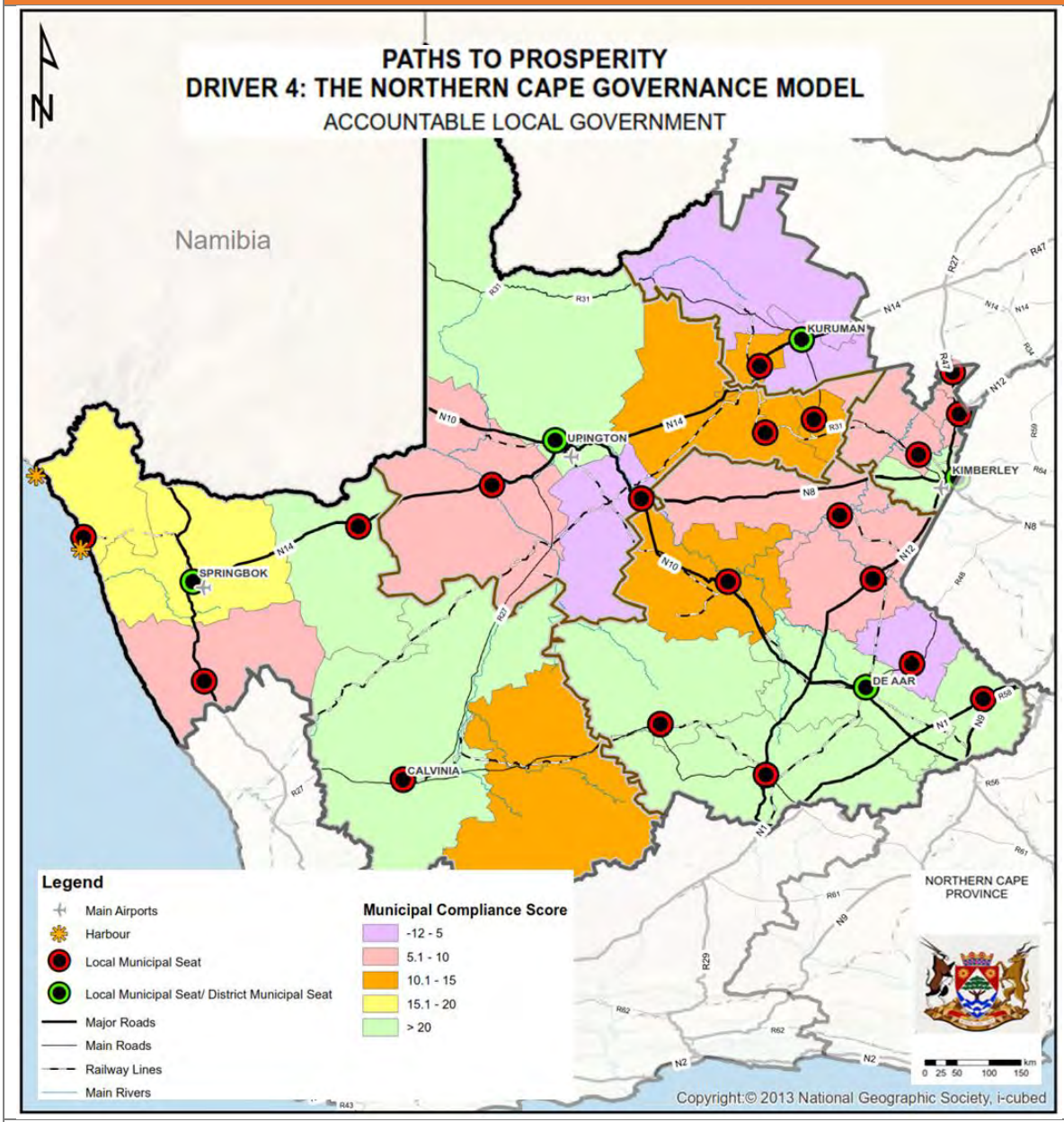
DRIVER 4: ACCOUNTABLE & EFFECTIVE GOVERNANCE PATH TO PROSPERITY: ACCOUNTABLE LOCAL GOVERNMENT

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Local Municipality Compliance Scores • Local and District Municipal Seats

Table 21: PGDP Driver 4 alignment and coordination: Development Orientated Public

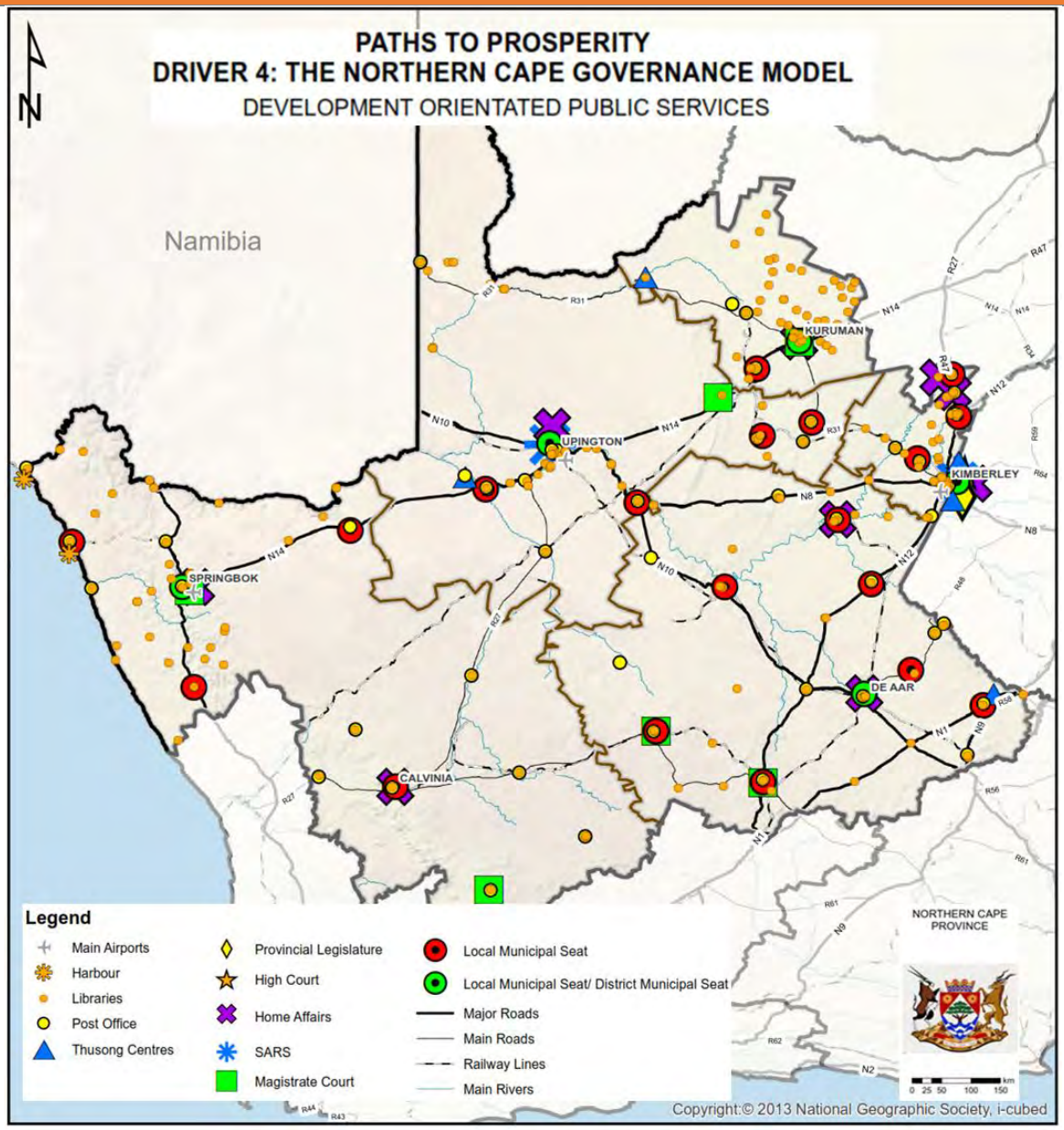
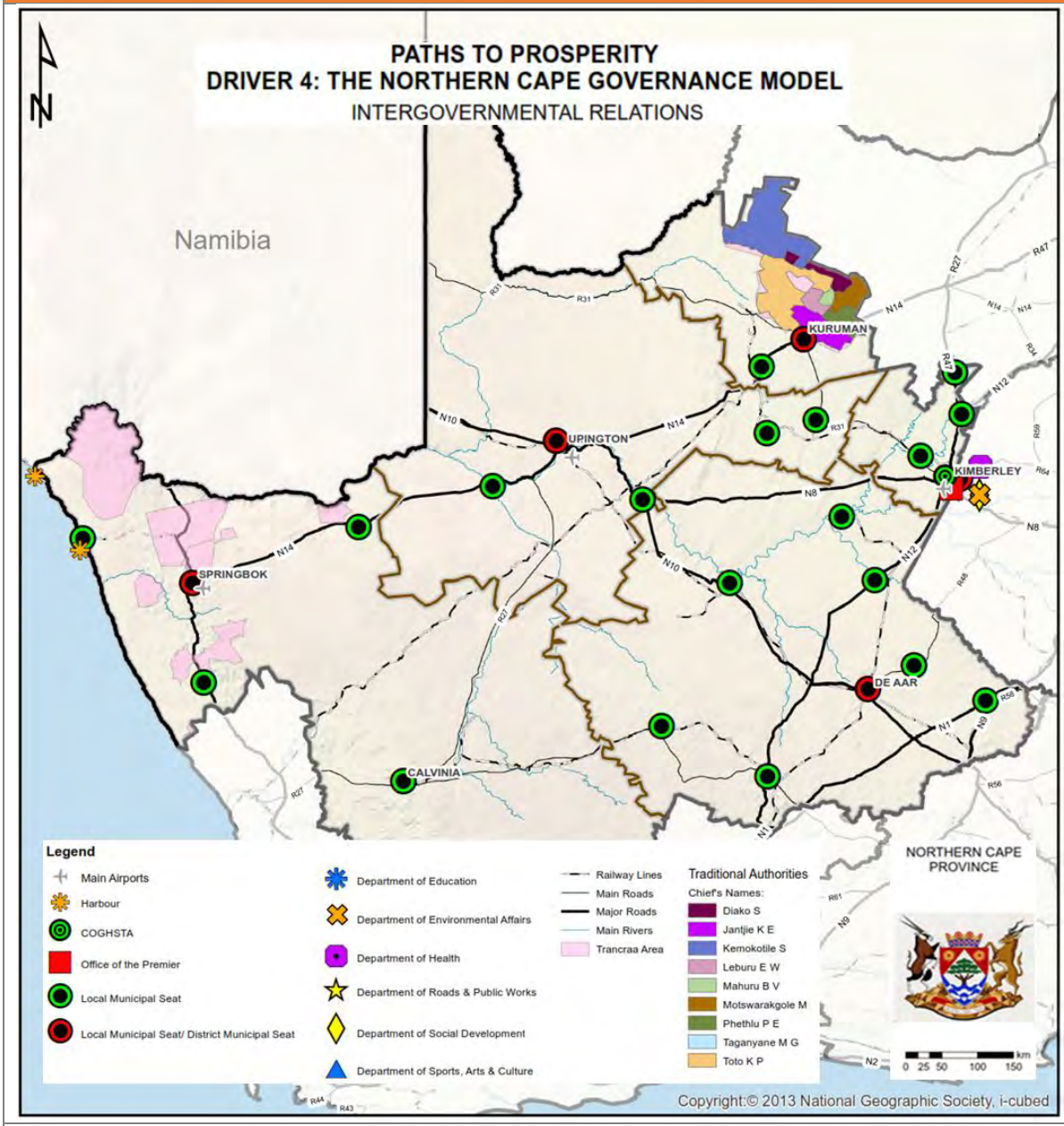
DRIVER 4: ACCOUNTABLE & EFFECTIVE GOVERNANCE PATH TO PROSPERITY: DEVELOPMENT ORIENTATED PUBLIC

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Thusong Centres • District seat (DM Offices) • Local seat (LM Offices) • Home Affairs Offices • SARS Offices • High Courts • Magistrate Courts • Provincial Legislature • Post Offices • Libraries

Table 22: PGDP Driver 4 alignment and coordination: Intergovernmental Relations

DRIVER 4: ACCOUNTABLE & EFFECTIVE GOVERNANCE PATH TO PROSPERITY: INTERGOVERNMENTAL RELATIONS

In order to give effect and spatially represent the objective and associated strategies contained within the PGDP. The following data was utilised to develop the spatial representation. • Office of the Premier • COGHSTA Offices and branches • LM seat • DM seat • Sector Department offices and branches • Traditional Areas • TRANCRAA Areas

1.3.5 SECTORAL POLICY ALIGNMENT

Table 23: Alignment towards Provincial sector Plans and Strategies

POLICY / PLAN /STRATEGY	Protection of Natural Resources	Agricultural Promoting Development	Sustainable Human Settlements	Green Energy development	Promoting mining development	Development of Infrastructure	Improving mobility and connectivity	Socio-economic Development	Urban and rural development	Value Chain development	Tourism development	Oceans Economy
LEGEND	STRATEGIC ALIGNMENT	O	SPATIAL ALIGNMENT	●	NO ALIGNMENT	*	LIMITED ALIGNMENT	X				
Northern Cape Strategy and Programme for the Upgrading of Informal Settlements, 2014			O		O	O			O	O	O	O
Department Mineral Resources – Beneficiation Strategy for the Mineral industry of SA, 2011						O				O		
DEDat – Small Scale Mining Strategy					O							
Department of Economic Development and Tourism – Provincial Integrated SMME Strategy, 2012										O		
Department of Economic Development – NC SMME Development Strategy,2013				O		O				X		
NC SMME Trust – Incubation Strategy for the Northern Cape, 2014		O			O			O		X		
NC Department of Education – Literacy Strategy, 2012									X			
NC Manufacturing Strategy, 2012					O					O		
NC Tourism Master Plan, 2015	O						O		O		O	
NC Department of Economic Development and Tourism – Development of the NC Coastal and Marine Tourism Strategy, 2016	O		O					O		O	O	O
Agriculture and Agro-Processing Sector Strategy, 2009		O								O		

POLICY / PLAN /STRATEGY	Protection of Natural Resources	Agricultural Promoting Development	Sustainable Human Settlements	Green Energy development	Promoting mining development	Development of Infrastructure	Improving mobility and connectivity	Socio-economic Development	Urban and rural development	Value Chain development	Tourism development	Oceans Economy
LEGEND	STRATEGIC ALIGNMENT		○	SPATIAL ALIGNMENT		●	NO ALIGNMENT	*	LIMITED ALIGNMENT			X
Northern Cape Province - Fishing and Mariculture Sector Development Strategy, 2009												○
Northern Cape Education Department - Human Resource Development Strategy For The Northern Cape Province, 2009									○			
Information and Communication Technology Strategy and Implementation Plan, 2009							○					
Northern Cape Manufacturing Strategy Document, 2004						○				○		
Northern Cape Province Climate Change Response Strategy (NCCCRS),	●		○	○								
The Northern Cape Department of Agriculture, Land Reform and Rural Development - Agro-Industrial Strategy, 2013		○						○	○	○		
Northern Cape Provincial Skills Development Strategy,2015									○	○		
Northern Cape Spatial Planning and Land Use Nanagement Bill, 2018	●	●	○		○	○	○	○	○		●	●
Dept. Of Rural Development and Land Reform: District Rurual Developmnt Plans	●	●	●	○	●	●	●	○	○	○	○	○

1.4 MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK COORDINATION

A brief assessment of Local Spatial Development Frameworks was made to guide the horizontal linkages required in terms of the formulation of the Provincial Spatial Development Framework. The table to follow provides an overview of the assessment outomces based on SPLUMA compliance and SPC alignment.

Table 24: Coordination of Municipal Spatial Development Frameworks

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
!Kheis Local Municipality	Yes 2016	• Protection of Orange River (FEPA's);	• Protection of Intensive Agricultural Land • Agricultural Industries	• Housing Policy (All developments within urban edge)	• Light Industrial Development in Groblershoop	• Renewable Energy
Dawid Kruiper Local Municipality	Yes 2018	• Protection of Orange River (FEPA's);	• Agricultural Industries	• Special Economic Zone • Tourism/Hospitality Corridor & Strategy • Haksteenspan Resort Development	• Rietfontein Mining Strategy • Industrial Development Zone – Cargo Hub	• Solar Special Economic Zone
Dikgatlong Local Municipality	No 2014	• Protection of Orange River (FEPA's);	• Expansion of water schemes	• Housing Policy (All developments within urban edge) • Venison Value Chain	• Mining Projects & Rehabilitation • Steel Smelter	• Enhancing local linkages
Emthanjeni Local Municipality	No 2007 (Used Pixley Ka Seme 2012-2018)	• Bio Regions - Nama Karoo & Kalahari Thornveld	• Promotion of Game Industry; • Read meat and wool production • Branding of Local produce	-	-	• N 1, 10 & 12 Corridor Development (Support Upington cargo hub)
Gamagara Local Municipality	No 2010	• Protection of Kathu Forest	-	• Detailed Geological Report to improve housing development • Detailed Socio-Economic Survey • Smart Metering	• Industrial Park, • Brick Making • Coffin Making • Toilet Paper Manufacturing • Sustainability and Live span of existing mines strategy	• Water Management Plan, • Traffic Management Plan • N 14 Mining Corridor • Renewable Energy Strategy

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
Ga-Segonyana Local Municipality	No 2007	-	• Agri park development Kuruman • Abattoir and Boiler • Ostrich Abattoir • Race Horse breeding • Feedlot	• Housing Policy (All developments within urban edge) • LED Strategy • Wonderwerk Caves Tourism development & Kuruman Eye	• Industrial Park Development • Sand Depot, • Tannery • Small Scale mining strategy • Metal Cluster (Smelter)	• Water Management Plan, • Transport Management Plan
Hantam Local Municipality	No 2010	• Succulent Karoo Ecosystem Programme (SKEP) • Protected Areas: Richtersveld Springs, Kamiesberg Wetland, Bokkeveld	• Rooibos Tea Expansion • Calvinia Wool Production	• Tourism Strategy incorporating all Reserves • Satellite Unisa Campus – Calvinia, Nieuwoudtville	• Salt Mining Node - Brandvlei & Loeriesfontein • Charcoal Production • SARAO, • South African Large Telescope (S.A.L.T)	• Transportation Corridor Strategy
Joe Morolong Local Municipality	Yes 2017	• Asbestos contamination strategy	• Agro-processing • Game & Cattle farming	• Business nodal development in smaller settlements • Development of Human Development Hubs • Tribal management Plan	• Mining Expansion Strategy	• Railway Development Plan
Kai !Garib Local Municipality	No October 2012	• Augrabies Falls National Park • Orange river Management Plan • Protection of river banks by 1:50 year flood line restricting development •	• Expand agricultural development. • Protect high potential land from Non-agricultural development	• Detailed Urban Edge Policy, • Nodal Policy • Precinct plans policy	• Industrial Precinct plans	-
Kamiesberg Local Municipality	No 2011	• Namakwa National Park Expansion	• Mari-culture - Hondeklip Bay	• Municipal Capacity Survey	• Gas & Oil Refinery	• Water Management Plan

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
		• Roodeberg Kloof Conservation Farm • Environmental Management Strategy		• Tourism Development Strategy • West Coast Development Framework	• Mining Exploration Strategy • Desalination Plant – Hondeklip Bay	• Wind Energy Strategy • Orange River water supply feasibility • N7 Corridor • Road maintenance plan • Bitterfonttein/Garies to Hondeklip Bay Rail linkage • Koiingnaas airfield upgrade
Kareeberg Local Municipality	No 2010	• Protection of the Kareeboschkolk-Zwartkop-Van Wyksvlei environmental conservation zone	• Cattle farming expansion; • goat farming expansion; • sheep farming expansion; • soya bean as potentials; • pistachios; and • game Farming.	• Astro Tourism development • Carnarvon Tourism Node	• SARAO, MeerKat	• R63 – R384 Transport Corridor
Karoo Hoogland Local Municipality	No 2010	• Protection of existing conservation areas and linking them with Tankwa National Park • Mountainous Areas biodiversity: Williston and the Meerkat/SARAO Site, continuing into Kareeberg Local Municipality.	• Processing indigenous rye grass. • Organic farming • Karoo Lamb production	• Astro Tourism development • Strengthen mobility & economic links between Sutherland, Fraserburg and Willison • Development of cross border Tourism Corridors • Activity Nodes Sutherland, Williston, Fraserburg	• SARAO, Meerkat • Support sustainable mining exploration • Mining feasibility for uranium, gypsum and gas/oil • Mining opportunities in: Copper, Silver, Calcite, Aggregate & Building material • Gas exploration feasibility	• Promote renewable energy generation • Transport Corridor Calvinia-Williston-Carnarvon & Sutherland-Matjiesfontein • Wind farm development

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
Kgatelopele Local Municipality	No 2010 (Currently being reviewed)	• Environmental Management plan • Dolomite Risks assessment plan • Open space policy	• Supporting meat and game farming • Supporting agricultural industries	• Housing Sector Planning • LED's • Danielskuil as nodal point • Eco tourism	• Mining Rehabilitation strategy	• Water Management plan
Khai-Ma Local Municipality	No 2010 (Currently being reviewed)	• Protection of Orange River (FEPA's);	• Supporting irrigation development in Pella Onseepkaans, • Optimal usage of commonage by emerging farmers • Eradication of invasive plants and establishment of secondary industries	• Development of Khai-Ma tourism corridor • Create motor vehicle testing hub at Pofadder • Nodal policy	• Supporting Gamsberg Mining (with special caution required to the extension of the ousing component).	• Establishing of a railway link • Renewable energy strategy • N14 Corridor development
Magareng Local Municipality	No 2014	• Protection of Vaal River (FEPA's);	• Agri-Park Development • Meat Production • Game Farming • Agro Processing • Agricultural Industries (Pecannut Oil) • Hydroponics	• Tourism Development Strategy (Vaal-Harts Dam, Class 19D Train, Nazareth House Mission Station, Warrenton Cultural Resort, Spitskop Dam) • N12 Treasure Route • Cultural Resorts	• Mining Strategy – social responsibility of mines or the towns. • Potential in precious stones • Rehabilitation	• Transport Management Plan
Nama Khoi Local Municipality	No 2014	• Protection of Orange River (FEPA's) & Coastal Zone	• Mari-cultural • Supporting irrigation development along Orange River	• Tourism Corridor • Nodal Policy/strategy • 1st Order Springbok, 2nd Order Kleinzee & Steinkopf, 3rd Order Vioolsdrift	• West Coast Mining Corridor	• Transport Corridor along N7 & N14 • Railway line linking Kakamas with Port Nolloth • Solar corridor development and wind energy

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
						• Vioolsdrift Dam Feasibility
Phokwane Local Municipality	No 2014	-	• Expansion of the Vaalharts Irrigation Scheme Expansion Plan. • Soil Management Plan • Agricultural Masterplan • Pecannut Development	• Agricultural linked research facilities/training/FET • Precinct plan for nodal areas • Tourism development study • Eco residential development	• Agricultural Related industries • Transport Hub – Warrenton	• Public Transport plan • Development of Research centres • N18 Corridor Development link with North West Province
Renosterberg Local Municipality	No 2007 (Used Pixley Ka Seme 2012-2018)	• Protection of Orange River (FEPA's); • UNESCO MaB Programme • Bio Regions - Orange River, Nama Karoo	• Promotion of Game Industry; • Branding of Local produce • Mari-culture	• Orange River Tourism development • Tourism Node Vanderkloof	-	-
Richtersveld Local Municipality	No 2010	• Protection of Orange River (FEPA's); • Transfrontier National park expansion and cross border linkage • Richtersveld National park • Orange River Mouth • Rooiberg Conservancy	• Cattle farming expansion; • goat farming expansion; • sheep farming expansion; • Agricultural Master Plan • Mari-cultural • Ostrich Farming	• West Coast Tourism potential, N 7 Linkage & Orange River	• Mining on and off shore • Rehabilitation strategy • Mining related manufacturing • Port Nolloth Harbour potential	• Upgrading of Alexanders Bay Airfield - tourism potential
Siyancuma Local Municipality	Used Pixley Ka Seme 2012-2018	• Protection of Orange River (FEPA's); • UNESCO MaB Programme	• Promotion of Game Industry • Branding of Local produce	• Orange/Vaal River Tourism development • Douglas Tourism Node	-	• N8 Corridor Development

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
		• Bio Regions - Orange River, Nama Karoo & Kalahari Thornveld				
Siyathemba Local Municipality	Used Pixley Ka Seme 2012-2018	• Protection of Orange River (FEPA's); • UNESCO MaB Programme • Bio Regions - Orange River, Nama Karoo & Kalahari Thornveld	• Promotion of Game Industry • Branding of Local produce	• Orange River Tourism development	-	• N10 Corridor Development
Sol Plaatje Local Municipality	No 2008	• Protection of Vaal & Riet River (FEPA's);	• Expansion of Agri-Processing • Branding of Local produce	• Economic Policy, Land Use Policy, Municipal Incentive for Tourism Development • Development of Economic Stimulation and Promotion Zones, Economic protection and enhancement zones & economic revitalisation zones • Heritage Policy	• Upgrading of infrastructure to enhance agricultural development	• Proposed Western By-pass around Kimberley
Thembelihle Local Municipality	Used Pixley Ka Seme 2012-2018	• Protection of Orange River (FEPA's); • UNESCO MaB Programme; • Bio Regions - Orange River & Kalahari Thornveld	• Promotion of Game Industry • Branding of Local produce	• Orange River Tourism development • Mining Tourism • Smart Government Systems	-	• N12 Corridor Development Strategy
Tsantsabane Local Municipality	No 2014	-	Protection of Agricultural land	• Nodal Development Strategy • Housing Sector Plan	• Sustainability and Live span of existing mines strategy	• Important Movement Corridors: N14, Sishen Saldanha Railway, R385 R325

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK – COORDINATION AND ALIGNMENT						
MUNICIPALITY	**SPLUMA COMPLIANT**	**NATURAL AREAS**	**AGRICULTURAL AREAS**	**URBAN RELATED AREAS**	**INDUSTRIAL AREAS**	**SURFACE INFRASTRUCTURE**
	Yes, No (and date)	*Key protected areas, biospheres, nature reserves, tourism development*	*Key areas to consider (nodes, corridors, zones), Agri-processing*	*Nodes, corridors, urban renewal, public transport, space economy, mega human settlements projects*	*Mining projects, corridors, industrial zones, nodes and corridors*	*Connectivity, accessibility, public transport, corridors and links*
					• Linkage with Gamagara Corridor	
Ubuntu Local Municipality	No 2005 Used Pixley Ka Seme 2012-2018	• Bio Regions - Orange River, Nama Karoo	-	-	-	• N1 Corridor Development Strategy
Umsobomvu Local Municipality	Used Pixley Ka Seme 2012-2018	• Bio Regions - Orange River, Nama Karoo & Kalahari Thornveld	• Promotion of Game Industry • Branding of Local produce	-	-	• N1 & N10 Corridor Development Strategy

2 SPATIAL GOVERNANCE

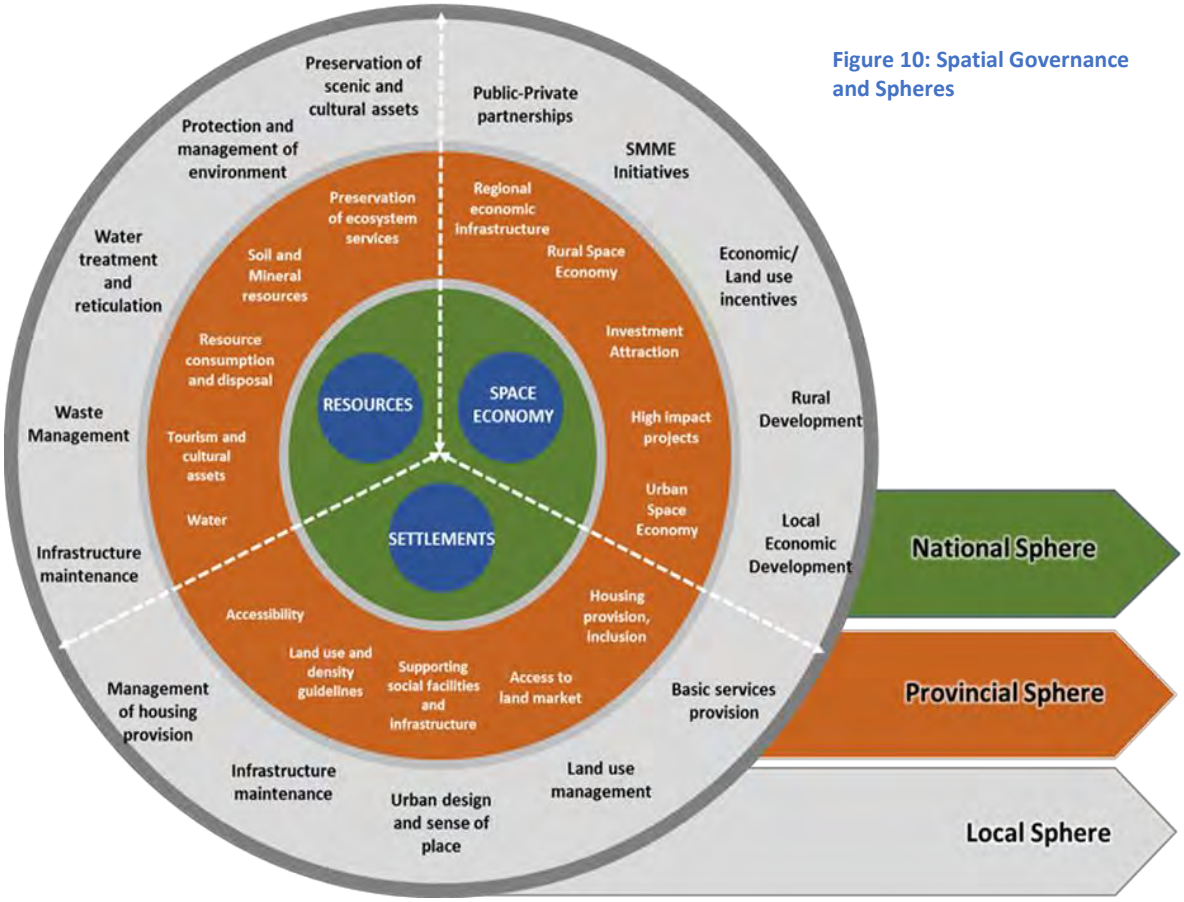


Figure 10: Spatial Governance and Spheres

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 12**, 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 regards to spatial governance and the alignment of spatial strategies can be summarised as follow (SA Cities Network, 2016):

- A plethora of plans with spatial development implications exist 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.

2.1 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 IDP's, SDF's and development strategies, they must ensure coherence of spatial development policy across the province, implement and their growth management policy and communicate the spatial focus of SDBIP's effectively. 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 development for new strategies and policies with spatial implications for the Province, and monitor municipal compliance in terms of SPLUMA.

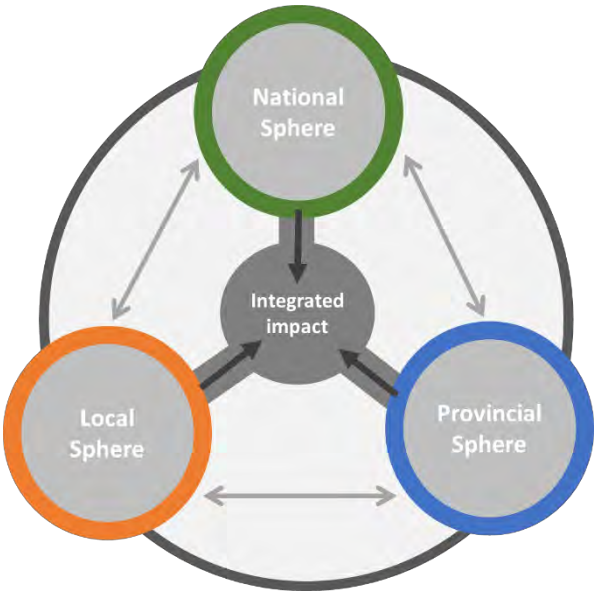


Figure 11: Integrated Impact between spheres of government

On the other hand, the PSDF provisions must also guide national government's spatial development interventions within the province. Provincial government must work together with 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 al government spheres, as indicated by **Table 25** and figures below.

Figure 12: The elements required for achieving a transversal spatial governance system (WC PSDF, 2013:32)

Table 25: Integrated development planning responsibilities

	WHO	WHAT	HOW
Plan	Province	• PGDP • PSDF • RSDF • Inter-provincial spatial plans	• Constitution • Transversal spatial plans compiled in terms of SPLUMA • Qualified and Registered planners

	WHO	WHAT	HOW
Regulate	Province Municipalities	• Provincial spatial planning system • Provincial land use management system • Use of provincial spatial assets • Risk mitigation & adaption • Municipal Planning	• NC SPLUMA • IUDF • Bylaws and Regulation • Provincial policies • Integrated Development Planning (IDP) • Qualified and Registered planners
Support	Municipalities	• Urban development • Rural development • Municipal planning • Transversal spatial systems • Spatial information	• Rural development support programme • Other municipal support
Monitor	Provincial Departments Municipalities	• Spatial transitions • Urban • Rural • Resource use/substitution/replacement • Spatial alignment • Adherence to national norms & standards	• Indicator based provincial performance management systems • Guidelines for municipal performance management system • Qualified and Registered planners
Align/ coordinate	Provincial Departments Municipalities	• National policies and programmes • Departmental spatial plans & capital investments • Municipal spatial plans & capital investments • Inter provincial spatial initiatives	• Provincial spatial and fiscal framework • All Sector Plans need to be aligned to Municipal SDF's (Local Municipalities are authority of first instance – SPLUMA)

As 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.

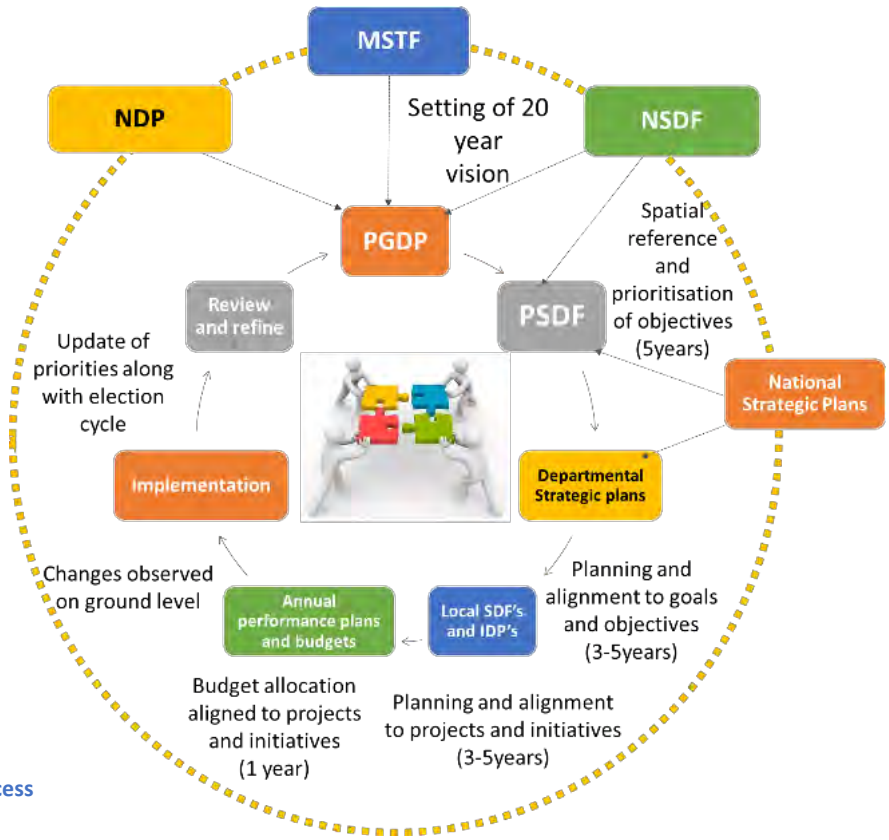


Figure 13: Policy alignment process

2.1.1 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.

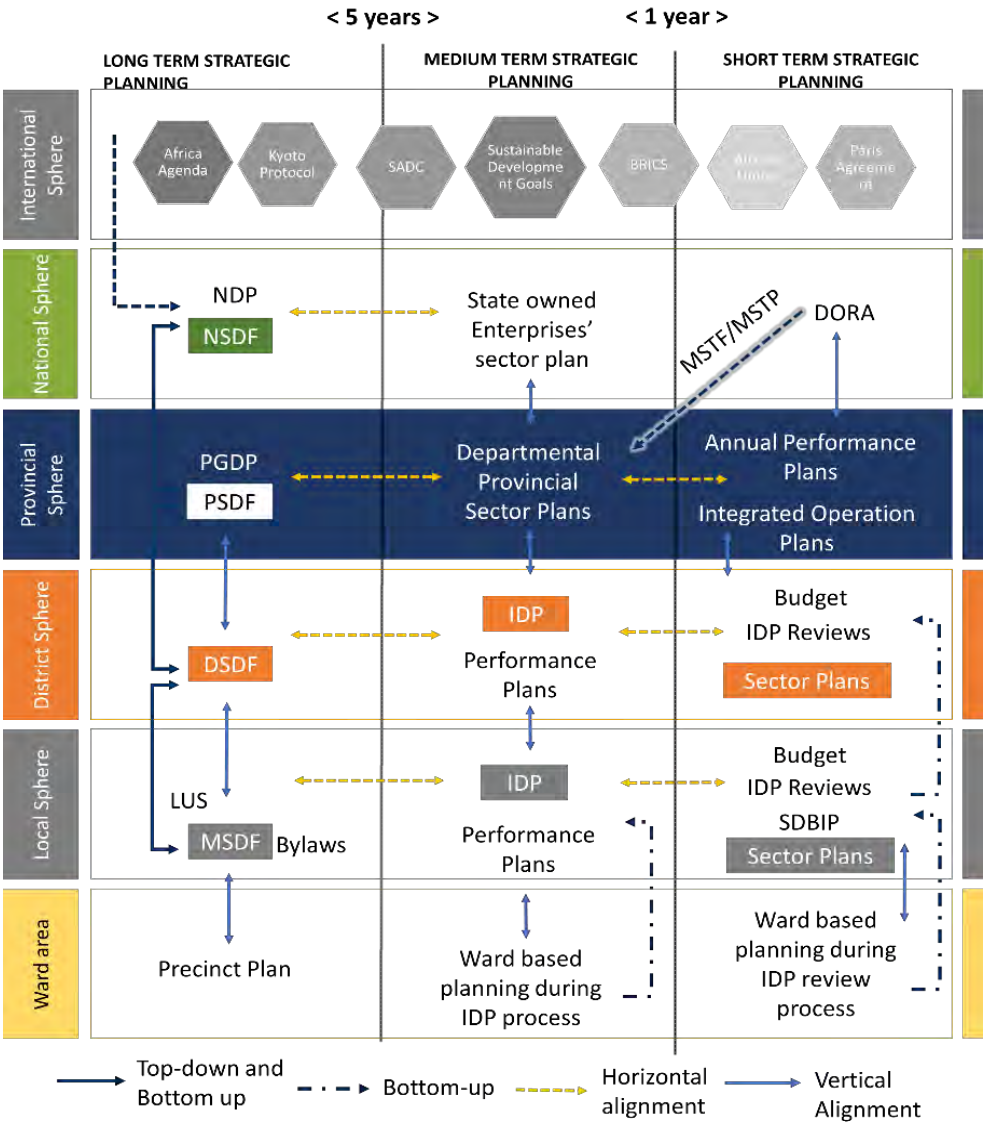


Figure 14: Policy alignment process

2.1.1.1 PROVINCIAL SPATIAL PLANNING AND LAND USE FORUM

The Northern Cape SPLUMB recognises the establishment of a Provincial Spatial Planning and Land Use Forum through Chapter 3, Section (6) which refers to the following:

- Section 6 (1), The Premier may, by way of notice in the manner prescribed establish a Provincial Spatial Planning and Land Use Forum.
- Section 6 (2), The Provincial Spatial Planning and Land Use Forum shall consist of:

a) all members of the Executive Council of the Province and any duly authorised and qualified officials who influence or participate in Spatial Planning and Land Use Management in Province; and

b) Municipal Managers of all Municipalities situated within the Province.

- Section 6 (3), The Premier shall act as or nominate the Chairperson of the Provincial Spatial Planning and Land Use Forum for each sitting thereof.
- Section 6 (4), The persons who are members of the Provincial Spatial Planning and Land Use Forum shall cease to be members if they vacate the posts or positions which they held at the time of their appointment.

THE PURPOSE AND FUNCTION OF THE PROVINCIAL SPATIAL PLANNING AND LAND USE FORUM IS:

- To identify all projects or opportunities relating to land use which will have a regional or provincial impact (matters of National and Provincial interest)
- To promote intergovernmental co-operation (availing projects and resources)
- To facilitate investment incentitives and local and provincial level;
- To oversee the provincial data repository;
- To request and evaluate any research or information pertaining to projects or opportunities that could affect matters of provincial interest;
- To identify non-compliance with the provisions of the NC SPLUMB and SPLUMA;
- To aid with budgetery constraints to to realise projects or opportunities relating to land use; and
- The Office of the Premier shall be responsible to ensure that the forum functions as per Section 8 of Chapter 4: Northern Cape SPLUMB.

2.2 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) provides clear indication in which fields the various stakeholders of development are associated with. The Provincial Spatial Planning and Land Use Forum[3] provides the enablisng mechanisms to coordinate the roes and functions as indicated in **table 26** below:

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

Table 26: Institutionalisation of the Spatial Planning Categories

SPC	FUNCTION	DEVELOPMENT PARTNERS[4]
A: Core 	Protection of ecosystems and the services it provides.	• Dept. Environment and Nature Conservation • SANParks • SANBI
B: Buffer 	Protection of ecological infrastructure within urban areas, and sensitive regions.	• 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 to ensure food security.	• Dept. Agriculture, Rural Development and Land Reform • National Dept. of Rural Development and Land Reform • Local and district municipalities • Tribal authorities
D: Urban and rural settlements 	Management and control of land uses within urban and rural settlements.	• 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 value, typically associated with pollution and potential exposure to hazardous substances.	• Dept. Environment and Nature Conservation • 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 	Bulk infrastructure planning, development, implementation and the maintenance thereof	• 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 settlements and traditional affairs. • SARAO

[4] 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.

2.2.1 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 SPISYS and the NSPDR), and the data should be updated on a regular basis (to be facilitated by the Office of the Premier, Northern Cape Province). The PSDF proposes that the SPISYS or a similar system 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 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 provincial level but also at local municipal level. The system will be used in conjunction with provincial standards/parameters for facilities as developed and updated by 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 authorative source could provide a workable alternative. This involves a centralised or "Coordinating Custodian[5]" 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 need 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 which the system needs answered and what data / information is required to answer these questions?

[5] *To be facilitated by the Office of the Premier (Policy and Planning).*

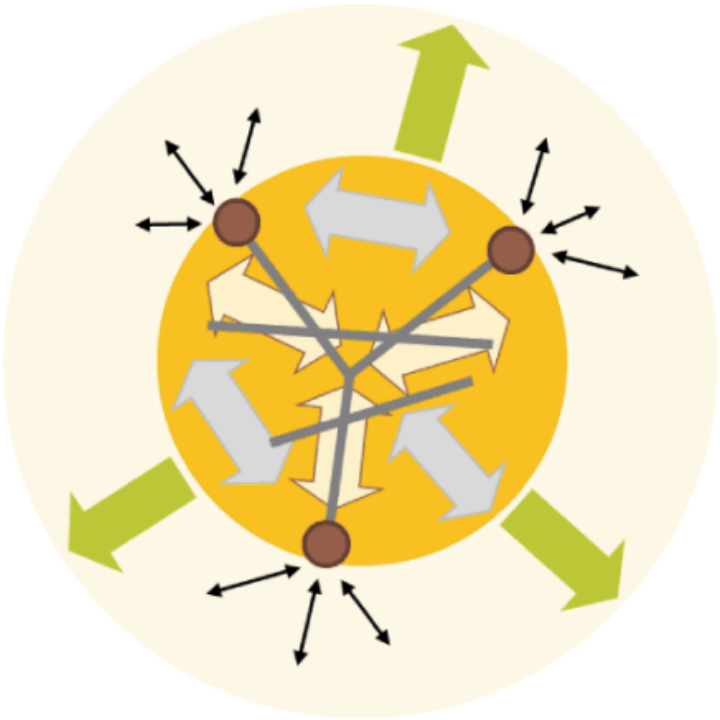
CHAPTER 3 : SPATIAL CHALLENGES AND OPPORTUNITIES

1 INTRODUCTION

This Chapter 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 follow:

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

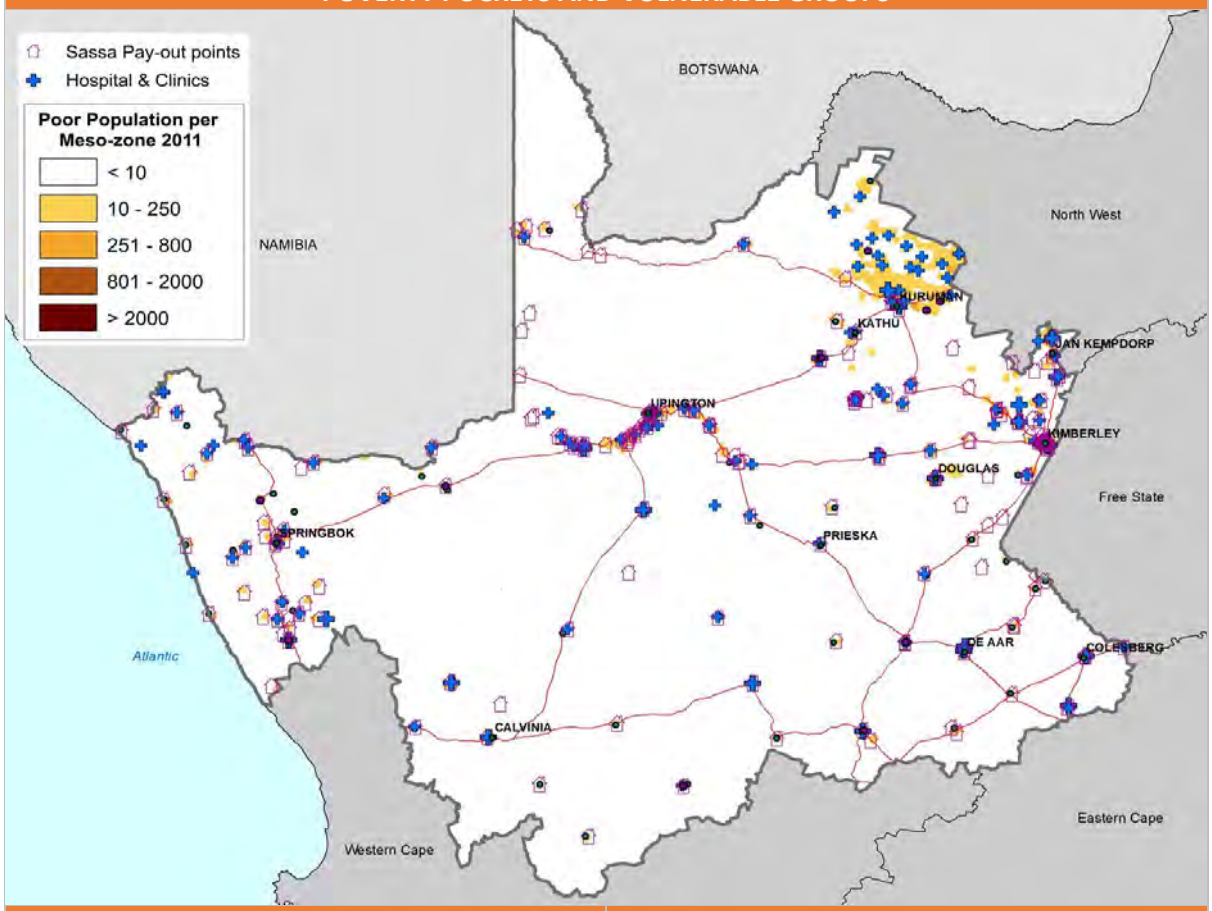
- Mining resources;
- Environmental Resources;
- Tourism resources;
- Agricultural resources; and
- Competing resources.

1.1 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 challenged faced within these spaces.

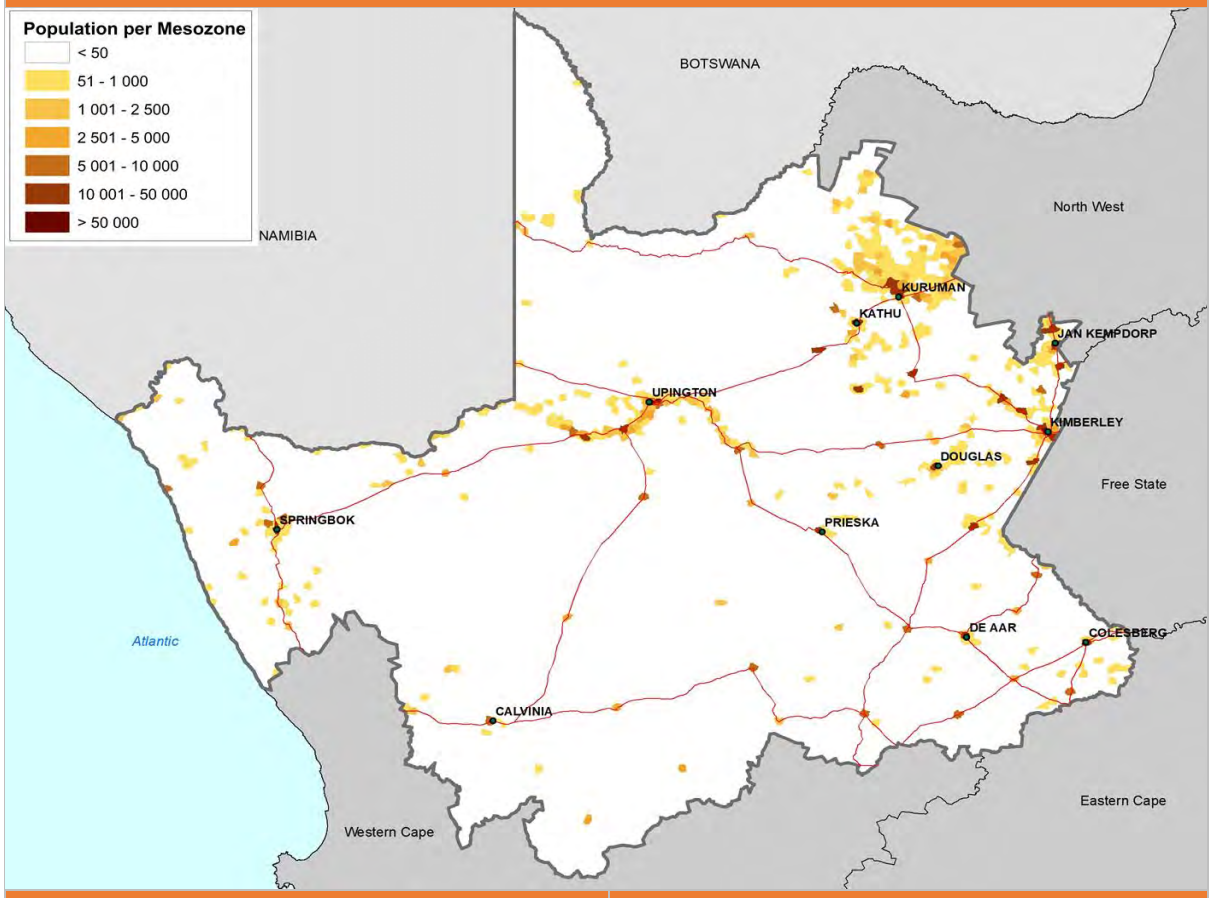
1.1.1 POVERTY AND VULNERABILITY

Table 27: Northern Cape Poverty and Vulnerability status

POVERTY POCKETS AND VULNERABLE GROUPS	
	
Spatial Challenges	**Spatial Opportunities**
• Poverty is mainly concentrated in larger urban settlements; • Largest poverty pocket conglomerate is within the tribal and mining region of the John Taolo Gaetsewe District; • Providing crucial health and social services to isolated rural communities. • Accessibility and road conditions; • Cost of extending infrastructure and services to rural areas; and • Limited growth and job creation result in increasing poverty, urbanisation and expansion of informal settlements	• As poverty is concentrated within urban region, poverty alleviation efforts can be concentrated for effective relief; • Concentrated poverty alleviation programmes can indirectly aid and manage migration; • Mobile social and health services; and • Promotion of sustainable livelihood models and sustenance farming in rural areas.

1.1.2 POPULATION CONCENTRATION

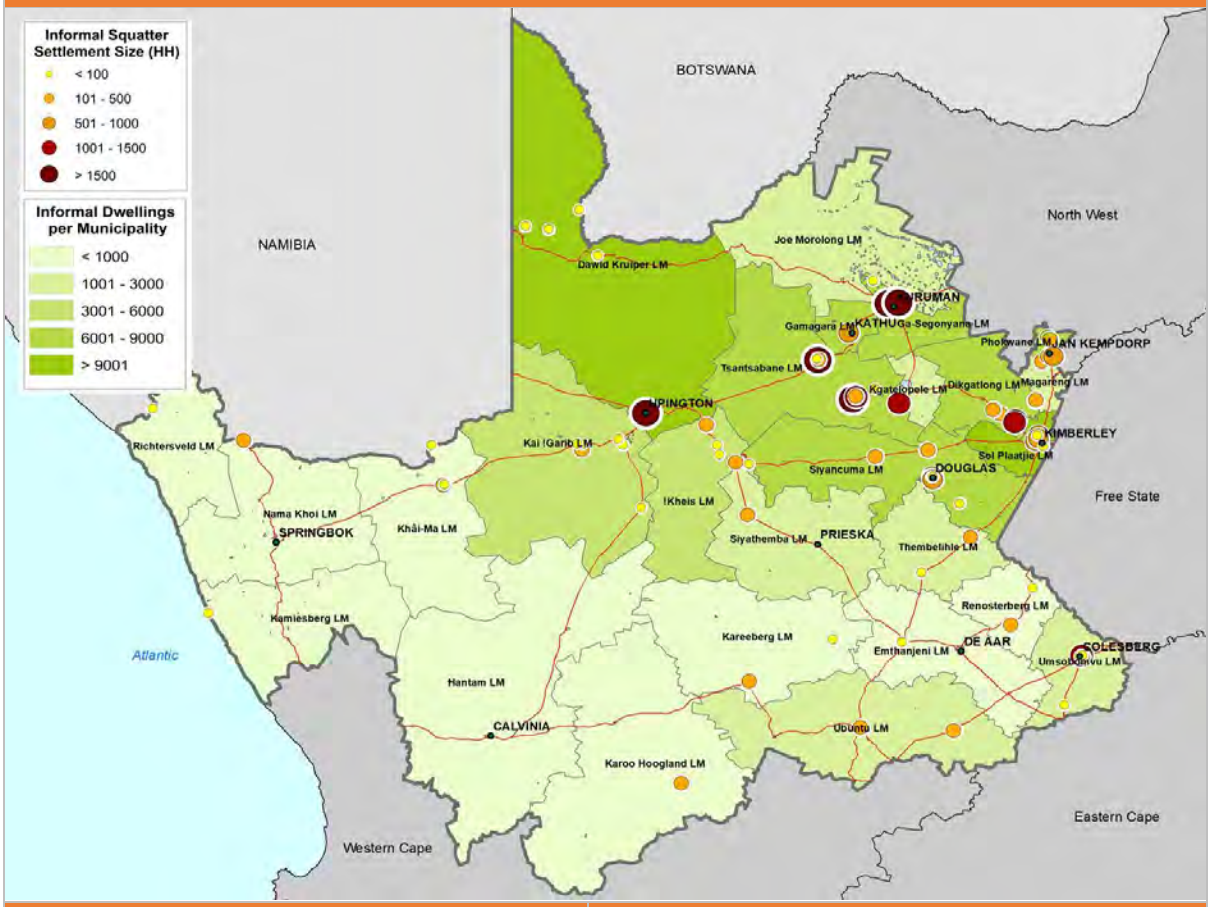
Table 28: Northern Cape Population Distribution

POPULATION CONCENTRATION


Spatial Challenges	Spatial Opportunities
• The highest population concentrations are mainly centred around main economic activities and centres. • The Tribal Authority areas within the John Taolo Gaetsewe district is the exception, where high population densities are located in rural areas. • Although the population is concentrated in urban areas, towards the east, various small population concentrations are vastly scattered with limited accessibility levels. • Limited accessibility and mobility options for rural and small population concentrations • Cost of extending infrastructure and services to rural areas.	• Concentration of investment in areas with larger population concentration will provide a larger return on investment. • Concentrated investment in larger regional centres, with satellite services to other towns and centres will aid the accessibility level of services and goods. • Mobile and electronic services to reach rural and isolated communities. • Promotion of sustainable livelihood models in order for rural or isolated communities to sustain themselves.

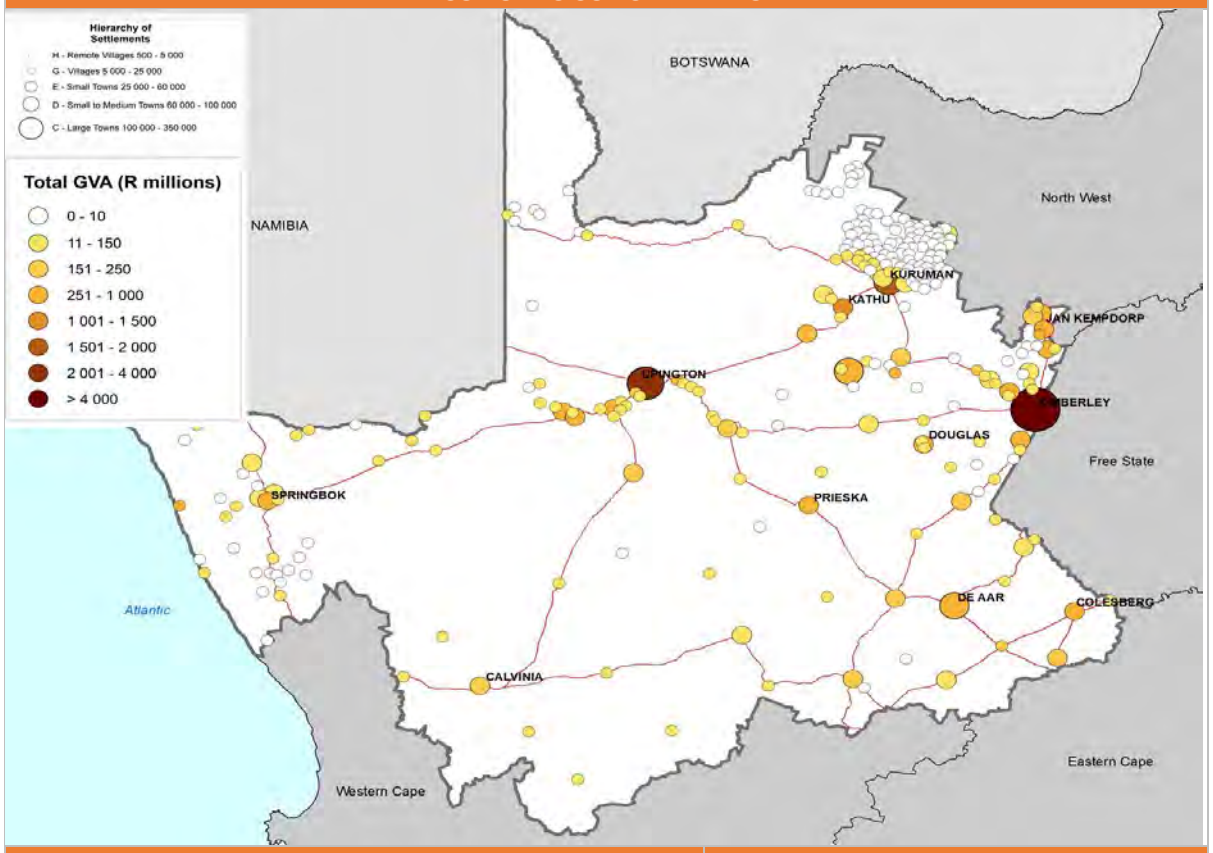
1.1.3 SETTLEMENTS AND HOUSING

Table 29: Northern Cape Housing realities

INFORMAL HOUSING AND SETTLEMENTS	
	
Spatial Challenges	**Spatial Opportunities**
• As mentioned previously, due to 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. • Prevalence of informal housing gives rise to various other social and health challenges. • Sustainability of settlements presents a shift towards the east as presented in the NSDF. This is due to mitigation measures againts climtate change and the impact thereof on water availability. • Pressure experienced by mining towns to develop and the impact thereof on smaller municipalities (socio-economic pressures)	• Focus settlement investment and development in regional economic centres, in order to effectively address informal settlement growth. • 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 of a Provincial Housing Provision Plan that needs to be aligned with the spatial proposals and recommendations made in the PSDF (also refer to the Socio -Economic Potential of Towns study)

1.1.4 ECONOMIC CONCENTRATIONS

Table 30: Distribution of the Northern Cape GVA generation

ECONOMIC CONCENTRATION


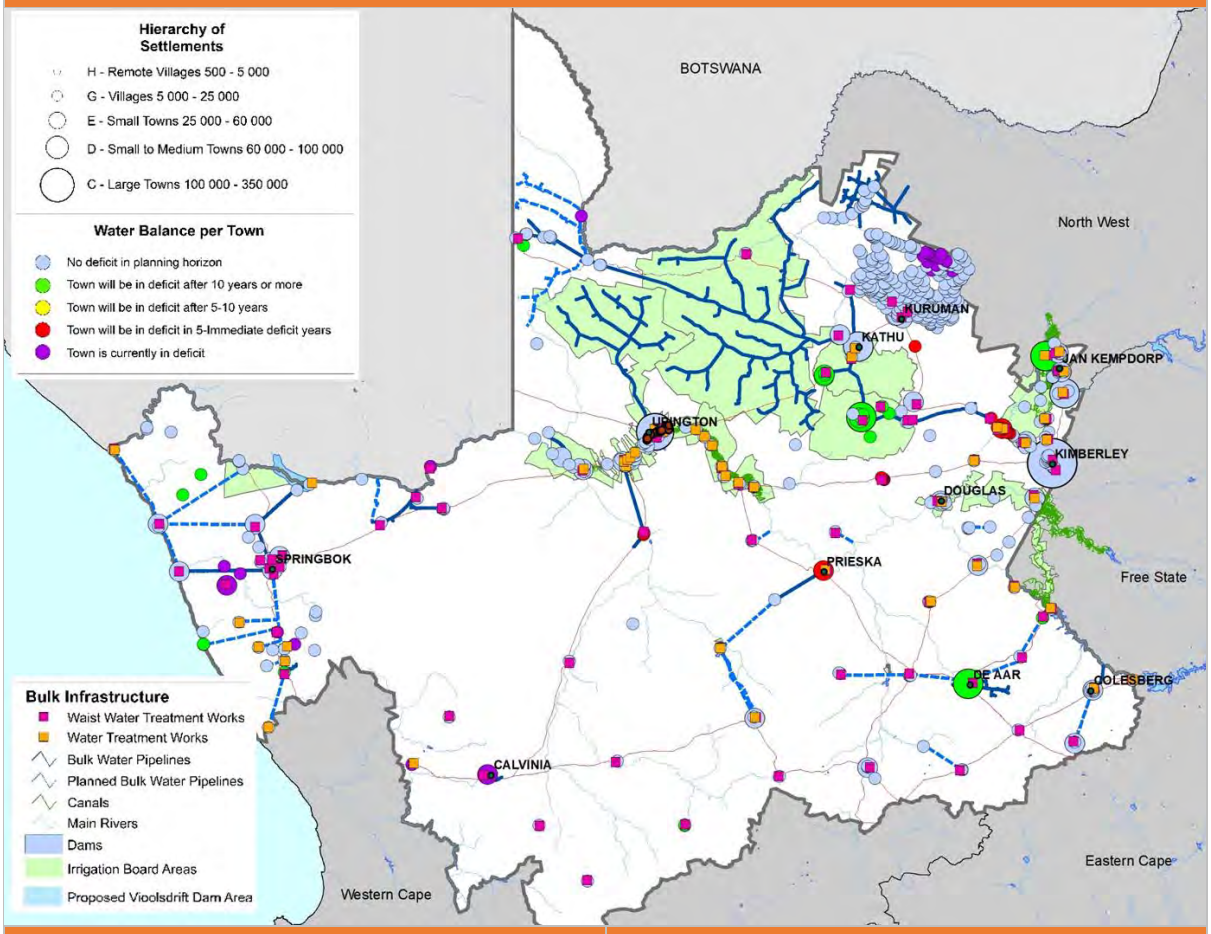
Spatial Challenges	Spatial Opportunities
• The province has 3 major regional economic centres, concentrated towards the east of the province, limiting the access to economic opportunities of the remaining parts of the province. • Due to the dependence on the primary sector, diversification levels are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

1.2 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, limits 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.

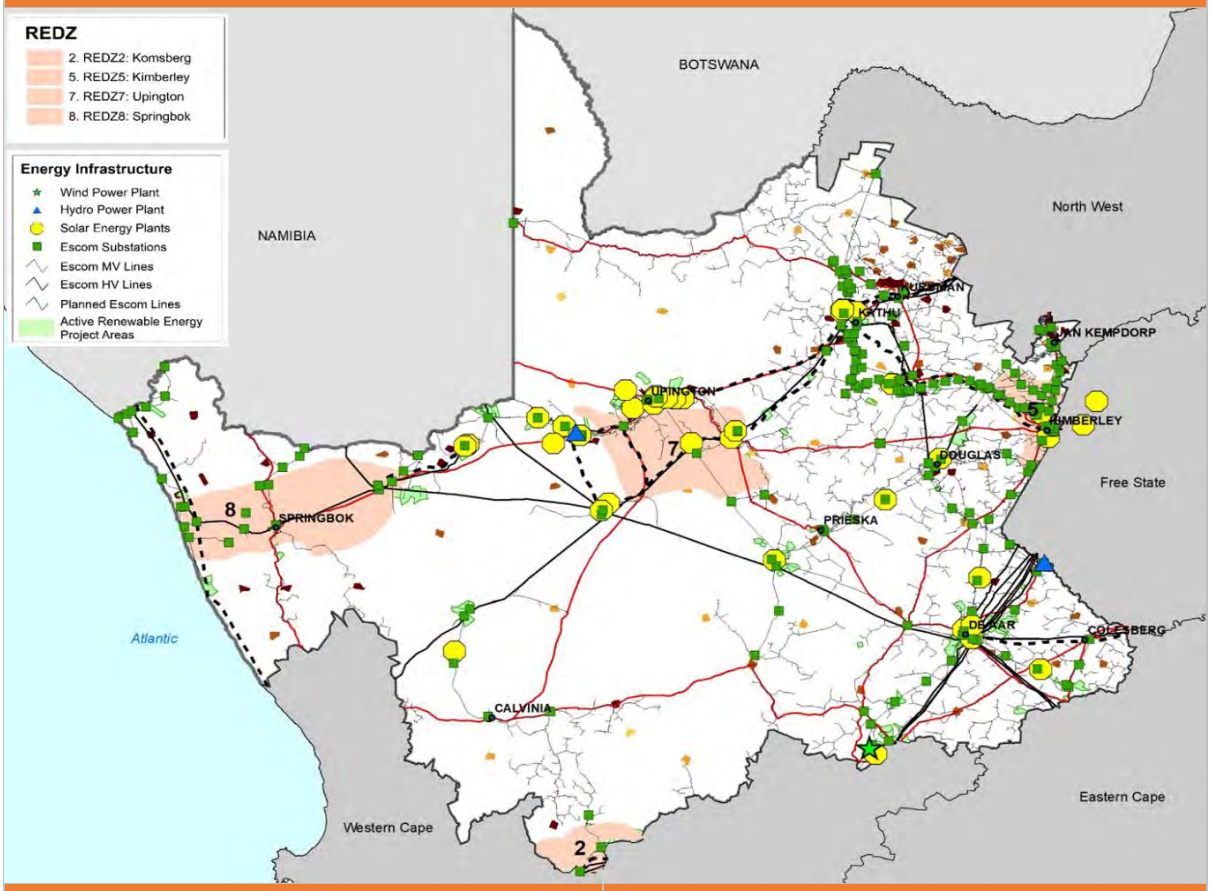
1.2.1 BASIC SERVICES

Table 31: Accessibility of basic services within the Northern Cape

ACCESS TO BASIC SERVICES	
	
Spatial Challenges	**Spatial Opportunities**
• The Northern Cape is a water scarce Province, some settlements are already experiencing water deficits, as indicated by the red and purple icons. • South Western corner of the province has limited access to water pipelines and relies on groundwater resources. • In vast areas, the ground water quality is not suitable for human or animal consumption. • Lack of adequate waste management systems and infrastructure is causing environmental degradation. • Basic service delivery is not always financially viable in isolated, rural and small settlements or villages. • As highlighted in the NSDF, climate change will have a negative impact on the sustainability of service provision.	• Create a framework or operational model that would allow the municipalities to exert a better control over provision of electricity to its customers particularly those who are not connected to the grid at the moment. • In order to ensure sustainable livelihoods until 2040 and beyond, re-use and reticulation systems will be crucial. • Protection of crucial water resources through the use of zonings and land use schemes. • Promoting densification strategies to maximise the use of existing services infrastructure. • Building of the Vioolsdrift Dam to unclock new irrigation and water schemes in the Lower Orange Catchment area.

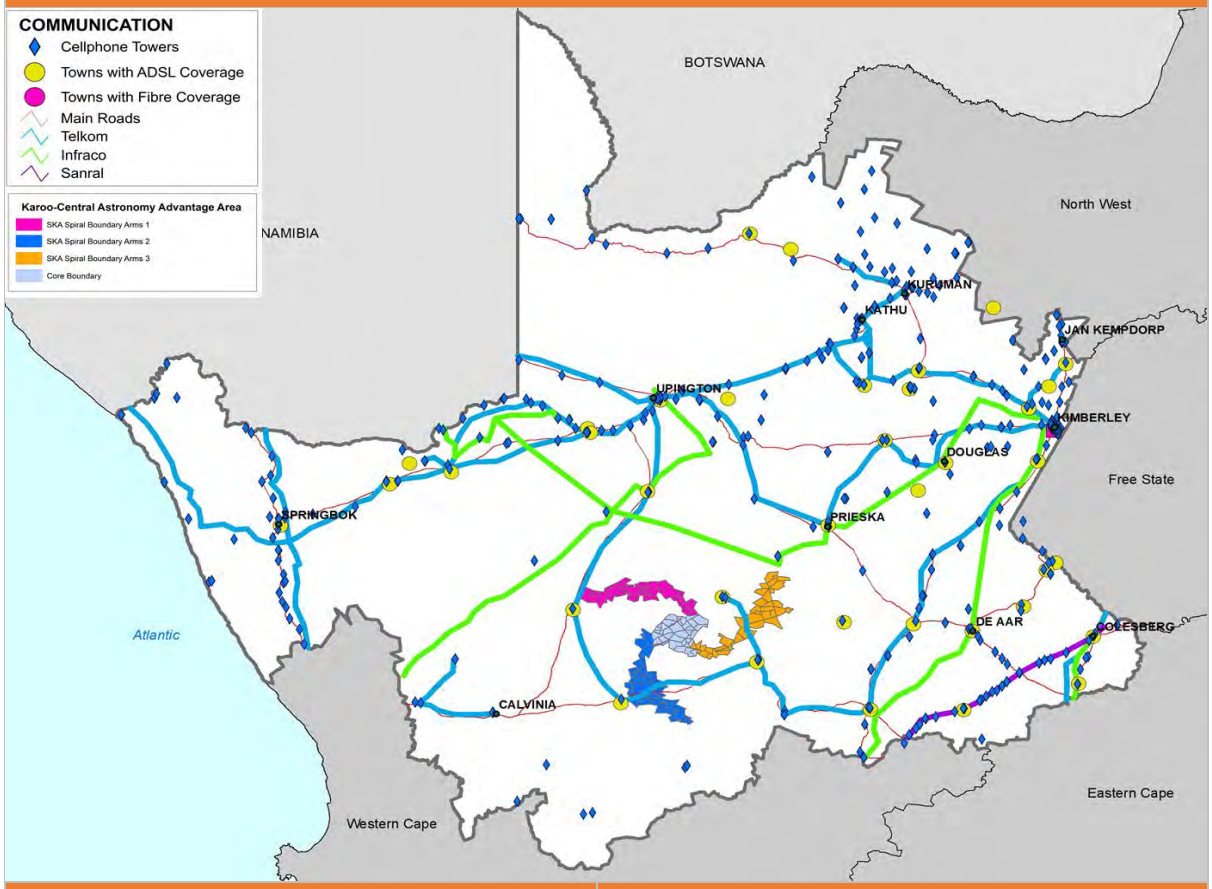
1.2.2 ENERGY

Table 32: Northern Cape Energy infrastructure distribution

ENERGY	
	
Spatial Challenges	**Spatial Opportunities**
• Due to limited capacity and less reliable infrastructure, economic growth and development is hindered. • Limited coordination and spatial logic of renewable energy project locations and distribution. • Vast distances increase the cost of developing and sustaining infrastructure. • Non-alignment between national and provincial solar corridors, • Ad-hoc licensing of rewable energy projects	• 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.

1.2.3 TECHNOLOGY

Table 33: Technological infrastructure within the Northern Cape

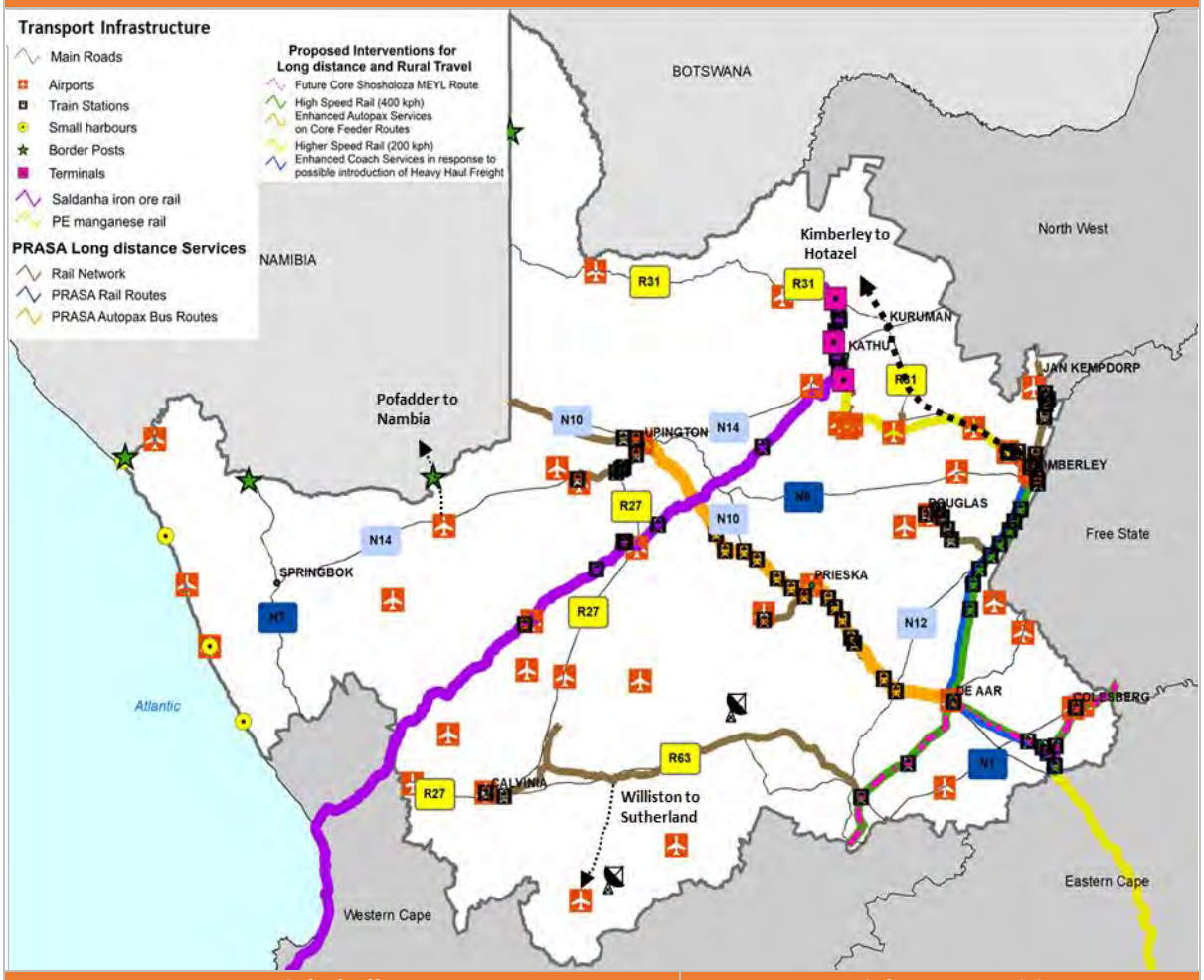
TECHNOLOGY	
	
Spatial Challenges	**Spatial Opportunities**
• Due to the vast, sparsely populated regions, provision and access to communication and technological services are limited in rural regions. • ICT development in areas within the core region of the SARAO, needs to adhere to various requirements, 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.	• Further capitalisation on the presence of the SARAO. • The linkages between universities and industry is 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.

1.3 CONNECTIVITY AND MOBILITY

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

1.3.1 PUBLIC TRANSPORTATION

Table 34: Public Transport Distribution and Access within the Northern Cape

TRANSPORTATION INFRASTRUCTURE


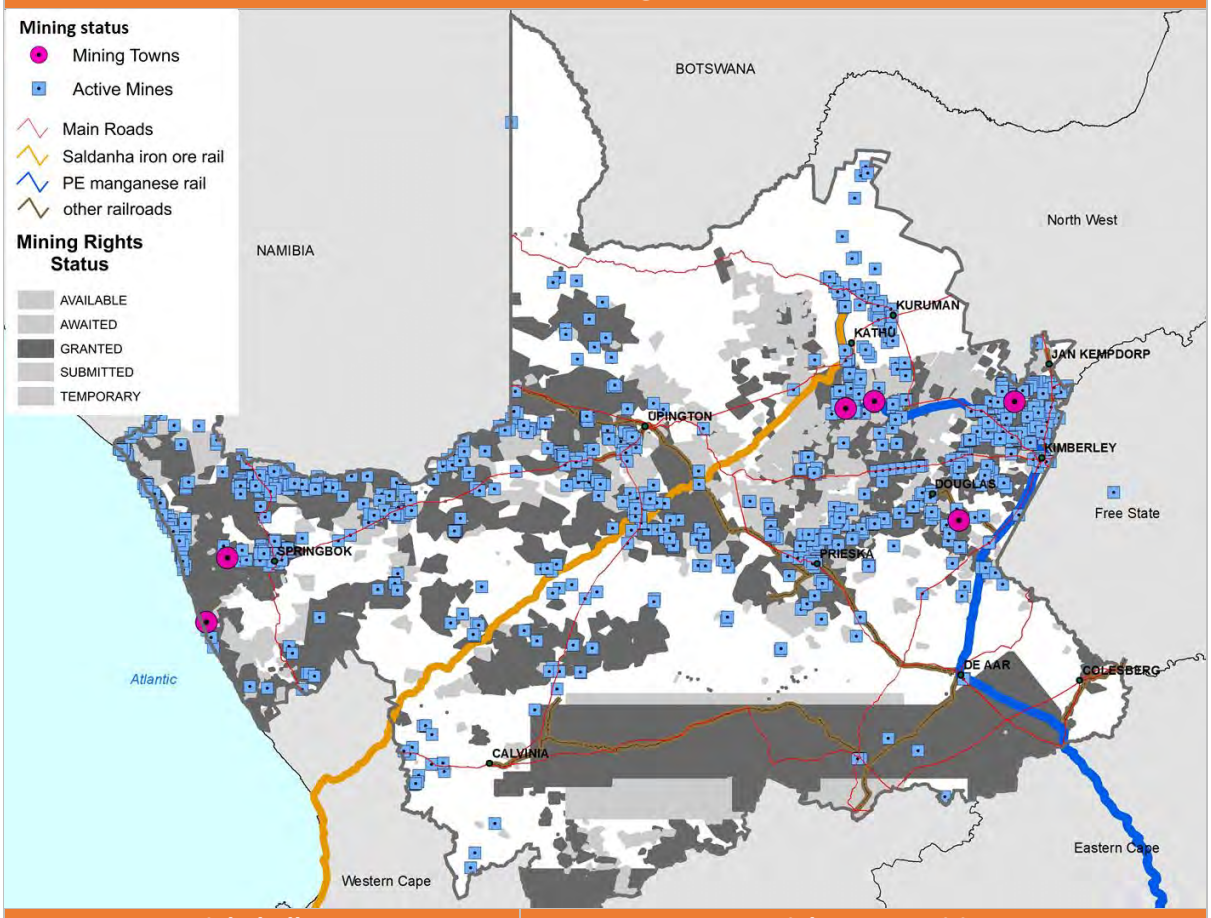
Spatial Challenges	Spatial Opportunities
• A limited number of provincial roads are paved, or in good condition, which hinders the overall accessibility and mobility of communities. • Due to the vast distances, transport costs are high, which tends to trap citizens in poverty within areas with limited economic potential. • Rail is mainly utilised for the export of raw materials. • Heavy motor vehicles utilised to transport raw materials are accelerating the deterioration of road surfaces. • SALT site inaccessible via the Astronomy Route (Calvinia towards De Aar), road conditions are not suitable for tourist/development. • Restricted road conditions from Kimberley towards Kuruman (over congestion and dangerous road conditions due to the number of trucks).	• Upgrading of the main route (R31) between Kimberley and Kuruman to a National Road. • Investigate rural transport model options. • Upgrading and maintenance of rail infrastructure in order to increase the viability of the logistics hub identified in De Aar and to promote the shift from road to rail. • Upgrade the Upington Airport to an International Airport in order to export commodities etc. • Upgrade roads from Pofadder to Namibia and Williston to Sutherland.

1.4 PROVINCIAL RESOURCES

As the Northern Cape's economy is a resource-based economy, 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 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 forms the base of the tourism sector, and plays a key role in the protection of resources and ensuring the sustainable utilisation thereof.

1.4.1 MINING RESOURCES

Table 35: Status of mining resources within the Northern Cape

MINING


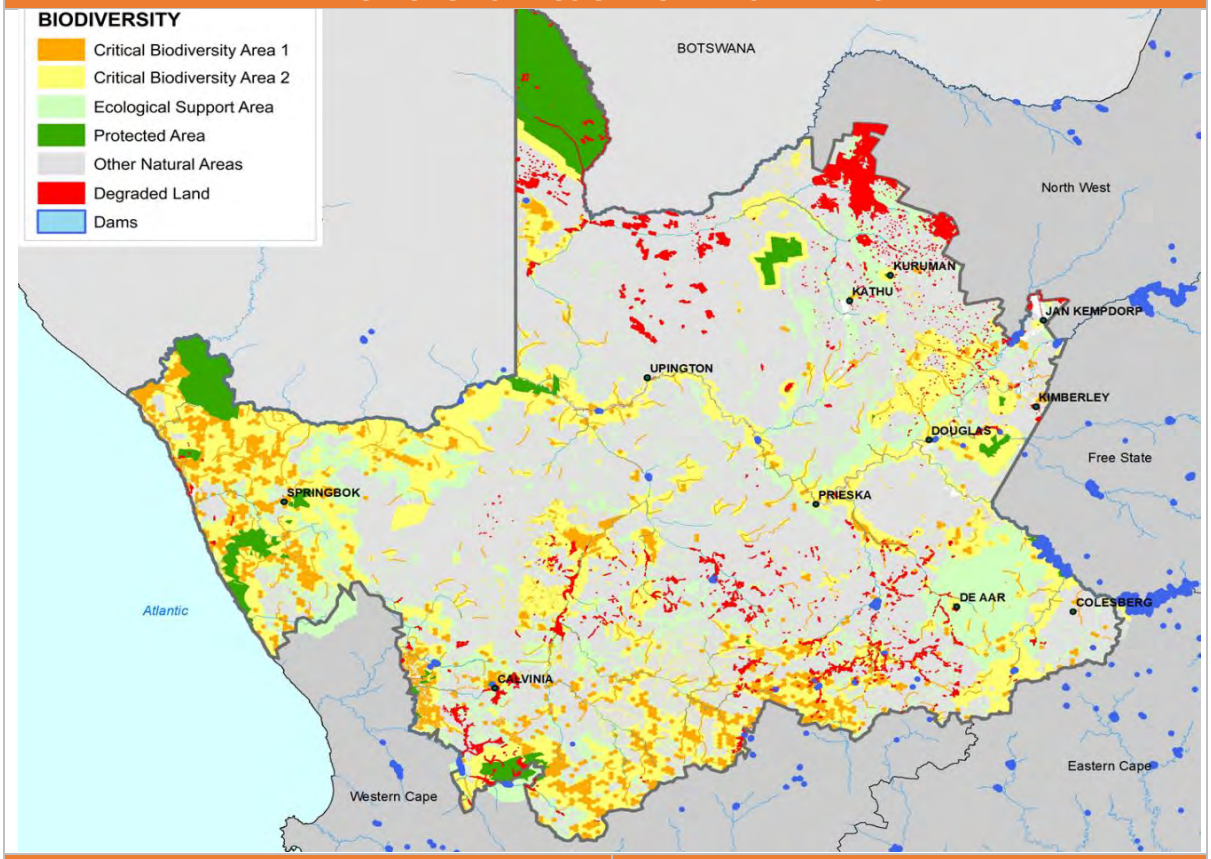
Spatial Challenges	Spatial Opportunities
• Difficulty is faced with sustaining mining towns or settlements, after mineral deposits are depleted, or become financially unviable. • Financial cost of expanding basic infrastructure to areas in close proximity to mining activities. • High level of water use and environmental degradation is associated with mining or extractive industries.	• Mining is a major economic driver, providing numerous job opportunities and economic development. • Promotion of manufacturing activities that support the mining industry. • Development of a strategy to address the establishment and inevitable decline of mining towns (no mine towns to be established or extended) and guidelines for the provision of mining housing.

MINING	
• As the main headquarters of mining houses are situated within the Gauteng Province, the income and profit are registered and allocated to the Gauteng Province. • Continious conflict between mining and agricultural land uses.	• Development of clear regulations for extractive industries located in high potential agricultural land, and in close proximity to crucial water resources. • As manganese has the highest estimated lifespan, regarding mineral deposits within the province, it will be more sustainable to direct and concentrate investment into manganese production.

1.4.2 ENVIRONMENTAL RESOURCES

Table 36: Status of environmental resources within the Northern Cape

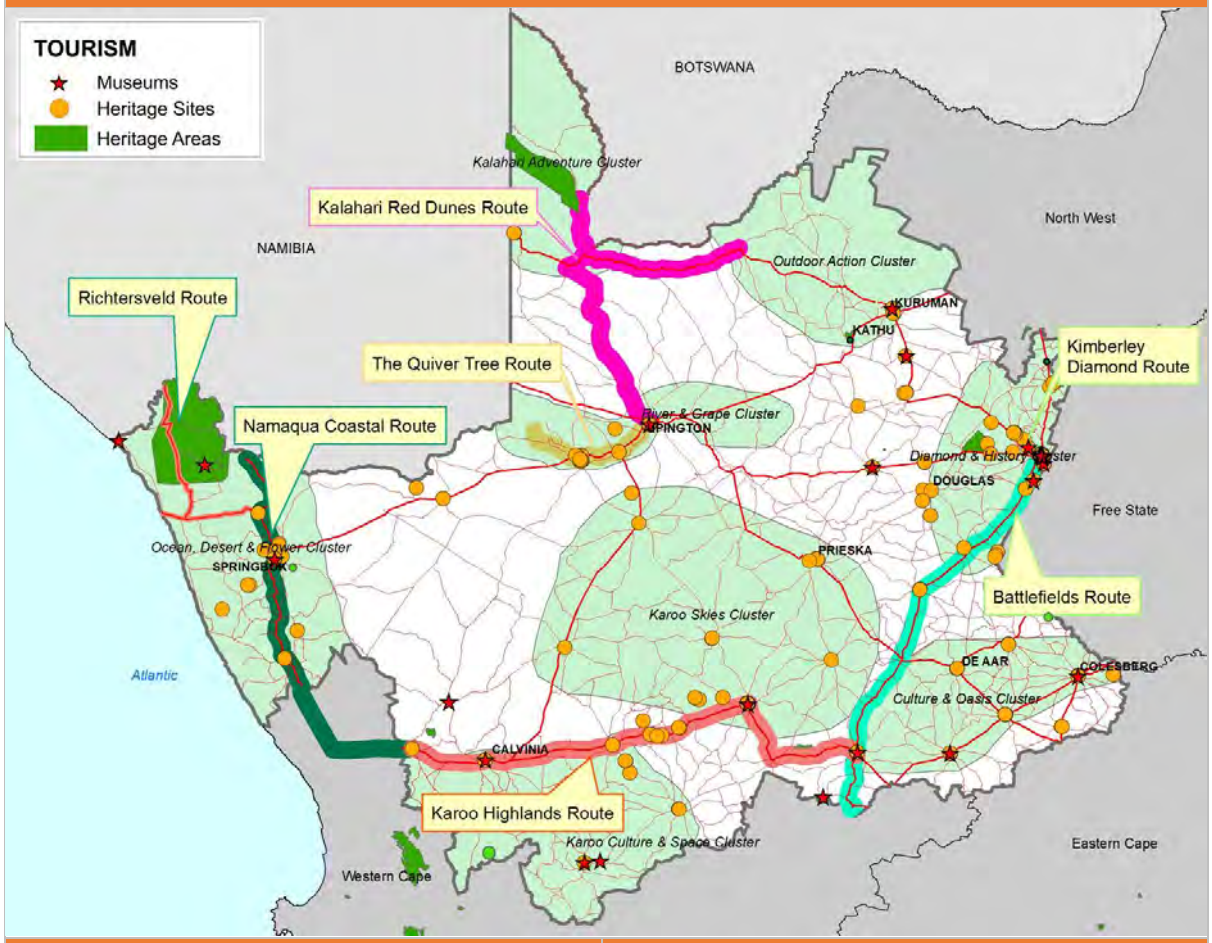
PROTECTION STATUS OF BIODIVERSITY AREAS



Spatial Challenges	Spatial Opportunities
• Agriculture and mining activities take place within or in close proximity to environmentally sensitive areas. • Areas/sections of degraded land are located within protected areas. • Large regions of the Northern Cape are covered by degraded land cover. • Climate change will greatly impact the sensitive ecological region along the western coast. • The environmental impact of the nuclear dumping site close to Kamieskroon requires extra care to ensure it does not cause dentrimental effects to the health of communities and the environment alike.	• 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. • Establishment of the SAROA biosphere / nature reserve

1.4.3 TOURISM RESOURCES

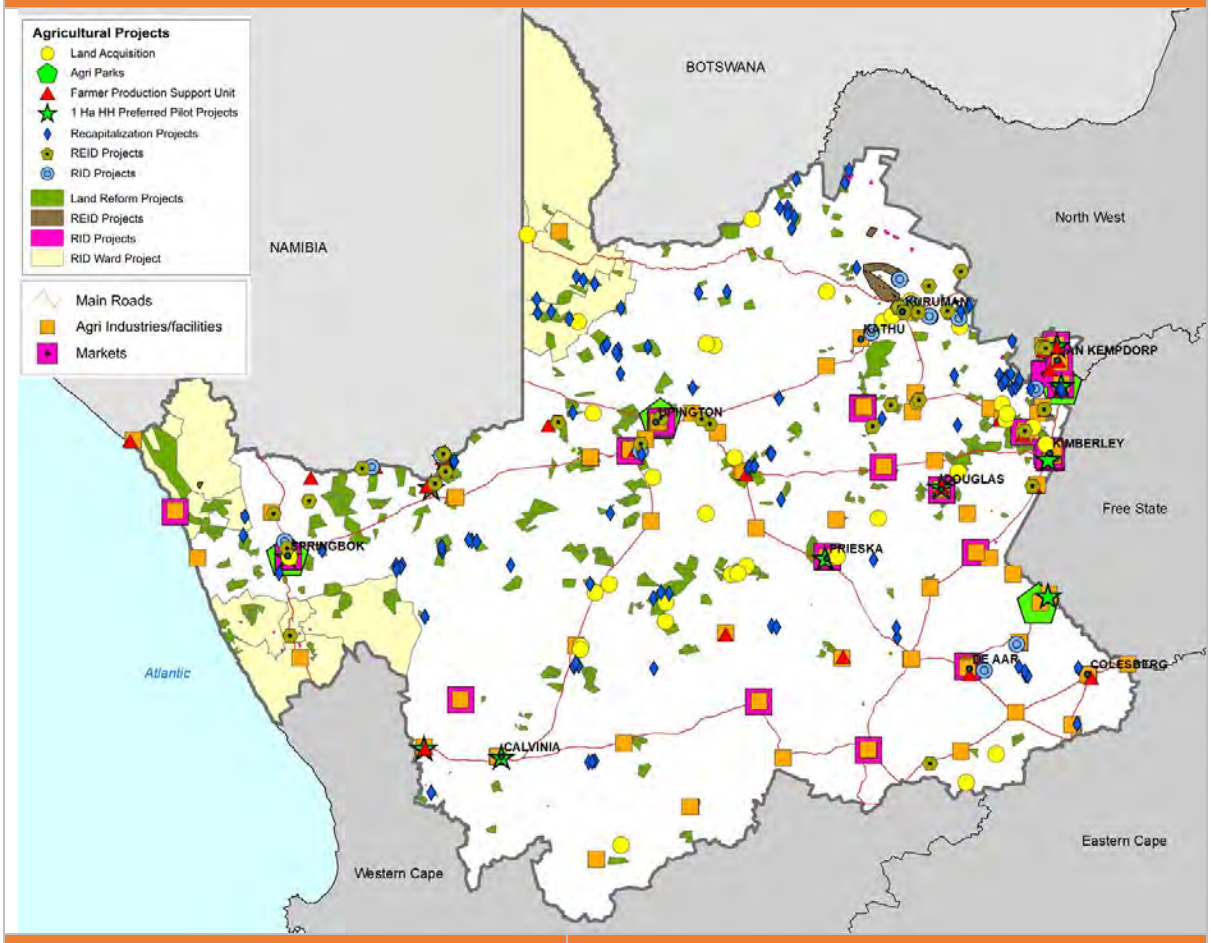
Table 37: Status of the tourism resource base of the Northern Cape

TOURISM RESOURCE BASE	
	
Spatial Challenges	**Spatial Opportunities**
• Vast distances between tourism attractions creates difficulty in attracting tourist to more than one destination within the province. • Limited distribution and access to public transit systems in close proximity to national parks and tourism attractions. • Road surface conditions of the provincial roads limits the level of accessibility for tourist to more rural regions of the province. • Limited awareness and marketing of tourism attractions of the province. • Negative impacts of climate change on the Namaqua Flower Region. • Limited transportation services negatively impact on accessibility; • Limited tourist services – travel agents, tour operators, guides, etc	• 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 diversify product offering 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

TOURISM RESOURCE BASE	
• Majority of these 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 sport facilities limited to major towns, catering primarily for local market.	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 supply of specialty restaurants offering local/traditional cuisine, fine dining, etc. • Explore potential to capitalise on intangible attributes and untapped potential. • Unclocking unique tourism related development and attractions through initiatives such as the Karoo Regional Spatial Development Framework.

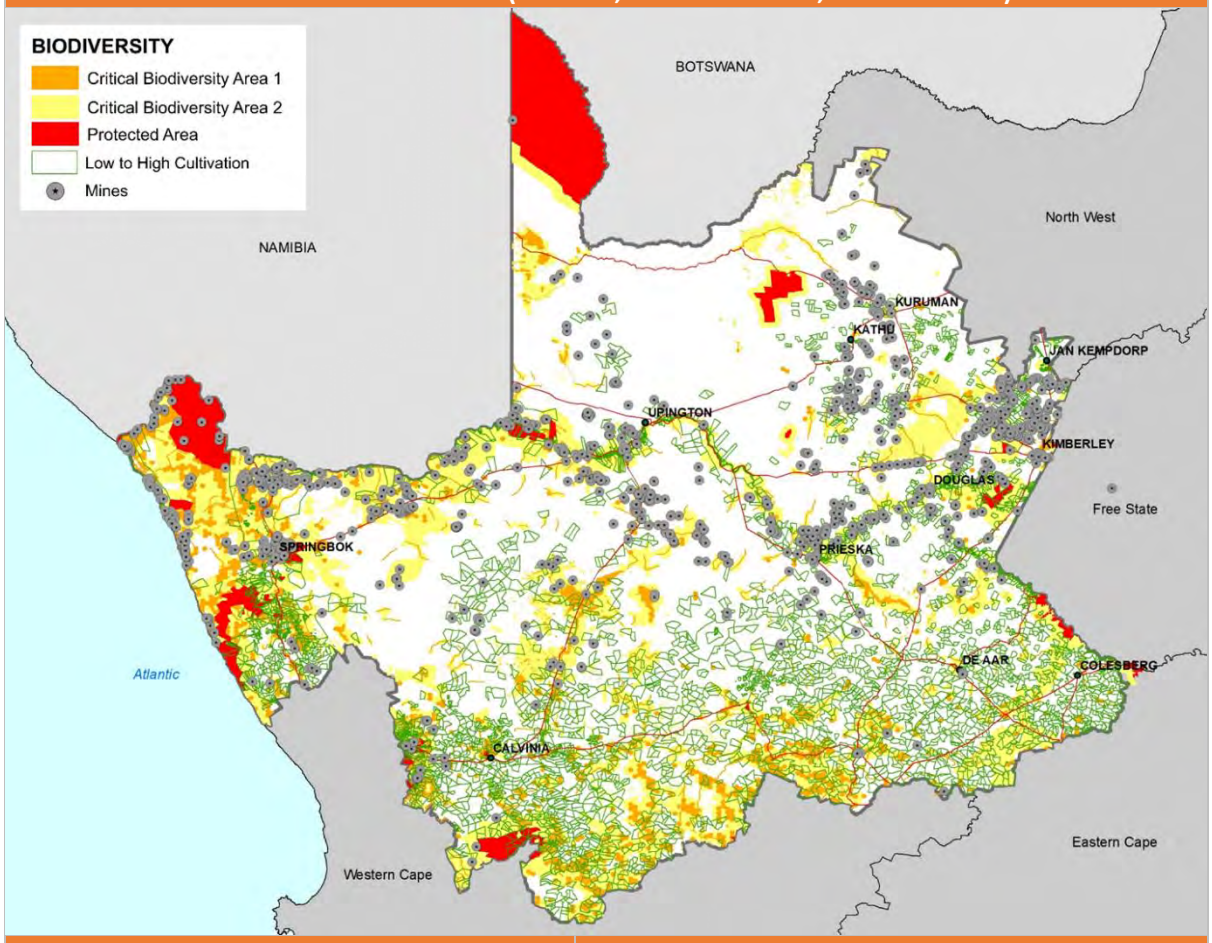
1.4.4 AGRICULTURAL RESOURCES

Table 38:Status of agricultural resources within the Northern Cape

AGRICULTURAL RESOURCES	
	
Spatial Challenges	**Spatial Opportunities**
• 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 impact on yields and production levels throughout the province.	• 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.

1.4.5 COMPETING RESOURCES

Table 39: Status and areas with competing land uses within the Northern Cape

COMPETING RESOURCES (MINING, ENVIRONMENT, AGRICULTURE)	
	
Spatial Challenges	**Spatial Opportunities**
• In numerous cases, active mines are located within protected or environmentally sensitive areas. • Mining and agriculture are concentrated along the river systems, typically known to host endangered species or sensitive ecological systems. • Agricultural activities are encroaching and affecting the overall health of indigenous and sensitive fauna and flora. • Both mining and agriculture are major water uses, reducing the availability of water required to sustain ecological services.	• Clear guidelines for regions experiencing high level of competition between land uses. • Provide clear guidance and possible approaches to agricultural activities adjacent to protected and sensitive areas. • Concentrate mining permits in areas not earmarked as high potential agricultural land or sensitive regions. • Explore opportunities for the re-use of un-rehabilitated mines for agricultural/Mariculture purposes.

CHAPTER 4 : SPATIAL AGENDA

1 INTRODUCTION

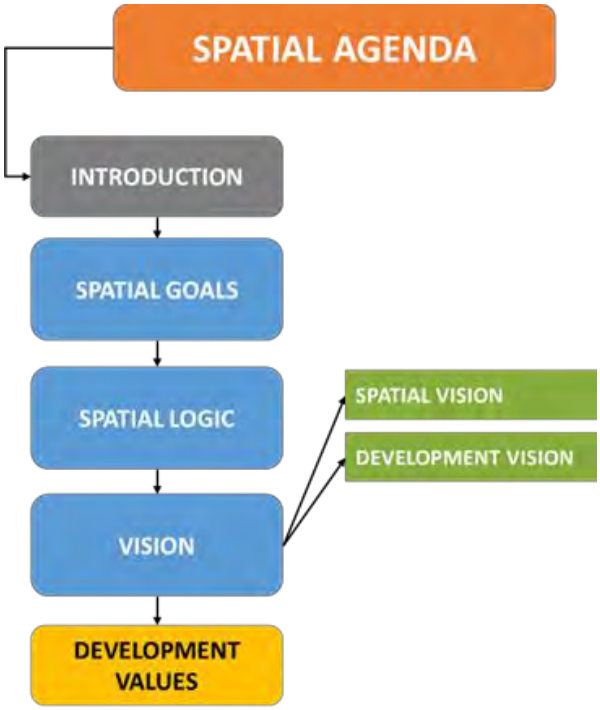


Figure 15: Spatial agenda structure

The spatial agenda draws on the profile of the Northern Cape's current development status (separately documented in PSDF **ANNEXURE 1 – Status Quo Analysis**). The reviewed PSDF (2020) positions the Northern Cape to transition towards a more inclusive, productive and resilient economic future with a key focus[6] on the following key challenges restricting development in the province, namely:

- Limited accessibility and mobility in the Province;
- Limited reverse of the apartheid planning systems (a primary strategy of apartheid was to manipulate urban and rural space-economies so that those enfranchised had preferential access to economic assets, particularly well located and resource endowed land, and the disenfranchised were severely restricted in accessing these opportunities);
- Being driven mostly by the primary sector (the NDP strives towards transforming the nature and performance of the economy to achieve sustained economic growth, greater environmental resilience, and much better inclusion);
- High dependency on the Mining Sector that proves to have only temporary investment potential and benefits (many mining towns reliant on the mining sector with limited value adding);
- Little management and protection of local resources;
- Uncoordinated infrastructure development (economic growth is the number one priority of the Province);
- The province is subject to global environmental risks (i.e. climate change, depletion in material resources, anticipated changes to the global carbon regulatory environment, and food and water insecurity).
- Poor rural – urban linkages (the PSDF needs to take on the challenge of restructuring the urban and rural landscapes so that they offer socio-economic opportunities for all; and
- Uncoordinated spatial planning (politicians, the private sector and spatial planners have differing agendas and timelines. Political decision making often contradicts stated policies).
- Establishment of key development entry points are causing unccordinated approval and issuing of development applications/licenses.

"Despite reforms to the planning system, colonial and apartheid legacies still structure space across different scales" (NDP, 2012:260)

[6] *Reference is also made towards the development Principles of SPLUMA*

2 SPATIAL GOALS

To address the spatial challenges identified the PSDF and PGDP strives to take the Northern Cape on a path towards:

- Greater productivity, competitiveness and opportunities in the provincial space economy;
- More inclusive development of its urban and rural areas (the current spatial management system incentivises the wrong outcomes (e.g. number of residential units delivered as opposed to progress made in developing sustainable human settlements);
- Strengthened resilience and sustainability of its natural and built environments; and
- Improved effectiveness in the governance of its urban and rural areas[7] (There is no quick fix to spatial transformation given the durability of the built environment and the time it takes to change land ownership and usage patterns. The NDP recognises that systemic change will take generations to manifest itself on the ground, but points out that decisions taken now will influence whether these changes do, or do not come about in future)

3 SPATIAL LOGIC

The logic underpinning the proposed spatial agenda is:

- To ensure that development is underpinned by the Principles of SPLUMA
- To build on the unique strengths and opportunities of the Northern Cape Province (e.g. Kalahari region, remoteness, natural and mineral resources and renewable energy sector);
- To coincide and align with the key development principles proposed through SPLUMA;
- To improve the regional accessibility and connectivity of the province, building on existing national and provincial corridors (e.g. Transport, ecological, Tourism, Renewable Energy);
- To target areas with economic potential through the beneficiation of local communities through value adding initiatives;
- To reconcile and improve the connectivity between rural and urban areas through the promotion of sustainable human settlements by promoting spatial transformation (e.g. urbanisation strategies);
- To cluster economic activities along and within development corridors and development zones;
- To give spatial direction for public and private sector development and promoting the collaboration between these sectors to drive a single and well coordinated development in the province;
- To establish a high-level regional spatial logic that makes sense even when administrative boundaries are removed or changed (functional logic); and
- Inform provincial government's social and capital planning, budgeting and implementation, with performance monitoring and evaluation enhanced by spatial intelligence supplied through a centralised GIS (such as SPISYS, NSPDR or other real time spatially enabled data repository systems).

[7] The previous PSDF (2012) resembled this as a key issue as Provincial Departments did not align plans to the SDF's of Local Municipalities, again refer to SPLUMA where Local Government is seen as the Authority of first instance. Any development planned by Provincial or National Dpeartments must be in line with Local SDF's.

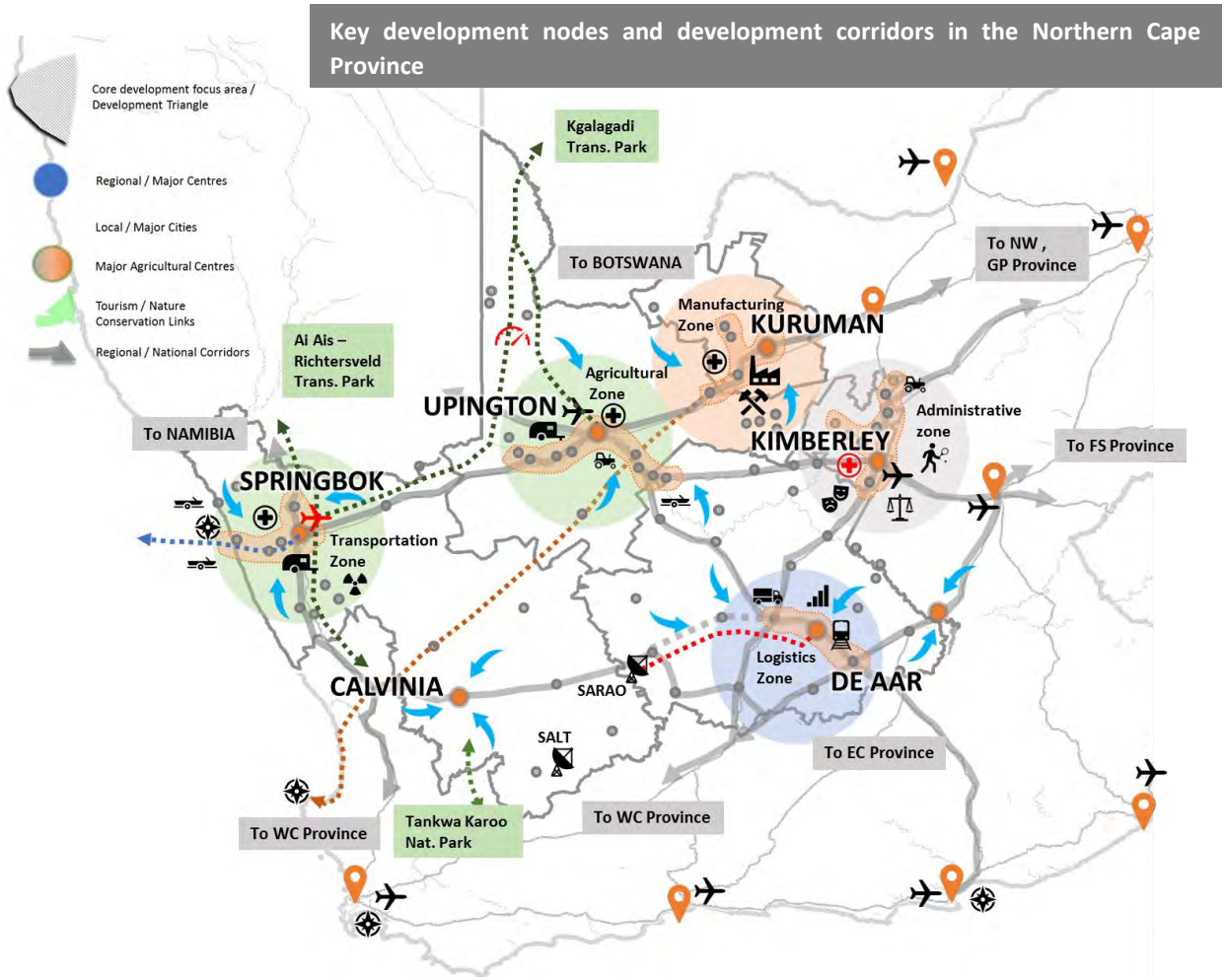


Figure 16: Northern Cape Spatial Logic

4 DEVELOPMENT VISION

Northern Cape Province comprises of numerous unique and significant development potential attributes including the environmental quality of life in certain areas, availability of resources, an extreme climate and urban and rural development opportunities. Water resources are restricted in most of the Northern Cape and is a main determinant of development trends.

The National Spatial Development Framework (Draft) accepts a *Spatial Development Vision and Mission* built on the overarching goal of *equity, unity and connectedness,* and reads as follows:

VISION STATEMENT:

"All Our People Living in Shared and Transformed Places in an Integrated, Sustainable and Competitive National Space Economy"

MISSION STATEMENT:

"Making our Common Desired Spatial Future Together Through Better Planning, Investment, Delivery and Monitoring"

The Northern Cape Province Spatial Development Framework has the function at a provincial strategic level to plan and co-ordinate the broad spatial structure of the area, integrating the policy frameworks set by the national and municipal spheres of government and to ensure the alignment of municipal

spatial frameworks and policies. A future functional spatial development pattern for Northern Cape Province requires the integration of sustainable natural resources, economic development and job creation and human development to provide the **Spatial Development Vision**:

NORTHERN CAPE SPATIAL VISION (towards 2040)

"Sustainable urban and rural spatial development based on a modern space economy supported by an integrated national and provincial infrastructure network and the responsible use of natural resources providing sustainable livelihoods for all "

The PSDF 2012 referred to a converted cryptic statement of

"***Enhancing our Future***"

It is believed the future spatial perspective would comprise a Spatial Development Framework of **managed human settlements** clustered in settlement nodes and corridors alongside productive areas, **managed ecological natural resource areas** and connected to a network of strategic transportation routes, open to the global, national and provincial economy.

In the context of a future development framework which underpins the Spatial Development Framework vision for the Northern Cape Province, there are several strategic requirements which need to be addressed. These include the following:

- Harnessing the opportunities provided by urbanisation forces to achieve effective rural development;
- Adopting a flexible approach which suits the province and enables sustainable development rather than inhibiting growth and development;
- Creating world class infrastructure, services and amenities to attract investment;
- Integrated infrastructure development planning responding to long term forecasted requirements;
- Pro-active planning which integrates aspiring economic activities into the mainstream economies and urban fabric;
- Safeguarding existing resources and creating opportunities for renewable energy development;
- Prioritise areas in the province to develop;
- Connecting the spatial frameworks to catalytic programmes in an implementation framework and plan;
- Creating opportunities for increased international, national, provincial and municipal connectivity, linked by strategic transportation routes in the province;
- Achieving improved quality of life in our settlements through formalisation, provision of planned amenities and consolidation of land uses; and
- Gearing up of spatial planning capacity, skills, systems and procedures to achieve the vision.

The figure below attempts to provide a vision directive per Spatial Planning Category.

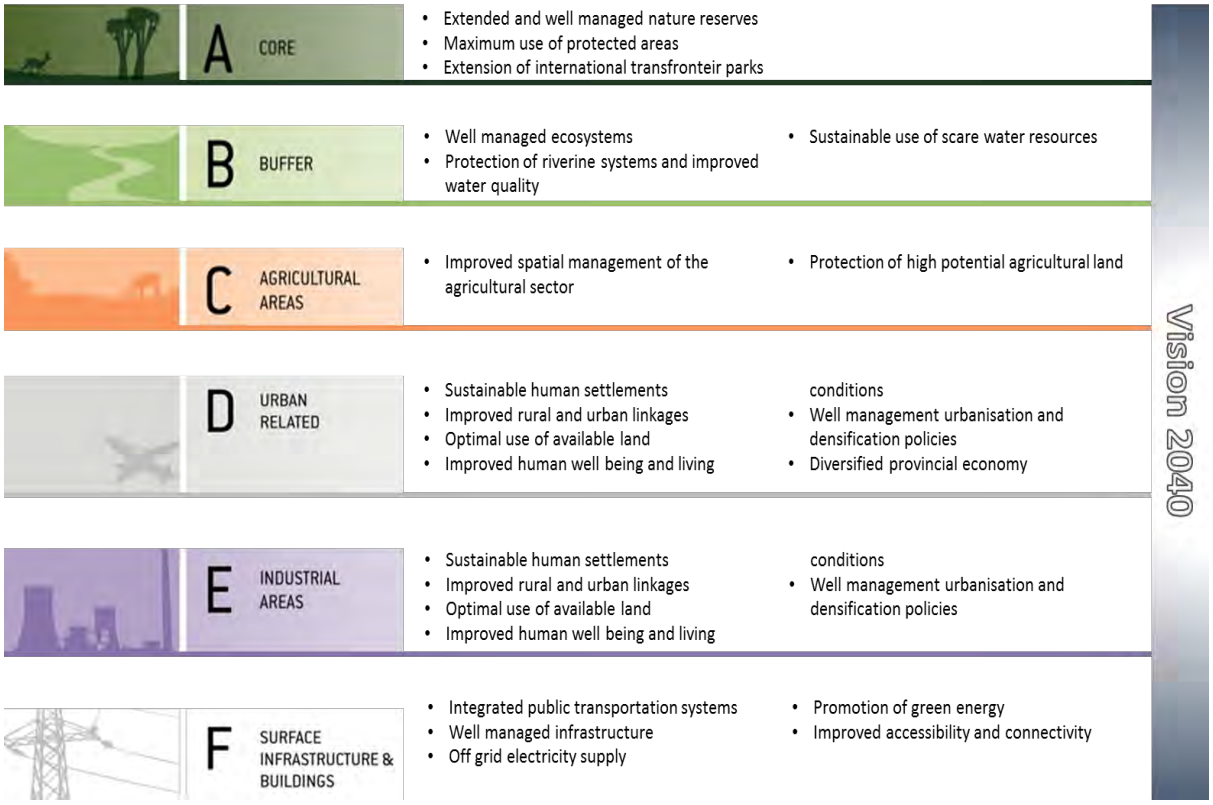


Figure 17: Vision statement presented through the Northern Cape Spatial Planning Categories (NC PSDF, 2012)

Moving forward, the development philosophy for the province needs to ensure that the PSDF is an enabling management tool which supports the strategic "developmental state" approach in those identified areas where development should be actively promoted in accordance with the policies and strategic objectives of the communities, municipalities and the departments in the province. In addition, there is a need to adapt the spatial planning, land use management systems and policy frameworks to meet the unique needs of developmental governance within Northern Cape Province. Fulfilment of the abovementioned strategic requirements is of paramount importance in order to achieve consensus on the future spatial vision of the province.

4.1 SPATIAL VISION

The vision is conceptually illustrated in **Figure 20**. The vision emphasises the strategic location of the Northern Cape Province in terms of its logistical connections, renewable energy potential, mining opportunities, agricultural potential, ecological landscape and tourism. The spatial vision further looks at the role that the Northern Cape plays in protecting and capitalising on these opportunities. A holistic approach is required to adres the challenges of the province holistically and work towards achieving balance and completeness so that:

- legacies are redressed in the manner in which growth is managed,
- current challenges are confronted and dealt with in a just and sustainable manner
- future risks are mitigated to improve the prospects of a socially, economically and environmentally sustainable future

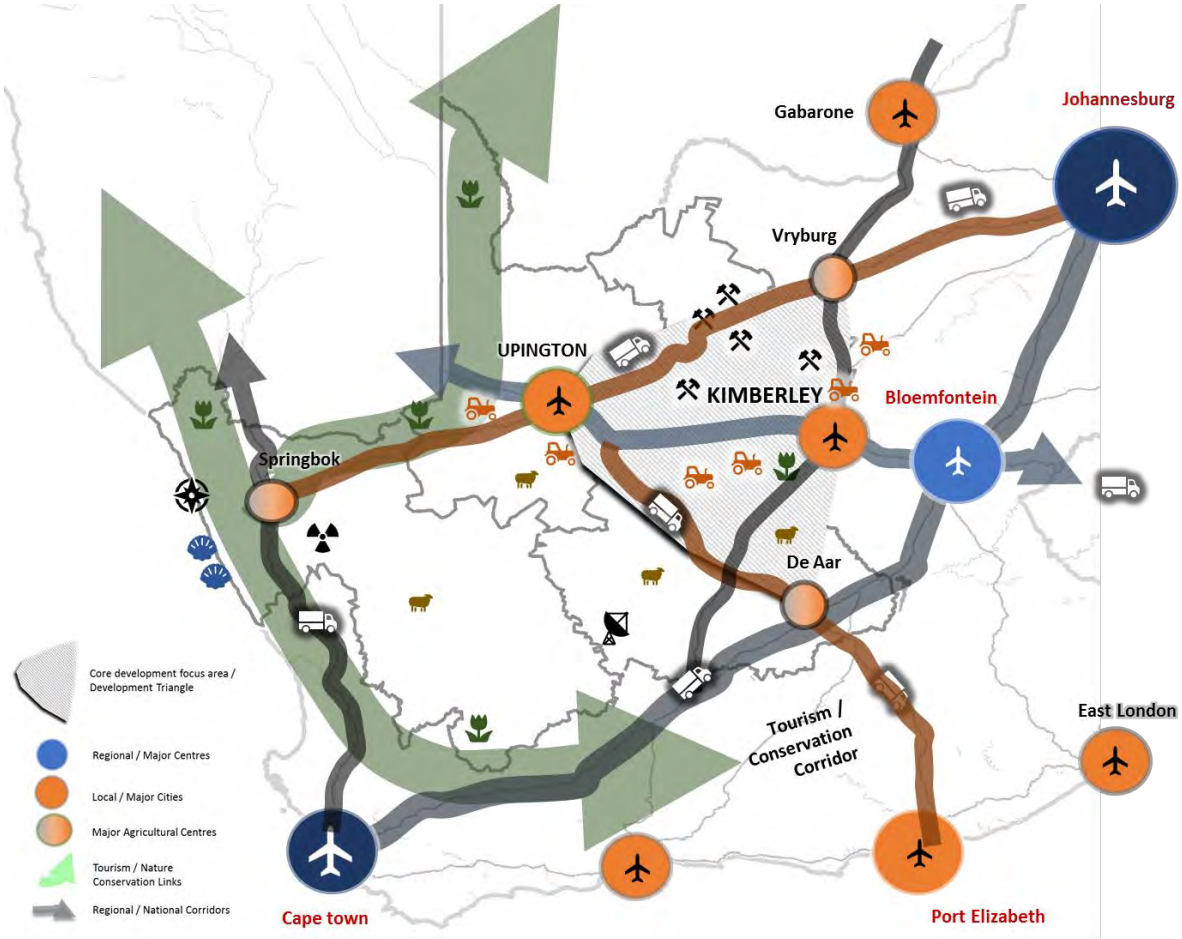


Figure 18: Northern Cape Spatial Vision

KEY OPPORTUNITIES INCLUDE:

- Strengthening the core development focus area / development triangle that is formed by linking Kimberley, Vryburg, Upington and De Aar. The highest population and economic concentration are reflected in this region. The region has good accessibility with major transport linkages towards Namibia, Gauteng, Lesotho (via Bloemfontein), Port Elizabeth (Coega) and the city of Cape Town. The development triangle sustains a diverse economy with strong mining, agricultural and renewable energy sectors. A sustainable and viable economic network must be driven within the development triangle to improve the return of public investment in the Province;
- Improved public transportation modes are required within the development triangle to improve access to economic development opportunities; and
- Environmental corridors could expand by linking the major nature reserves via wildlife or conservation corridors towards the west and north of the Province. Upington is well positioned to serve as a tourism gateway into Africa (especially looking at overlanding opportunities)

The vision intends is to build a province that is abundant, unbiased and inclusive of protecting the environment, reconciling society and promoting economic development where all can participate without undermining the resources needed to sustain future generations.

4.2 SPATIAL DEVELOPMENT VALUES

In order to plan and manage the spatial implementation of development in the province it is crucial that all stakeholders agree on the core values which will help shape the spatial framework of the province. The core values are intended to achieve integration between stakeholders through better linkages that connects sector programmes, aligns infrastructure, social services, government spending, private sector investment and economic development.

The core values towards addressing spatial justice for the Northern Cape Province are recommended to be the following:

- Environmental integrity and sustainability through achieving a balance between safeguarding natural resources, optimising the livelihoods of communities and developing a flourishing economy;
- Optimum use of existing resources including water resources, agriculture, renewable energy potential, already impacted land (brown field areas) minerals, bulk infrastructure, roads, transportation and social facilities;
- Reduced settlement sprawl and more compact formalized settlement through densification and diverse, mixed land uses;
- Rapid economic growth that is sustained and inclusive;
- Government spending on fixed investment focused on localities of economic growth and / or economic potential (*refer to the NC Socio-Economic Potential of Towns study*) in order to gear up private sector investment stimulates sustainable activities and create long-term employment opportunities;
- Development of productive land uses (creating economic opportunity) could stimulate needed economic growth, job creation and tax base expansion. This will increase municipal income enabling increased public-sector investment to be focused towards social upliftment.
- Where low economic potential exists, investments should be directed at projects and programmes to address poverty and the provision of basic services in order to address past and current social inequalities;
- The economic development of rural areas (CRDP);
- Strategic capital investment in future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent or link to the main growth centres in order for them to become regional gateways;
- Integration, synergy and linkages between urban and rural areas (*reference is specifically made to the NC District Rural Development Plans)* supported by appropriate infrastructure;
- Community based spatial planning and enforceable land use management based on agreed sustainable community development codes with unified provincial legislation;
- Correction of the historically distorted spatial patterns of settlement with optimum use of existing infrastructure, integration of residential and employment opportunities in close proximity to each other;
- Maintaining existing infrastructure and developing new infrastructure to unclock regional economic opportunities (such as the road linkage from Pofadder to Namibia, Williston to Sutherland);
- Achieving integrated development at community level; and
- Monitoring and evaluation of achievement in service delivery.

CHAPTER 5 : SPATIAL DEVELOPMENT FRAMEWORK

1 INTRODUCTION

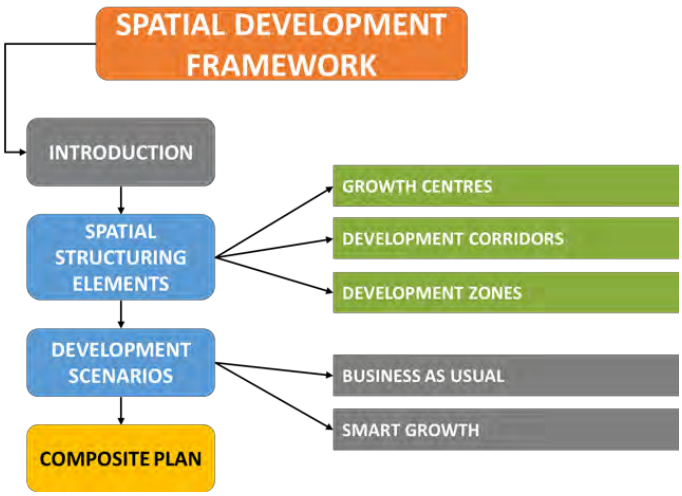


Figure 19: Spatial Development Framework report structure

The Spatial Challenges and Opportunities provided as part of CHAPTER 3 provide the crucial components that underlines 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. CHAPTER 5 provides a Spatial Framework and Development Strategies that will manage future growth and associated change in a way that protects and enhance the use of natural resources, biodiversity and lifestyle values. This requires a highly sustainable pattern of development based on the efficient utilisation of land and infrastructure, supported by management decisions over ad-hoc and dispersed forms of development.

The Development Strategies provides for four (4) Strategic Objectives, each providing for a set of Spatial Development Strategies, Strategic Focus Areas and Strategic Projects.

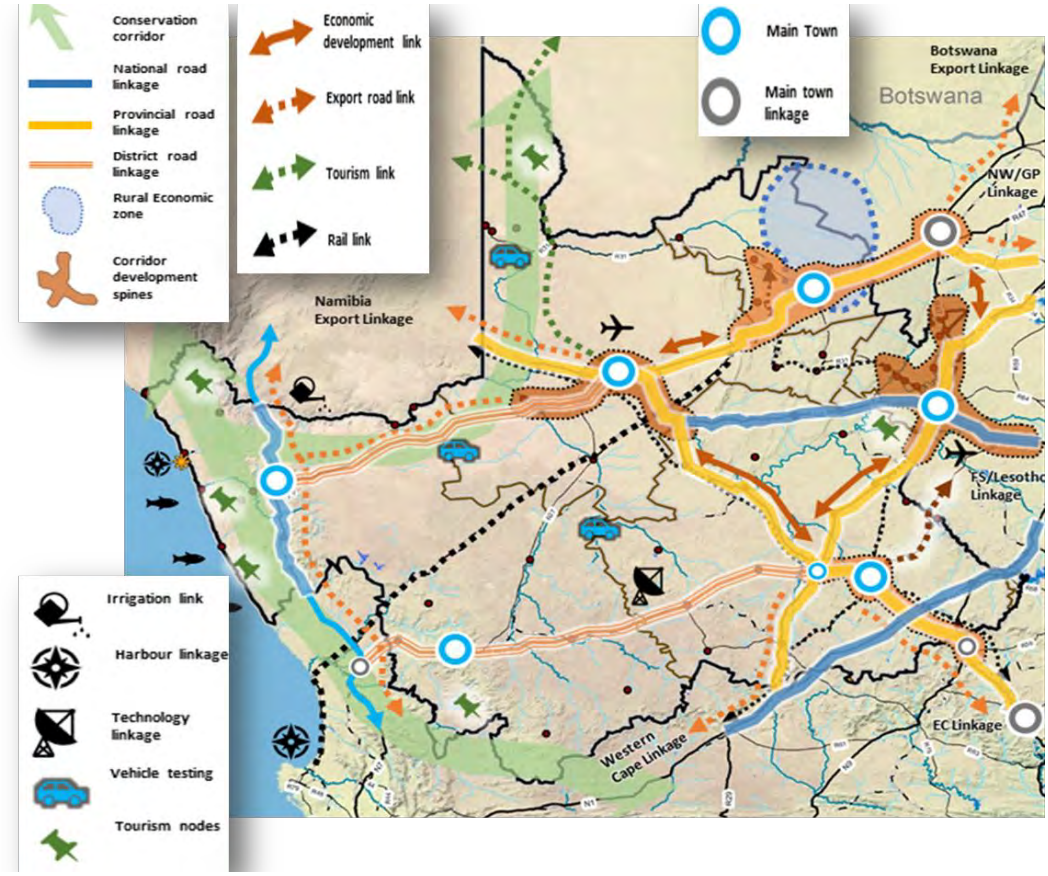
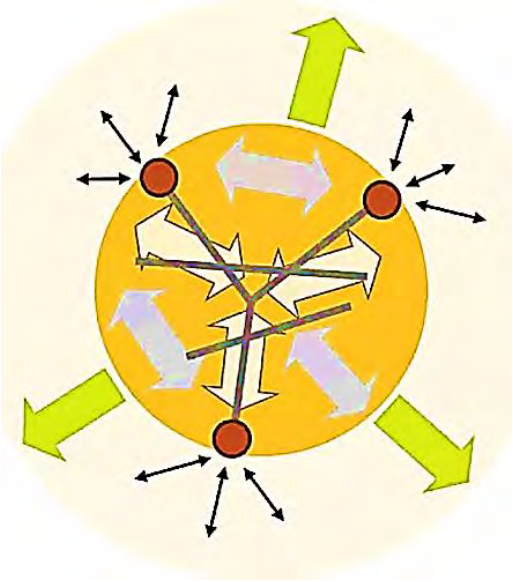


Figure 20: Overview of key spatial structuring elements

2 SPATIAL STRUCTURING ELEMENTS WITHIN THE NORTHERN CAPE PROVINCE

2.1 INTRODUCTION



The Northern Cape Provincial Spatial Development Framework is developed though an interrelated set of **growth centres, nodes, corridors and zones**. The essence of development in this system is the movement of people, goods and services that produces the basic impetus for developing functional relationships between otherwise independent and unrelated elements. The movement of people, goods, and services are channelled along specific routes that describe a network of interaction. Where networks intersect the opportunity for people, goods and services develop to interact and this gives rise to growth centres. The intensity of interaction gives rise to the development of a hierarchy of centres of different sizes depending on the level of interaction taking place in a node. This one-dimensional system of corridors and centres are tied together through surfaces that fill the areas between the centres and corridors.

The first structuring element is the development and reinforcement of a system of varied growth centres. This will enable greater access to development opportunities, as well as equitable access to a system of local opportunities. The idea is to ensure that all people within the province live within equal and easy access to public transport, economic opportunities and social amenities. These centres, depending on their position in the hierarchy, will form points of access to a range of local and in some cases regional opportunities. Through the focus of development at these points the following key objectives could be realised:

- Higher density settlements should be located along the main transportation routes and held together by a web of local access roads and public facilities;
- At a regional level, they should be knit together by a system of regional access routes;
- Towns should not be creations and remnants of the apartheid regime by converting into sustainable human settlements;
- Effective and sustainable urbanisation;
- Urban coastal areas promote integrated mixed-use residential development; they should earmark all the strategically mark land parcels that can be used as opportunity;
- Mitigating climate change through the promotion of densification;
- Improved access to basic social and services needs;
- Improved infrastructure investment by focusing development within confined areas, improve the return on investment within the public sector;
- Centrally located settlement should provide improved access to higher order public facilities, intensive agriculture and other urban services;
- They should generate a wide range of opportunities;
- Rural sparsely populated settlements should be considered as opportunity areas for agricultural development such as crop production and livestock farming; and
- Centrally located settlement should provide improved access to higher order public facilities, intensive agriculture and other urban services.

2.2 A SYSTEM OF INTERACTIVE GROWTH CENTRES

The assembling and location of services and facilities, in a manner that promotes accessibility and efficiency in service delivery, is required. This is critical for the sustainability for urban and rural development as well as economic performance of the Northern Cape Province. As such, the clustering of various activities at appropriate and accessible growth locations provides the Province with a network/system of opportunity centres. Some of these centres have benefited from significant public and private sector investment in services and infrastructure, which needs to be managed and maintained. Although the growth centres have contrasting characters, profiles and management issues, they accumulatively accommodate the majority of economic activities, employment prospects, an existing/growing residential stock, and access to community facilities. As such, the strength and feasibility of the growth centres is directly linked to the functioning and health of their catchment areas. The concentration of activities in and around these areas will stimulate further development of higher order activities.

2.2.1 GROWTH CENTRE DELINEATION

The bioregional planning approach requires that development planning be undertaken in the context of five distinct spheres, namely the international level, national level, provincial level, district municipal level and local municipal level. This implies that the inter-relationship of settlements or growth centres should be recognised and understood. As stated throughout the document, the Northern Cape is an immensely important hub in the international, national, regional and local context.

The various spheres of growth centres (as defined in the National Spatial Development Framework) applicable to the Northern Cape are as follows:

- **Urban Regions**: These include areas where consolidated urban growth in a network of more compact densified and diverse urban development is required. This region needs to support the national network of urban core regions and provides a link to national and international competitive advantages, these include:
    a. **Kimberley** (and bigger growth development areas that includes, Barkly West, Delportshoop, Postmasburg, Warrenton and Ritchie)

- **Regional Growth Centres**: These are areas/towns of significance in terms of scale, location, impact, diversity and agglomeration of function (facilities, services and economic activities), which have a significant impact on the Northern Cape as a whole. These include:
    a. Upington (which includes the sub regions of Kakamas, Keimoes and Groblershoop).
    b. Springbok (which include sub regions of Steinkopf, Okiep and smaller settlements within close proximity).
    c. Kuruman (which includes the sub growth centres of Kathu and Olifantsfontein)
    d. Calvinia (as identified in the Draft NSDF, 2018:111) and
    e. De Aar.

The hierarchy of towns have been derived according to the Population Size, NSDF Settlement Infrastructure System (NSDF,2018:111) and PSDF (NC PSDF, 2012:129) function, SPC Categories and Economic Base.

Table 40: Northern Cape town hierarchy and provincial function

SETTLEMENT	POP.	NSDF/PSDF FUNCTION	SPC CATEGORY	ECONOMIC BASE	SECONDARY FUNCTION
Kimberley	225155	Urban Core Region	Main Towns	Regional Centre	Administrative Centre
Upington	67581	Regional Growth Centre	Main Towns	Regional Centre	Agri-hub
Postmasburg	30089	Rural service Centre	Local Towns	Mining	
De Aar	29989	Regional Growth Centre	Main Towns	Transportation	Logistics Hub
Jan Kempdorp	23003	Rural Service Centre	Local Towns	Agriculture	
Warrenton	22588	Rural Service Centre	Local Towns	Agriculture	Agri-hub
Barkly West	20105	Rural Service Centre	Local Towns	Mining	
Douglas	20082	Rural service Centre	Local Towns	Agriculture	Agro-processing
Colesberg	16870	Rural service Centre	Local Towns	Service Centre	Tourism Node
Ritchie	14850	Rural service Centre	Local Towns	Agriculture	Agro-processing
Prieska	14246	Rural service Centre	Local Towns	Service Centre	
Danielskuil	13598	Rural service Centre	Local Towns	Mining	
Kuruman	13057	Regional Growth Centre	Main Towns	Regional Centre	Agri-hub
Springbok	12789	Regional Growth Centre	Main Towns	Regional Centre	Tourism Node / Agri-hub
Kathu	11510	Rural service Centre	Local Towns	Mining	
Hartswater	10465	Rural service Centre	Local Towns	Agriculture	
Delpoortshoop	10346	Rural service Centre	Local Towns	Mining	
Hopetown	10260	Rural service Centre	Local Towns	Service Centre	
Olifantshoek	10234	Rural service Centre	Local Towns	Mining	
Calvinia	9680	Regional Growth Centre	Local Towns	Service Centre	Karoo lamb hub
Kakamas	9539	Small Rural Service Centre	Local Towns	Service Centre	Agricultural Hub
Keimoes	9501	Small Rural Service Centre	Local Towns	Service Centre	
Victoria West	8254	Small Rural Service Centre	Local Towns	Service Centre	Tourism Node
Dibeng	7848	Small Rural Service Centre	Rural settlements	Residential	
Noupoort	7848	Small Rural Service Centre	Local Towns	Service Centre	
Steinkopf	7842	Small Rural Service Centre	Rural settlements	Residential	
Carnarvon	6613	Small Rural Service Centre	Local Towns	Service Centre	Astronomy Node
Griekwastad	6428	Small Rural Service Centre	Local Towns	Service Centre	
Windsorton	6250	Small Rural Service Centre	Rural settlements	Agriculture	
Port Nolloth	6092	Small Rural Service Centre	Local Towns	Transportation	Tourism Node / Logistics node
Nababeep	5374	Small Rural Service Centre	Rural settlements	Mining	

SETTLEMENT	POP.	NSDF/PSDF FUNCTION	SPC CATEGORY	ECONOMIC BASE	SECONDARY FUNCTION
Petrusville	5211	Small Rural Service Centre	Rural settlements	Service Centre	
Britstown	5145	Small Rural Service Centre	Local Towns	Service Centre	Tourism Node
Concordia	4988	Rural settlement	Rural settlements	Mining	
Groblershoop	4938	Rural settlement	Rural settlements	Service Centre	
Kenhardt	4842	Rural settlement	Rural settlements	Service Centre	
Lime Acres	4408	Rural settlement	Rural settlements	Mining	
Augrabies	3627	Rural settlement	Rural settlements	Agriculture	Tourism Node
Ganspan	3518	Rural settlement	Rural settlements	Agriculture	
Williston	3368	Rural settlement	Rural settlements	Service Centre	
Phillipstown	3365	Rural settlement	Rural settlements	Service Centre	
Pofadder	3287	Rural settlement	Rural settlements	Service Centre	
Marchand	3223	Rural settlement	Rural settlements	Agriculture	
Komaggas	3116	Rural settlement	Rural settlements	Mining	
Fraserburg	3029	Rural settlement	Local Towns	Service Centre	
Strydenburg	2987	Rural settlement	Rural settlements	Service Centre	
Brandvlei	2859	Rural settlement	Rural settlements	Service Centre	
Sutherland	2836	Rural settlement	Rural settlements	Recreation	Astronomy Node
Kalksloot	2752	Rural settlement	Rural settlements	Agriculture	
Loeriesfontein	2744	Rural settlement	Rural settlements	Service Centre	Renewable Energy Node
Grootdrink	2645	Rural settlement	Rural settlements	Agriculture	
Marydale	2624	Rural settlement	Rural settlements	Service Centre	
Pella	2470	Rural settlement	Rural settlements	Residential	
Rietfontein	2293	Rural settlement	Rural settlements	Residential	
Pampierstad	2272	Rural settlement	Local Towns	Residential	
Aggeneys	2262	Rural settlement	Rural settlements	Mining	
Kanoneiland	2251	Rural settlement	Rural settlements	Agriculture	
Wegdraai	2189	Rural settlement	Rural settlements	Agriculture	

SETTLEMENT	POP.	NSDF/PSDF FUNCTION	SPC CATEGORY	ECONOMIC BASE	SECONDARY FUNCTION
Campbell	2179	Rural settlement	Rural settlements	Service Centre	
Garies	2105	Rural settlement	Rural settlements	Service Centre	
Nieuwoudtville	2093	Rural settlement	Rural settlements	Recreation	Tourism Node
Onseepkans	2090	Rural settlement	Rural settlements	Agriculture	
Cillie	1969	Rural settlement	Rural settlements	Agriculture	
Kleinzee	1946	Rural settlement	Rural settlements	Mining	Tourism Node
Hotazel	1756	Rural settlement	Rural settlements	Mining	
Ulco	1754	Rural settlement	Rural settlements	Mining	
Alexander Bay	1736	Rural settlement	Rural settlements	Mining	Tourism Node
Niekerkshoop	1729	Rural settlement	Rural settlements	Agriculture	
Van Wyksvlei	1721	Rural settlement	Rural settlements	Service Centre	
Louisvale	1637	Rural settlement	Rural settlements	Agriculture	
Orania	1400	Rural settlement	Rural settlements	Residential	Tourism Node
Leerkrans	1383	Rural settlement	Rural settlements	Agriculture	
Carolusberg	1335	Rural settlement	Rural settlements	Mining	
Soverby	1292	Rural settlement	Rural settlements	Agriculture	
Vosburg	1259	Rural settlement	Rural settlements	Service Centre	
Vanderkloof	1228	Rural settlement	Rural settlements	Recreation	Tourism Node
Hanover	1200	Rural settlement	Local Towns	Service Centre	
Norvalspont	1198	Rural settlement	Rural settlements	Recreation	
Philandersbron	1081	Rural settlement	Rural settlements	Residential	
Buffelsrivier	1065	Rural settlement	Rural settlements	Residential	
Loxton	1063	Rural settlement	Rural settlements	Service Centre	
Kamieskroon	893	Rural settlement	Rural settlements	Residential	
Riemvasmaak	694	Rural settlement	Rural settlements	Agriculture	Rural Node
Askham	607	Rural settlement	Rural settlements	Agriculture	
Vioolsdrif	600	Rural settlement	Rural settlements	Transportation	

SETTLEMENT	POP.	NSDF/PSDF FUNCTION	SPC CATEGORY	ECONOMIC BASE	SECONDARY FUNCTION
Plooysburg	594	Rural settlement	Rural settlements	Agriculture	
Dyasonsklip	580	Rural settlement	Rural settlements	Residential	
Hondeklip Bay	540	Rural settlement	Rural settlements	Fishing	Tourism Node
Eksteenfontein	520	Rural settlement	Rural settlements	Residential	
Longlands	507	Rural settlement	Rural settlements	Agriculture	
Groot Mier	500	Rural settlement	Rural settlements	Residential	
Straussburg	450	Rural settlement	Rural settlements	Residential	
Klein Mier	449	Rural settlement	Rural settlements	Residential	
Van Zylsrus	438	Rural settlement	Rural settlements	Service Centre/Tourism	Tourism Node
Olynvenhoutsdrif	389	Rural settlement	Rural settlements	Agriculture	
Santoy	346	Rural settlement	Rural settlements	Mining	

2.2.2 SECONDARY NODAL FUNCTIONS

2.2.2.1 TOURISM NODES

Tourism nodes represents growth centres with potential for agri-tourism, eco-tourism, botanical tourism, marine and coastal tourism, heritage tourism and adventure areas. Any development within the areas proposed in the table above (see secondary nodal functions) that may have adverse effects on the tourism industry needs to be discouraged. These areas are strategically situated in the province and represents the access points towards tourism areas. **Key objectives of tourism nodes include:**

- To improve and optimise provincial tourism opportunities, through directing tourism-related activities to identified tourism areas and creating strong links between tourism towns and surrounding eco-tourism opportunities.
- To protect tourism assets, especially natural and agricultural resources and to ensure a sustainable coexistence between urban, mining, agricultural and ecological land uses in areas where the different competing land use do coexist.
- Protect the character and attractiveness of agriculture and tourism areas from development that may subtract from their functional value or compromise their unique irreplaceable qualities.
- By preserving and promoting eco-tourism, especially the ecologically sensitive areas of the province.
- Promoting and extending unique branding of tourism areas and routes in the Province
- The character of the province's rural areas should be protected from harmful developments that might detract from their functional value or visual quality. Strong, functional movement and economic linkages and synergies must also be created between rural nodes and surrounding eco-tourism opportunities.

- To improve broadband connectivity and cell phone access on routes proposed as tourism destinations. ICT infrastructure development can lead to real job creation in both the knowledge economy and tourism industry.
- The development tourism sector based SMME's.
- To maintain and and/or upgrade roads proposed as tourism routes.
- Promote and direct tourism-related activities into identified tourism areas, so as to strengthen their pull factor, promote essential cultural services and take advantage of the inherent value of such areas.
- Create strong, functional movement and economic linkages and synergies between tourism towns and surrounding eco-tourism opportunities.

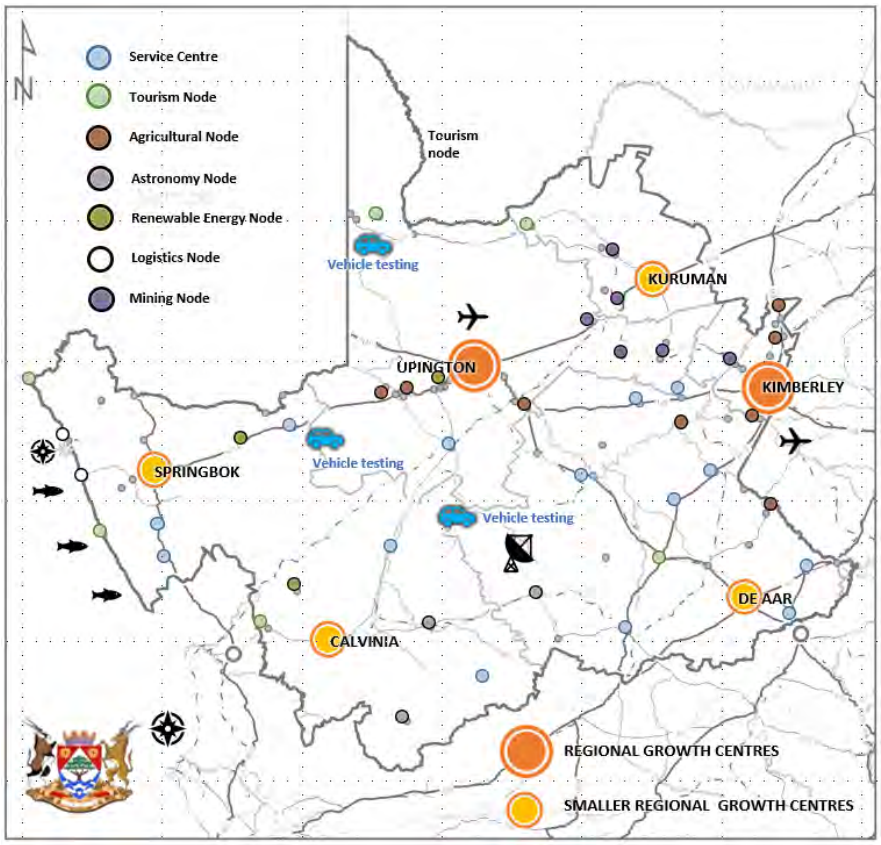


Figure 21: Northern Cape regional growth centres and development nodes

2.3 DEVELOPMENT CORRIDORS

2.3.1 CORRIDOR FUNDAMENTALS

Corridor development as a spatial structuring element, and a tool for economic growth, seeks to create functional linkages between areas of higher thresholds (levels of support) and economic potential, with those that have insufficient thresholds. This will enable areas that are poorly serviced to be linked to areas of opportunity and benefit with higher thresholds. As a result, the system of development corridors in the province are developed on the following fundamental aspects:

- Levels of Mobility;
- Levels of Access;
- Land use intensity and role in the spatial economy; and
- Functionality of the corridor.

Upgrade and road maintenance projects on corridors that leads to development opportunity areas such as rural service centres, high potential agricultural land and tourism nodes should be prioritized as this will encourage investment, improve accessibility and enhance mobility. This principle supports the phased approach to development, targeting areas of greatest potential first. Development corridors are effective in linking infrastructure and economic development as towns and structures connect to each other in a functionally effective manner.

The spatial development concept starts by understanding the mobility networks of people, goods, and services which are channelled along specific routes that describes a network of interaction. The level of activity that these networks provides results in "Development Corridors" which are broad areas of high-intensity urban development centred along activity and development routes. They are characterised by a dynamic, mutually supporting relationship between land use and the supporting movement system.

Development corridors are generally supported by a hierarchy of transport services that function as an integrated system to facilitate ease of movement for private and public transport users. Corridor development is focused predominantly on activity/ development routes serviced by mass rapid public transport services (i.e. rail or bus); however, the system of routes may serve distinct functions, with some routes combining route functionality in terms of accessibility and mobility.

The draft National Spatial Development Framework further presents priority inter-regional development corridors of national importance. The national corridors strive towards consolidating growth and to prioritise economic development through trade infrastructure and activities within a well-connected inter-regional corridor network. Based on the above, the Northern Cape conceptual spatial framework reflects:

- Inter-Regional and National Development Corridors; and
- Provincial Development Corridors to strengthen inter-regional development within the Province.

Other provincial development Corridors proposed include:

Table 41: Northern Cape development corridors

REGION AND CORRIDOR	DESCRIPTION	FUCTION
Namaqua Ocean Corridor	The Namaqualand coast is the centre of the fishing and Mariculture sector. This corridor has its primary node at Port Nolloth and secondary nodes at Hondeklip Bay and Alexander Bay. The Oceans Economy concept is driven by the Operation Phakisa initiative of the South African government which aims to implement priority economic and social programmes better, faster and more effectively. The Operation Phakisa: Oceans Economy was launched by President J.G. Zuma, in October 2014. Initially four growth areas were prioritised to contribute to unlocking the economic potential of South Africa's oceans. This was based on their potential contribution to economic growth and job-creation. The following growth areas and corresponding departments were prioritised: • Marine Transport and Manufacturing led by the Department of Transport; • Offshore Oil and Gas Exploration led by the Department of Mineral Resources; • Aquaculture led by the Department of Agriculture, Forestry and Fisheries; and	• Mariculture • Coastal Tourism • Marine Biodiversity protection • Nature Conservation • Fishing Value Chain development

REGION AND CORRIDOR	DESCRIPTION	FUCTION
	• Marine Protection Services and Ocean Governance led by the Department of Environmental Affairs.	
Gamagara corridor	This corridor comprises the mining belt of the John Taolo Gaetsewe and Siyanda districts and runs from Lime Acres and Danielskuil to Hotazel in the north. The corridor focuses on the mining of iron and manganese.	• Mining • Manufacturing • Industrialisation • Mining Value Chains • Terminal development • Heavy Industries
De Aar Technology Corridor	This corridor centres around Carnarvon and extends to the proximity of De Aar and Calvinia. The corridor presents access towards the SARAO astronomy zone and seeks to develop the following key initiatives: • Broadband access • Science and Technology • Astronomy tourism development • Logistics Hub • Electronics development hub	• Electronics development • Broadband Development • Science and Technology research • Astronomy Tourism • Logistics Hub (Rail and Heavy Vehicle)
Tourism corridors	This corridor centres around Lake Gariep has significant tourism potential. It is a potential interprovincial hub for tourism which affects the Northern Cape, the Free State and the Eastern Cape. Since the Province is known for its mining assets and not really for its tourism potential, there is scope for better utilisation of opportunities. This will have to take place bearing in mind that such development is not detrimental to the natural environment. Tourism activities should be in accordance with the image of the tourism features of the Province, and various initiatives are to be coordinated.	• Adventure Tourism • Eco Tourism • Botanical tourism • Avi-tourism • Tourism nodes • Nature Conservation
N1	This corridor connects Gauteng, Free State, Eastern Cape and Western Cape. Colesberg, Richmond and the other settlements along this route are the key beneficiaries and tourism hubs along this route.	• Transportation • Tourism development • Provincial gateway
Trans-orange development corridor (N7)	This corridor stretches from Cape Town through Namaqualand up to Namibia. It is renowned for its unique aesthetic appeal and seasonal flower displays.	• Export and Import gateway • Weigh Bridge • Tourism Development • Botanical Tourism • Tourism Node • Link towards Metropolitan areas

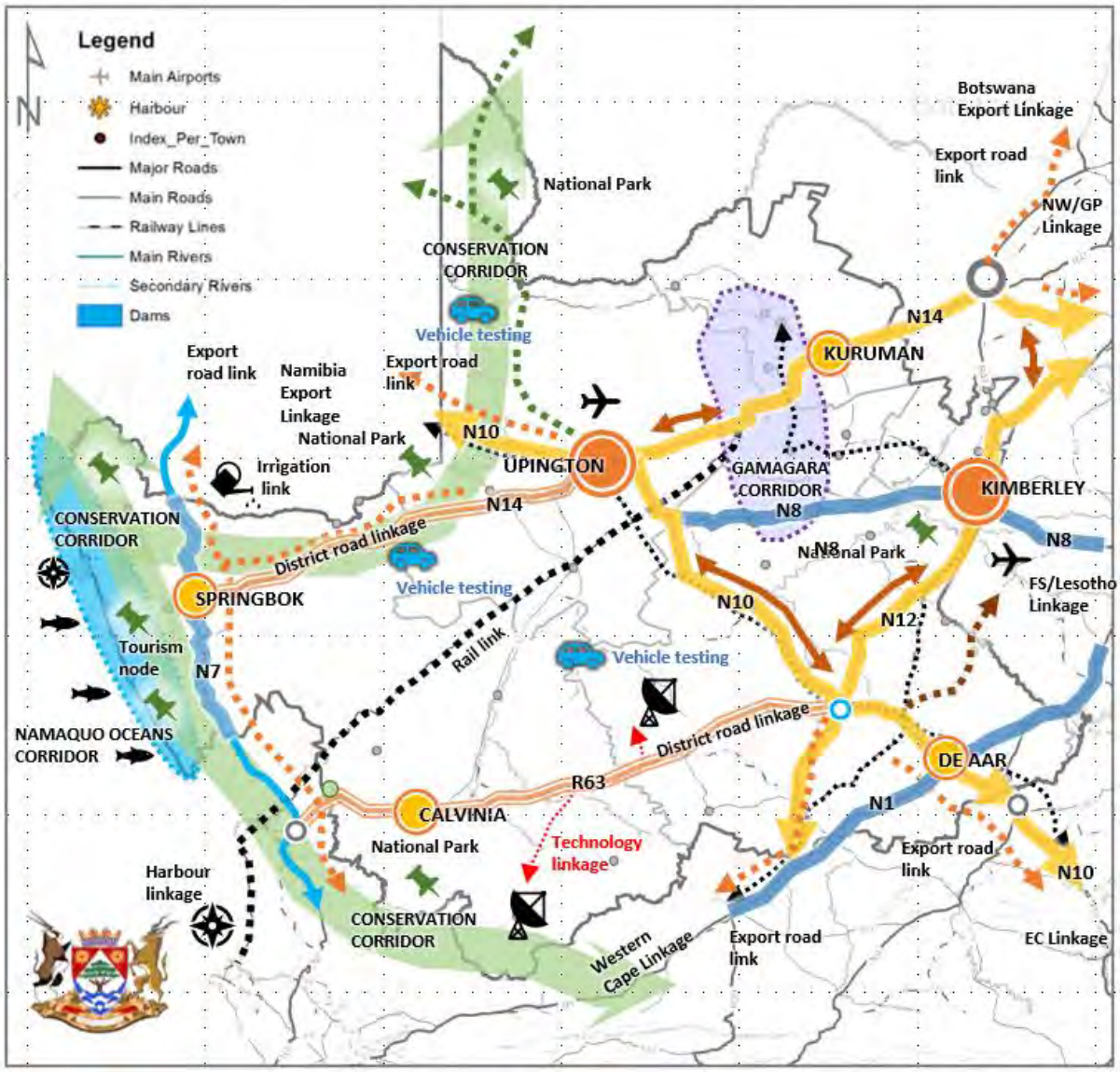


Figure 22: Northern Cape Corridors and Linkages

Corridor development is associated with a system of transport facilities on key routes that work together as an integrated system to facilitate ease of movement. A system of regional and local transport routes, which link a number of areas, should be viewed as the logical focus areas of an ordered strategy for rural development. These routes should be seen as activity and investment lines.

The structure they give to the area is articulated in the form of movement patterns and systematic distribution of land uses in space. However, not all regional routes are the same in terms of the intensity of use and ability to attract investment, services, economic activities and settlement.

Generally, larger routes linking economic engines of movement and investment have a greater generative capacity than smaller routes. It thus follows that regional facilities and services should gravitate towards these areas. Smaller facilities with smaller thresholds should be located along smaller routes. Viewed in this way, the issue of regional and rural spatial organization becomes one of creating a systemic framework of interlocking activity routes over time. This has an impact of:

- increasing equitable access to all level of services;
- promoting investment;

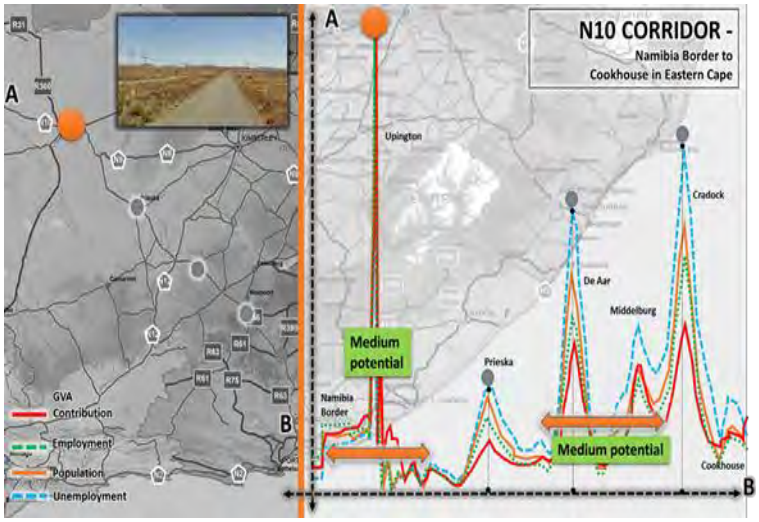
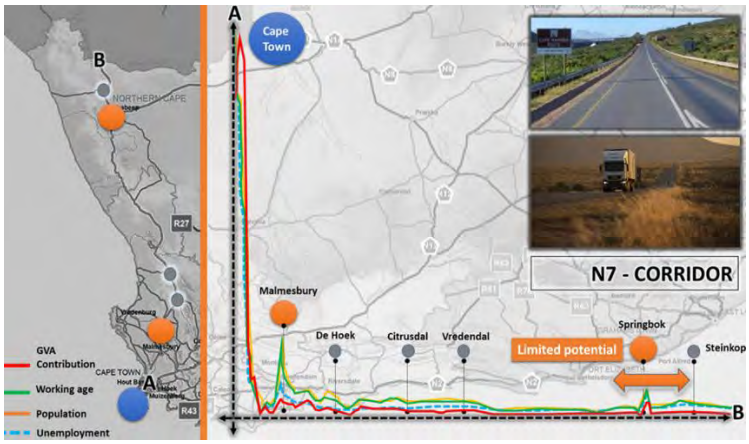
- reducing spatial marginalization;
- integrate communities with service provision; and
- fulfilling a range of economic and social needs.

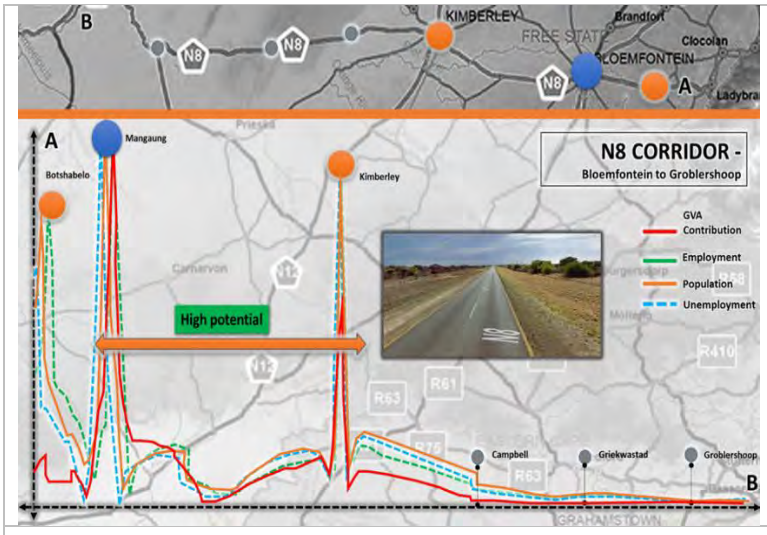
Location of facilities along major routes recognizes the importance of choice to the rural communities with respect to services such as education, health and welfare facilities. Upgrading road maintenance projects on corridors that leads to development opportunity areas such as rural service centres, high potential agricultural land and tourism nodes should be prioritized as this will encourage investment, improve accessibility and enhance mobility. This principle supports the phased approach to development, targeting areas of greatest potential first. Development corridors are effective in linking infrastructure and economic development as towns and structures connect to each other in a functionally effective manner.

2.3.2 KEY CORRIDOR DEVELOPMENT FOCUS AREAS:

The following table provides a detailed analysis of the current and future development potential of corridors within the Northern Cape.

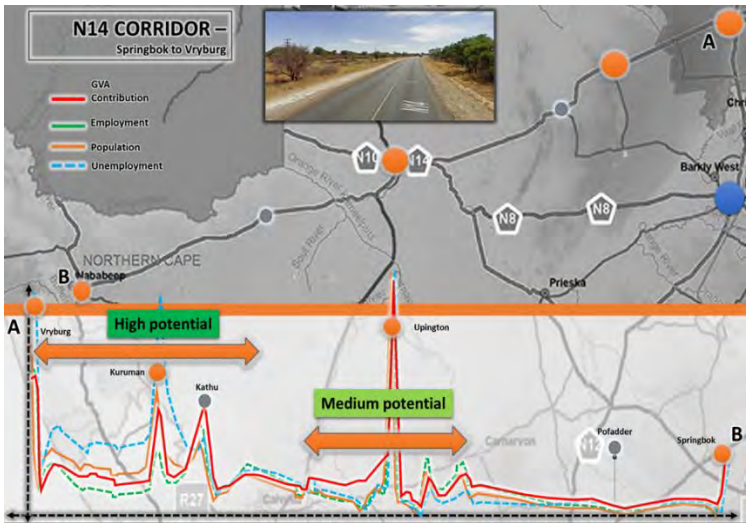
Table 42: Key corridor focus areas

	**N10 Focus area description:** • Medium corridor development potential is available between the Namibian border and Groblershoop, along the agricultural development zone. • Further potential lies between De Aar and Middelburg towards Cradock. The PrieSARAO section has limited potential for corridor development close to the town
	**N7 Focus area description:** • Limited to no potential for corridor development is evident as the Cape Town Metropolitan area is not within close proximity of the Springbok area. The corridor is to be used as Transportation corridor only



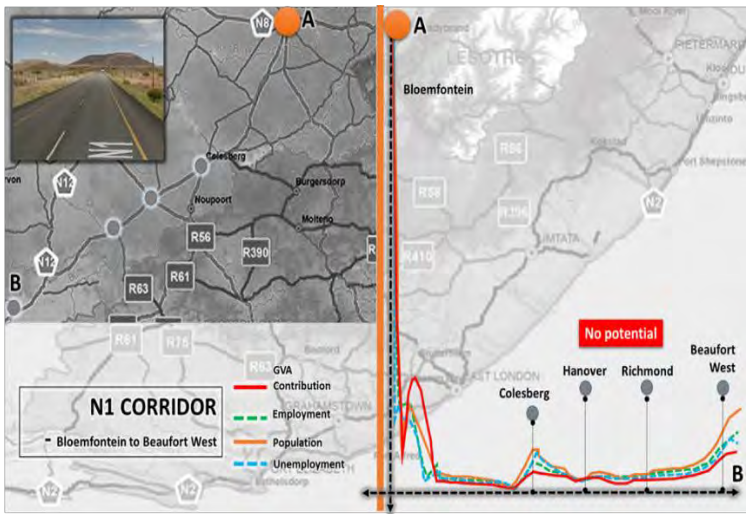
N8 Focus area description:

- A strong economic and administrative link existing between Kimberley and Bloemfontein. Further studies are required to investigate potential.
- Corridor development efforts are evident in Bloemfontein whereas Kimberley has still to improve and access future corridor development potential between the cities



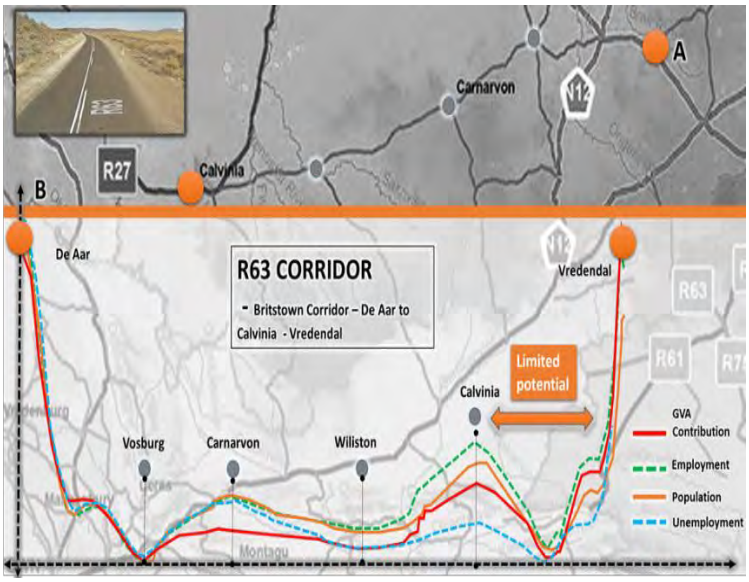
N14 Focus Area description:

- High corridor potential is evident between Vryburg, Kuruman and Kathu. Further studies are required to determine the economic potential
- Corridor development potential along the Upington, Kakamas area is also evident and needs to be consolidated through a corridor development strategy



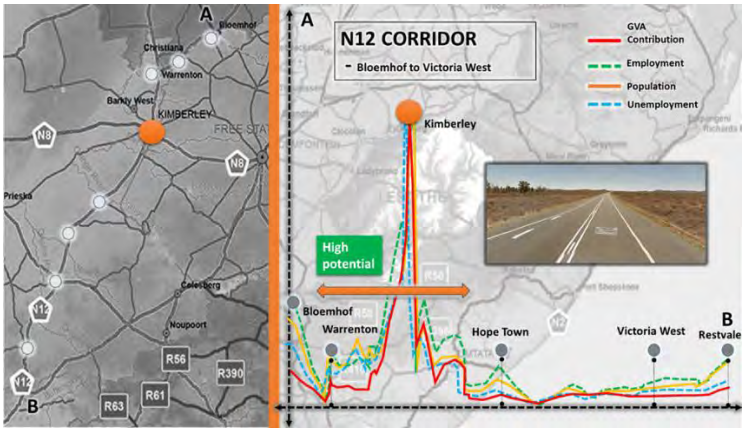
N1 Focus area description:

- The corridor presents very limited corridor development potential and needs to function as a transport corridor and gateway towards the Northern Cape province.
- Tourism development can be viable for overnight accommodation and related facilities, especially where the N1 and N6 intersects just south of Colesberg.



R63 focus area description:

- Corridor development potential exist between Calvinia and Vredendal/Clanwilliam area. Although only limited to medium potential is evident future development studies could give strategic direction to improve the viability of the development corridor.
- The corridor further provides access to the SARAO astronomy zone which opens tourism, research and technology potential.



N12 Focus area description:

- A medium to strong economic linkage coexist between Ritchie, Kimberley, Warrenton towards Christiana, and Bloemhof. Further studies are required to determine the corridor development potential.
- The route further links to Gauteng and is regarded as a Treasure route.

The table below reflects the distance between the proposed focus areas as described in **Table 42** above. The development sections present areas along the corridors that show potential for future corridor links. These sections show high economic growth, population size, and areas with high socio-economic needs. The distances between the target sections are reflected in **Table 43** below:

Table 43: Distance between towns and total distance along development corridors

CORRIDOR	LINKAGE	DISTANCE BETWEEN FOCUS AREAS (KM)	TOTAL DISTANCE OF SECTION (KM)
N14	Vryburg - Kuruman	141	426,6
	Kuruman - Kathu	58,6	
	Kathu - Upington	227	
N14	Upington to Keimoes	70,1	262
	Keimoes to Kakamas	59,9	
	Kakamas to Pofadder	132	
N7	Steinkopf to Springbok	50,2	173,3
	Springbok to Kamieskroon	70,4	
	Kamieskroon to Garies	52,7	
N10	Namibia Border to Upington	128	289
	Upington to Leerkrans	42,7	

	Britstown to De Aar	54,8	
	De Aar to Hanover	63,5	
N8	Kimberley to Bloemfontein	187	187
N12	Warrenton to Kimberley	76,4	212,2
	Kimberley to Richie	43,8	
	Richie to Hopetown	92	
R63	Calvinia to Nieuwoudtville	115	115

Table 44 provides an indication of the estimated economic size along the development corridors. The estimated total GVA contribution along the respective corridors are as follow (in order of highest potential):

- N12 corridor – GVA[8] value of 22000 as contributed by the economic potential of the towns along the N12 corridor section. The link between Kimberley and Bloemhof shows economic potential, especially through the diversification of the economic activities taking the agricultural, mining, transportation and administrative activities along the route into consideration.
- N8 corridor – GVA value of 21100 as contributed along the Kimberley section only, the GVA of Bloemfontein has not been included and is in the order of 40000. Compared to Bloemfontein, Kimberley shows poor economic performance taking the balance between GVA contribution, Employment and Population size into consideration. This shows than Kimberley is underperforming and requires catalytic projects to kick-start the local economy. The economic potential between Kimberley and Bloemfontein is not fully exploited and requires urgent development and strategic interventions.
- N14 Corridor – GVA value of 8500 as contributed by the Kuruman and Upington growth centres. This section provides economic diversity whereby the Upington region could improve agricultural linkages towards the Kuruman area to improve the rural food security challenge. A corridor development strategy is required to determine the potential towards future expansion of the economic opportunities that could improve the link between the two growth centres.
- N10 Corridor – GVA value of 5500 as contributed by Upington, Prieska, De Aar and smaller towns. The distance between these growth centres do limit the corridor potential. The N10 and N14 intersects in Upington and presents an improved GVA contribution for the Upington growth centre.
- Other corridors contribute little towards the GVA and show little potential for corridor development.

Table 44: Total GVA contribution along the proposed development corridors

CORRIDOR	TOWNS	GVA OF TOWN*	AVERAGE GVA
N14	Vryburg	1332	718
	Kuruman	1519	304
	Kathu	1252	626
	Upington	3541	885
	Keimoes	370	370
	Kakamas	509	255
N7	Springbok	785	393

[8] *The Economic Activity of the Corridor using the Total GVA xR1000*

	Steinkopf	122	122
	Kamieskroon	38	38
	Garies	39	39
N10	Upington	3541	885
	Straussburg	173	173
	Leerkrans	304	304
	Grobblershoop	156	156
	PrieSARAO	295	295
	De Aar	813	813
	Hanover	160	160
N8	Kimberley	21097	3516
N12	Warrenton	270	270
	Kimberley	21097	3516
	Ritchie	352	352
	Hopetown	192	192
R63	Calvinia	234	234
	Nieuwoudtville	56	56

** Units R'000,constant prices*

Table 45 reaffirms the development potential with more focus provided on the GVA contributions of the sections highlighted.

Table 45: Total GVA contribution as per priority development section

CORRIDOR	SECTIONS	GVA OF SECTION TOTAL	GVA OF SECTION AVERAGE
N14	Vryburg to Kuruman	4855	381
	Kuruman to Kathu	2980	271
	Kathu to Upington	5242	122
N14	Upington to Keimoes	3349	478
	Keimoes to Kakamas	991	165
	Kakamas to Pofadder	900	37
N7	Steinkopf to Springbok	966	81
	Springbok to Kamieskroon	825	63
	Kamieskroon to Garies	96	11
N10	Namibia Border to Upington	3416	142
	Upington to Leerkrans	3380	676
	Britstown to De Aar	1072	97
	De Aar to Hanover	1070	71
N8	Kimberley to Bloemfontein	36510	974
N12	Warrenton to Kimberley	10639	760
	Kimberley to Richie	9103	1517
	Richie to Hopetown	741	41
R63	Calvinia to Nieuwoudtville	315	21

2.3.3 FUTURE DEVELOPMENT CORRIDOR

A Future Development Corridor (R31) is proposed to facilitate the expansion of Kuruman, Hotazel and Kathu towards the Sol Plaatje Local Municipality. The Corridor is proposed to unlock the Rural Economic Development Zone, the corridor further links towards the Central Urban Cluster as proposed in the National Spatial Development Framework. The expansion would improve the economic diversity of the Central Urban Cluster as the Gamagara Corridor would be included in the last-mentioned cluster. The proposal would further encourage mixed land use activities, improved access and mobility, improve road safety and increased development potential in the central region of South Africa. Key to the success of the proposed development corridor is to promote freight to rail, thus releasing the preussre experienced on the existing road networks.

2.4 DEVELOPMENT ZONES

Development zones determines geographical areas where appropriate activities are allowed (environmental management zones) and is aimed at facilitating economic development in the province. The Development Zones were developed to address the challenges posed by urban and rural development:

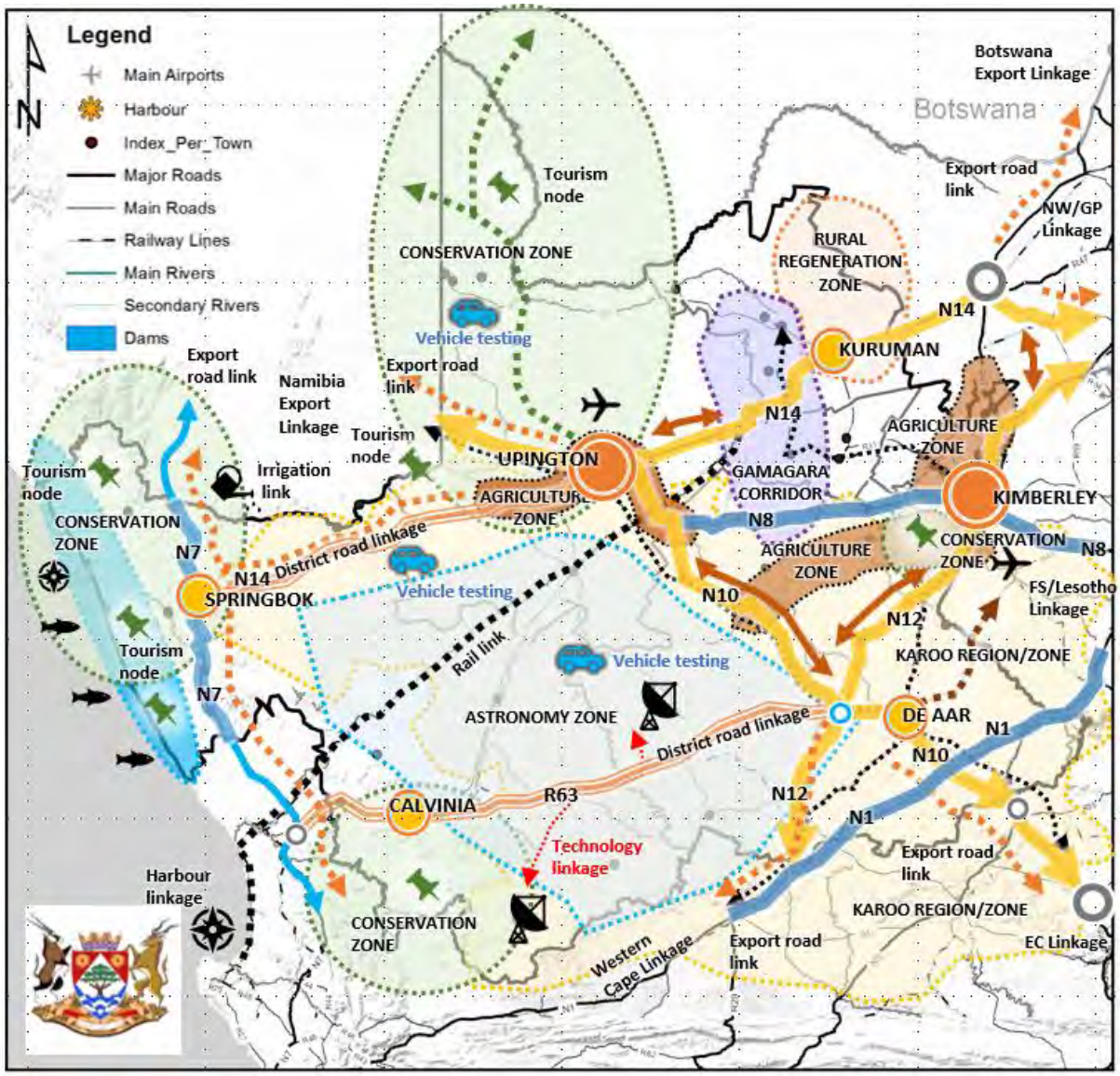


Figure 23: Northern Cape Development Zones

Table 46: Development Zones

DEVELOPMENT ZONE	DESCRIPTION AND OBJECTIVES	FUNCTION
Astronomy Zone	The following activities are declared as prohibited or restricted activities in core or central astronomy advantage area: • Prospecting or mining activities; • The construction, expansion or operation of any fixed radio frequency interference source; • Harmful industrial processes; • The construction and development of new business or residential areas or recreational facilities; • The construction or expansion of road or rail transport networks or parts thereof; • The construction or expansion of any airfield or airport; • The operation, construction or expansion of facilities for the generation, transmission or distribution of electricity; • Activities capable of causing light pollution, including the installation or operation of street lighting, outdoor security lights, laser promotional lights or self-lit billboards; • Activities capable of causing radio frequency interference, including bringing into the area or operating any interference source, mobile radio frequency interference source or short-range device; • Activities capable of causing air pollution; and • Any other activity which may detrimentally impact on astronomy and related scientific endeavours, or the astronomy advantage of any core or central astronomy advantage area.	• Science and technology development • Broadband development • Restricted development (frequencies) • Tourism development • Nature Conservation / declaration of a Biosphere Reserve • Research development • IT development industries
The Vaal-Orange Agricultural Zone and 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. Key objectives of this zone include: • To maintain the productive capacity of agricultural activities by frugally managing water resources, protected against contamination, and prevented from becoming conduits for pollution. • Sustainable water management strategies. • Sustainable and Environmental sound fertilisation strategy. • Integrated agricultural value chains • Integrated transport management system to commute workers, produce in and out of the Province. To development 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).	• Agro-processing • Agri-tourism • Agricultural value chains • Protection of Agricultural Land • Public Transportation network • Special Economic Development Zone • Cargo hub •
Rural Regeneration Zone	Development within the John Taolo Gaetsewe District raises an issue of the traditional dichotomy between urban and rural, town and countryside. The structure of the local economy shadows the discrepancy between urban and rural. These realities underscore the necessity of putting together a spatial strategy within the broader development context. It should thus focus on managing the form and texture of development, in a manner that contributes to the following performance criteria:	• Rural regeneration strategy • Rural intervention Area (RIA) • Improved housing delivery

DEVELOPMENT ZONE	DESCRIPTION AND OBJECTIVES	FUNCTION
	• Developing a comprehensive spatial system that promotes integration of the previously disparate areas and eliminates the gap between where people live and where they work. • Improving the overall quality of the urban environment by better integrating environmental concerns within development planning and urban management practices. • Creating the base for efficiency in the delivery of services (water, electricity, sanitation, etc.), movement, investment and decision-making. • Promoting integrated and coordinated development with all stakeholders working towards a common development vision and agenda. • Creating a more efficient and productive sub-region through the development adoption of policies that seeks to build of the competitive advantages while also unlocking new opportunities. **A Rural Economic Development Zone strategy** needs to be development to improve the living conditions and opportunities of the communities residing in traditional areas. The strategy needs to aim at the following objectives: • Upgrading informal settlements and transforming illegal structures into legal ones thus improving the provincial housing statistics. • The recognition of three fundamental conditions which include property rights, property values and physical attributes of the underlying assets and their impact on each other. • Beyond the legal dimensions of upgrading the informal settlements, the strategy also needs to aim at promoting improvement of services such as water, electricity, sanitation, road infrastructure, etc. • **Kuruman** has been identified as the Rural Investment Node. It is strategically located to serve rural settlements. • The Kuruman node would improve accessibility towards provincial and national development markets and opportunities by unlocking the **proposed national road (R31) upgrade between Kimberley and Kuruman.**	• Land Tenure upgrading • Traditional Leadership management strategy • Public Transportation strategy • Manufacturing • Skills development • Broadband access • SMME Development hub • Densification Strategy
Conservation Zones	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. Corridors acts as passages for fauba and flora to move from one region to the next. In light of climate change, they also play a vital role in allowing species to move from a warmer to a cooler region and vice versa. Conservation corridors assist land owners and land users to improve the way they manage the economic, social and ecological aspects of their environment while improving the well-being of local communities. Key conservation strategies to adopt and accommodate within the conservation corridors are: • Promoting the conservation linkages between existing natural protected areas, thereby reinforcing the natural resource foundation towards mitigating climate change. The linkages	• Expansion of Nature Conservation areas • Improved ecological corridor development • Improved protection of sensitive natural areas (SKEP etc.) • Mitigation of climate change

DEVELOPMENT ZONE	DESCRIPTION AND OBJECTIVES	FUNCTION
	can be strengthened by the extension of buffer/transition zones to embrace large areas suitable for appropriate ecosystem management. The approach explores and demonstrate techniques to sustainable development at the regional scale. Appropriate attention should, therefore, be given to the transitional and/or buffer areas. • Maintaining landscape connectivity is a major action that municipalities can implement through land use planning to mitigate climate change impacts within the province and South Africa as a whole. • Mountains, ridges and rivers, including wetland systems, represent important natural corridors in the Northern Cape Province. • 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 storm water run-off. In addition, these areas (especially flood-plains) are extremely high risk for communities living in these areas. • Ensuring that infrastructure and agricultural development is avoided, where possible, in high risk areas to reduce the long-term impact of climate change, particularly on poor communities. • For biodiversity conservation to succeed, the maintenance of environmental integrity (as defined by ecological, economic and social criteria) must be one of the primary determinants of land-use planning and development.	• Eco-tourism development
Karoo Zone (region)	The Karoo is a semi desert natural region, a more defined definition is due to be formulated in the proposed Karoo Regional Spatial Development Framework. The Karoo is partly defined by its topography, geology and climate, and above all, its low rainfall, arid air, cloudless skies, and extreme temperatures. The Karoo also hosted a well-preserved ecosystem hundreds of million years ago which is now represented by many fossils. The unique climatic conditions, bio-diversity sparse landscapes and tranquility have lent itself to a unique appeal and cultural identity. The Karoo is also a source of agricultural production, such as lamb and goat meat as well as table fruit. The Karoo has recently seen significant investment in production of renewable energy, both wind and solar. Due to its unique characteristics and location, it is also home to scientific exploration in astronomy with projects such as the Square Kilometer Array located in the Karoo. The region holds reserves of shale gas and uranium for which there is currently significant interest to conduct exploration. The towns in the Karoo are important due to the sparse settlement pattern of the region, therefore each plays an important role in providing goods and services to its residents and its hinterland rural communities. However, the Karoo also poses some important development challenges namely: • The Karoo is a water stressed biologically diverse and sensitive bio-region requiring a careful weighing up of development options.	• Expansion of Nature Conservation areas • Improved ecological corridor development • Improved protection of sensitive natural areas (SKEP etc.) • Mitigation of climate change • Eco-tourism development

DEVELOPMENT ZONE	DESCRIPTION AND OBJECTIVES	FUNCTION
	• Individual municipalities have limited resources (human, financial, technical) in order to deal with factors that affect the entire region; such as, shale gas and uranium mining, renewable energy investment, climate change and adaption, poverty and unemployment. • Developing a strategic response to the development challenges will have limited impact, without considering the area as a region. Key conservation strategies to adopt and accommodate within the conservation corridors are: • Building on the Karoo's location as the region is centrally located, providing connection between various regions (logistics). • Unclock unique tourism opportunities in with the unique Karoo Identity and culture (tourism). • Mining industries - iron, uranium, shale gas – (beneficiation, energy mix). • Building on the region's unique Agricultural characteristics (Orange river belt, livestock (Karoo meat of origin)) • Maximising the potential benefits of the production of renewable energy (energy mix). • Unclocking the knowledge economy through science development (astronomy: SKA, SALT; indigenous knowledge).	

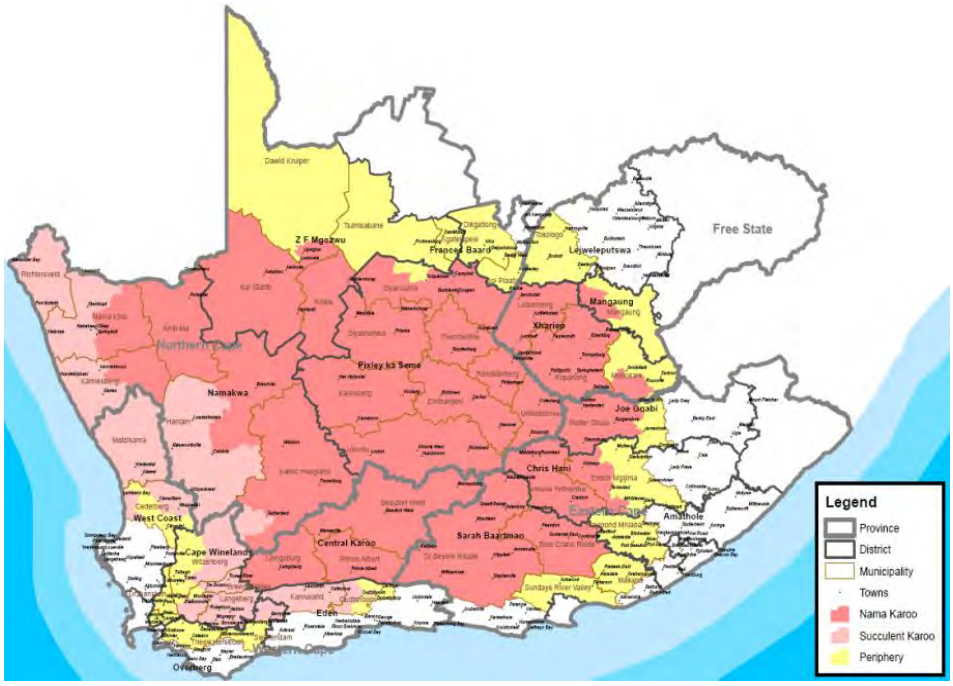


Figure 24: Karoo Small Town Regernation and Economic Development Initiative (SALGA, 2018[9])

[9] *SALGA, 2018, Karoo Regional Small-Town Regeneration Initiative. Concept Document (Establishing the Karoo STR Initiative), September 2018*

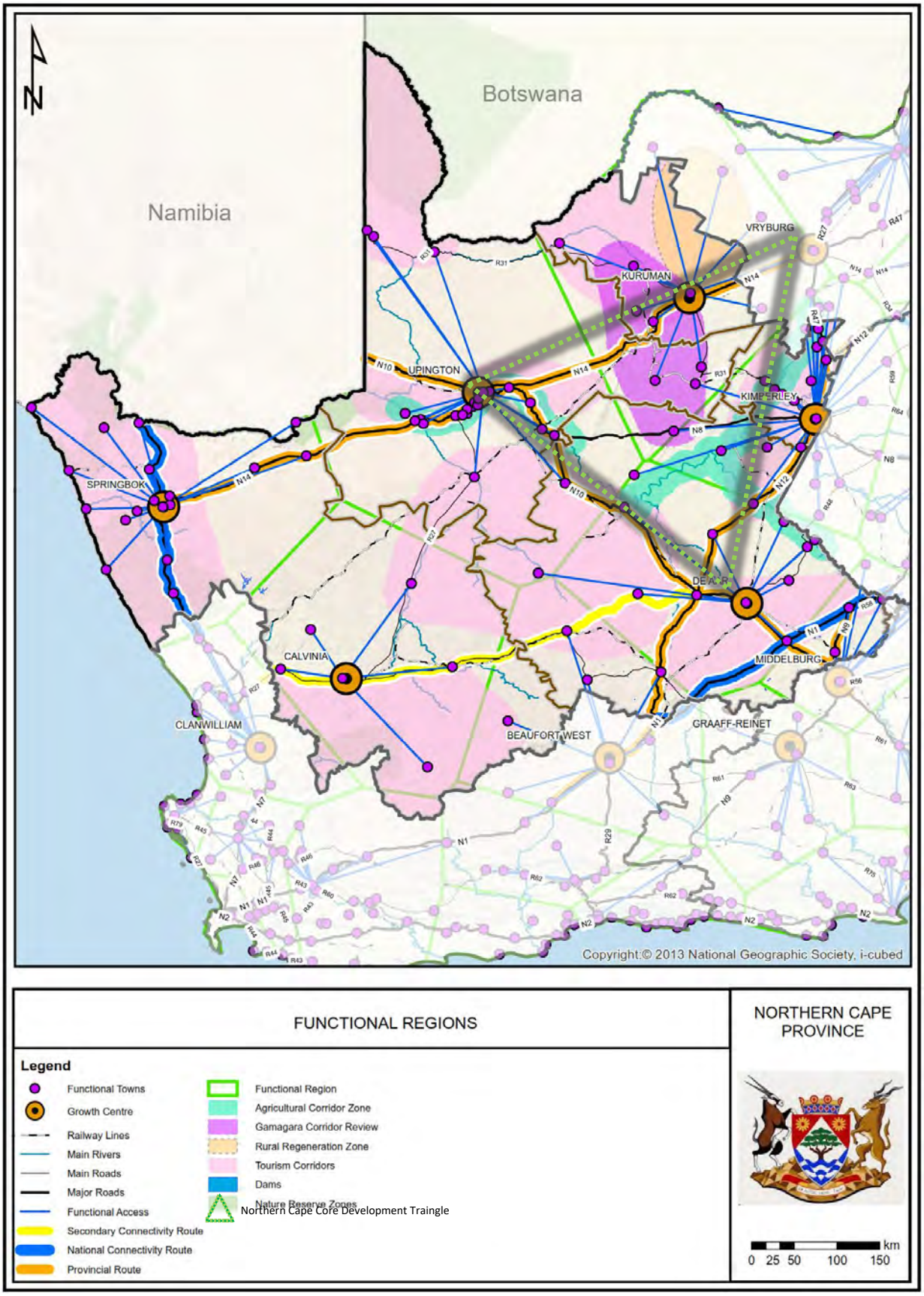
3 FUNCTIONAL REGIONS

The National Development Plan calls for spatial targeting and highlights certain key space economy interventions that need further planning. Taking their cue from this plan, a process to delineate and analyse functional economic regions was done to determine the interrelationships of economic development trends between different towns and bigger growth centres. The approach will consider the functional economic relationships occurring across a contiguous space by analysing regional value chains, market trends, sector territories, economic clusters and transportation flows amongst other aspects of the space economy.

The intention in defining functional regions is to "improve cross-boundary infrastructure planning, ensure better integration of a wider network of human settlements and support the sharing of economic assets to secure economies of scale". Key objectives for the determination of the functional regions included the following:

- The process needed to be evidence based, thus providing an opportunity for more effective planning across sectors as opposed to the more linear silo approach;
- Development of spatial economic perspective that will essentially support both the NSDF's Spatial structuring elements (Growth zones, Urban core Areas, Rural service Centres) as well as Government's new Infrastructure build programme and SIPs;
- To cost the strengths of the different economic functional regions and to give perspective on the future development opportunities these regions do pose;
- To create space for cross boundary planning. Allowing municipalities that configure into functional economic regions to collective plan catalytic interventions;
- To be provide a basis for the prioritisation of high-impact infrastructure investment across the Province;
- To enable the potential basis for Provincial Economic Development Departments to support economic planning on a regional basis with Districts strengthening the economic component of the PGDP;
- To allow for planning that is based on an understanding the potential of economic value chains over space;
- To provide a spatial platform for scaling up jobs by maximizing opportunities resulting from high impact initiatives; and
- To ensure greater leverage off major structuring elements such as transport and development corridors

To provide an economic context/ platform for key spatial initiatives of government, such as the SIP, IDZ and new SEZ programmes. The proposed economic development approach is to create an integrated cross provincial system of growth nodes with "well-articulated strategic functional economic linkages to less-developed areas (rural areas)" to help unlock latent economic potential and create more inclusive and wide-spread regional development. The functional regions would require formalised linkages through the proposed development corridors where secondary cities and regional service centres will get to anchor their key value chains in a broader economic region. **Map 3** below indicates and delinineates the Northern Cape functional regions, which was determined by utilising the CSIR settlement typology (2013) and similar research conducted by Van Huyssteen *et al*, (2015:5) which indicated which setllements have the highest levels of interactions. The approach was slightly adapted, as the original methods was not based on the existing transport routes.



Map 3: Functional Regions

4 DEVELOPMENT SCENARIOS

4.1 INTRODUCTION

Future growth scenarios are defined providing for the baseline and sustainable growth targets. When considering future possibilities in the context of historical trends and dynamics there are believed to be four (4) possible growth scenarios whereby at least two possible growth scenarios for the province are envisaged, namely:

- Essentially the "**BUSINESS AS USUAL**, inequitable share development scenario" sees the existing trends continuing-the baseline scenario.
- The "**ACCELARATED GROWTH**, equitable share development scenario" pre-supposes interventions through development management tools and spatial development plans will result in positive, beneficial change which alters current trends towards a higher growth trajectory and more sustainable outcome.

This would involve more compact formalised development in integrated settlement regions, containing productive rural resources linked to employment and economic growth in the primary and secondary nodes and revitalised tertiary and fourth order settlements. This refers to the high-growth scenario. Different development scenarios can be investigated to determine the possible outcomes of the strategic framework. Four (4) development scenarios have however been used to determine either the status quo or the envisaged development path as depicted in the development strategies of the PSDF. Each scenario is unpacked in the following sections.

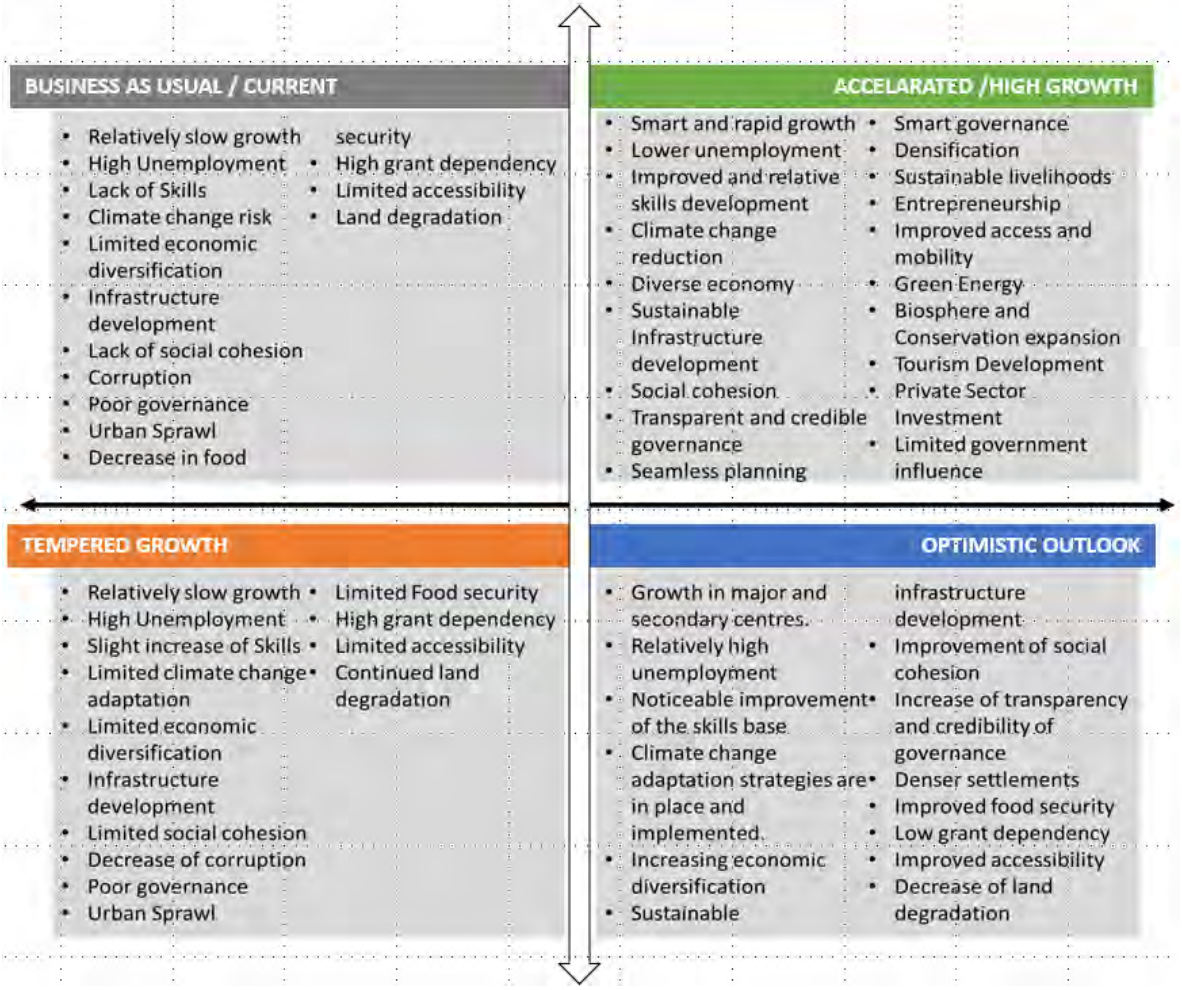


Figure 25: Development scenarios

4.2 SCENARIO 1: BASELINE – BUSINESS AS USUAL

The main urban centres, adjacent rural areas and the main transport corridors linking them are the areas where urban and peripheral urban growth can be expected over the next 15 to 20 years.

The main features of the scenario therefore are expected to be as follows:

- Strong private sector investment in high growth areas with a large onus for infrastructure upgrade;
- Broad based government expenditure aimed at addressing social need in poverty-stricken areas;
- The aforementioned stimulates isolated tax base growth; effectively penalises private sector initiative; and ultimately increases the net tax burden;
- Low population growth is anticipated to continue within the core urban area – Kimberley– as urbanisation continues;
- There will be large scale demand for urban and peripheral urban sites with a consequent demand for urban level services;
- Continued and extensive peripheral urban settlement development in the relatively high population regions – John Taolo Gaetsewe District;
- Relative population stagnation is anticipated in the freehold land areas to the western side of the province; and
- Continued moderate levels of population growth are anticipated within the rural communities of the province.

This scenario is expected to continue to fuel the following development impacts:

- It will result in more and more challenges affecting areas that are supposed to be conserved for future generations – biodiversity hot spots could be destroyed;
- In about 15 to 20 years valuable resources such as the Karoo Flora and other precious resources will shrink and eventually vanish. Agricultural soils will be washed away, there will be no grazing land for rural households, poverty levels will increase, and rural land will continue to lose it's value;
- If efforts are not made to improve the rural areas to ensure that migration is mitigated, the urban areas could become overpopulated resulting in the depletion of resources, breakdown of infrastructure, and lack of facilities to support them. This situation will result in government reaction rather than planning for future growth;
- Vacant and local commonage land resources will become fully developed with time. As the land release process is complex, it will be difficult for the urban areas to expand resulting in a lack of development. Property values will increase with resultant increased in rents. The costs of living will be pushed to very high levels;
- Peripheral urban settlement sprawl if unchecked would also result in government continuing to pour out resources for infrastructure in unsustainable settlements;
- Existing infrastructure will be overstretched in some of the towns with numerous negative implications as result;
- Infrastructure as well as some key roads has already outgrown their planned capacities.
- The imbalance between population, jobs and economic opportunities within the province will be sustained; and
- Economic and employment growth will continue along its current trajectory, maintaining the joblessness cycle within the province.

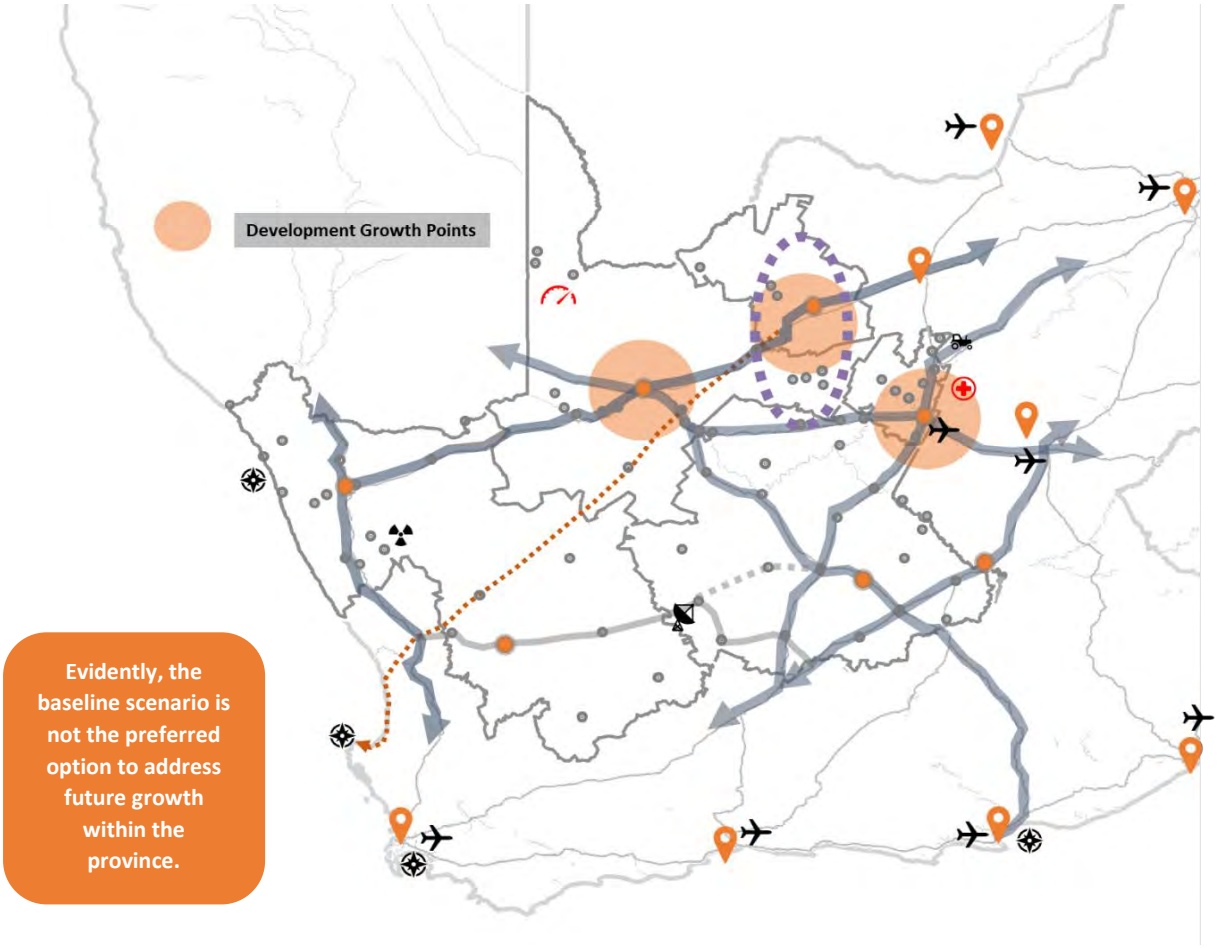


Figure 26: Business as usual growth scenario

4.3 SCENARIO 2: TEMPERED GROWTH

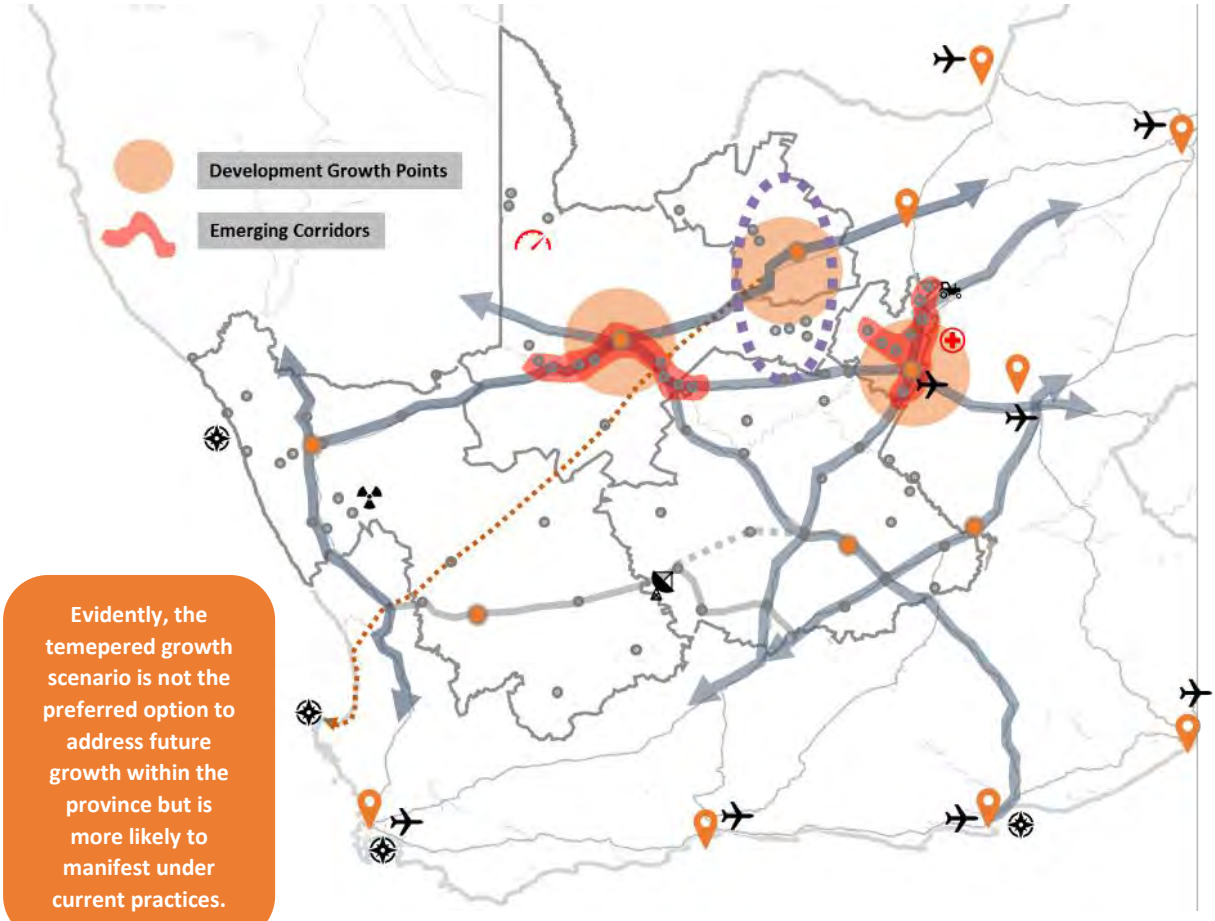
The main urban centres, adjacent rural areas and the main transport corridors linking them are the areas where urban and peripheral urban growth can be expected over the next 15 to 20 years.

The main features of the scenario therefore are expected to be as follows:

- Strong private sector investment in high growth areas with a large onus for infrastructure upgrade;
- Broad based government expenditure aimed at addressing social need in poverty-stricken areas;
- The aforementioned stimulates isolated tax base growth; effectively penalises private sector initiative; and ultimately increases the net tax burden;
- Increasing population growth is anticipated to continue within the core urban areas – Kimberley and supporting centres– as urbanisation continues;
- There will be large scale demand for urban and peripheral urban sites with a consequent demand for urban level services;
- Continued and extensive peripheral urban settlement development in the relatively high population regions – John Taolo Gaetsewe District;
- Relative population stagnation is anticipated in the freehold land areas to the western side of the province; and
- Continued moderate levels of population growth are anticipated within the rural communities of the province.

This scenario is expected to continue to fuel the following development impacts:

- It will result in more and more challenges affecting areas that are supposed to be conserved for future generations – biodiversity hot spots could be destroyed;
- In about 15 to 20 years valuable resources such as the Karoo Flora and other precious resources will shrink and eventually vanish. Agricultural soils will be washed away, there will be no grazing land for rural households, poverty levels will increase, and rural land will continue to lose it's value;
- Rural areas will experience an increased level of migaration to larger urban centres, increasing the pressure to provide services in urban regions;
- Vacant and local commonage land resources will become fully developed with time. As the land release process is complex, it will be difficult for the urban areas to expand resulting in a lack of development. Property values will increase with resultant increased in rents. The costs of living will be pushed to very high levels;
- Peripheral urban settlement sprawl if unchecked would also result in government continuing to pour out resources for infrastructure in unsustainable settlements;
- Existing infrastructure will be overstretched in some of the towns with numerous negative implications as result;
- Infrastructure as well as some key roads has already outgrown their planned capacities and will need upgrading and continuous maintenance;
- The imbalance between population, jobs and economic opportunities within the province will be sustained; and
- Economic and employment growth will continue along a similar trajectory, which may indicate a sligh increase in growth, maintaining the joblessness cycle within the province.



Evidently, the temepered growth scenario is not the preferred option to address future growth within the province but is more likely to manifest under current practices.

Figure 27: Tempered growth scenario

4.4 SCENARIO 3: OPTIMISTIC OUTLOOK

The high road/ high growth scenario reflects a much more optimistic scenario. However, this scenario will require direct decisive interventions. The high-growth scenario will require exceptional growth rates of approximately 2.1%[10]. It will require decisive and well thought through and accurately aimed public sector interventions. There should be a refrain from following a "blanket approach" where politics determine expenditure. Future development should be bound by economic rationale – meaning that money should be invested in locations where it will have maximum impact. This will result in an improved spatial development pattern, with:

- Strong private sector investment in high growth areas, supported by focused government infrastructure investment to optimise the growth effect and subsequent income-generating, revenue side of the tax equation (i.e. accelerate taxable / productive investment);
- Onus for infrastructure upgrade vests with government and is not shifted to private sector.
- Private sector responds, establishing higher confidence levels, which lead to greater investment propensity;
- More tax revenue is generated – creating more scope for social investment in low growth areas;
- Government investment in low growth / marginal markets should be highly focused and strategically aimed at high potential nodes and corridors – enhancing attractiveness for (income generating) private sector investment (multibillion Rand private sector investments have a much greater and more sensible job creation impact – and success rate – compared with relatively small scale, government-funded entrepreneurial projects);
- The emphasis will gradually shift from government investment in social services and nonrevenue generating subsidy housing to new income generating commercial developments, job creation and concomitant tax base expansion – yielding a more equitable and sustainable overall development scenario;
- Focused economic development in the high population concentrations within the John Taolo Gaetsewe District (Rural areas) activity nodes as Economic Focus Zones to be developed in tandem with the provincial growth centres; and
- The aforementioned will stimulate broad based tax base growth; effectively rewarding private sector initiative; and ultimately reducing the tax burden on individual contributors.

[10] *The South African economy slipped into recession during the second quarter of 2018, shrinking by 0,7% quarter-on-quarter (seasonally adjusted and annualised). This followed a revised 2,6% contraction in the first quarter of 2018 (STATSA SA, 2018). An omptistic outlook of just above 2% can be achieved bearing in mind that the both the Mining and Renewable Energy sectors of the Province are foreseeing a more positive outlook.*

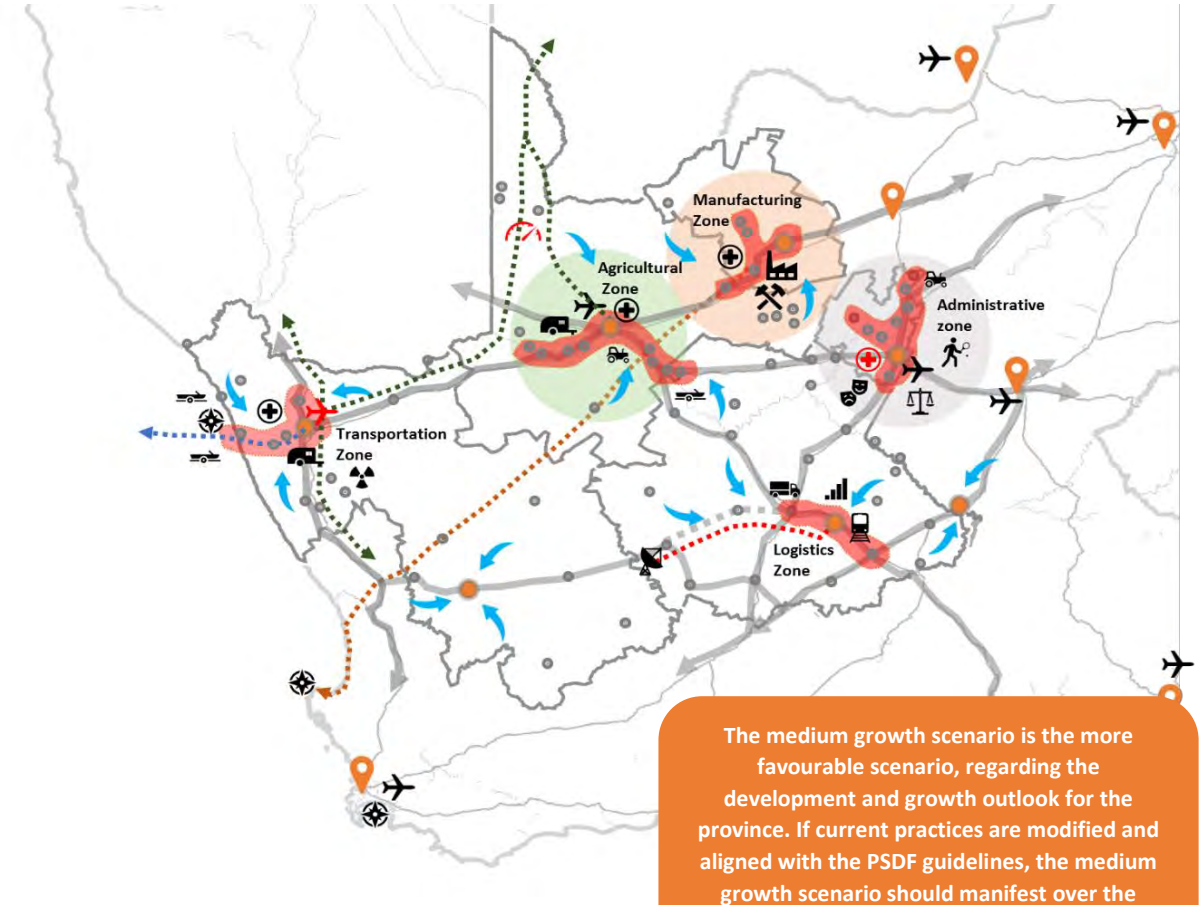


Figure 28: Medium High growth scenario

The medium growth scenario is the more favourable scenario, regarding the development and growth outlook for the province. If current practices are modified and aligned with the PSDF guidelines, the medium growth scenario should manifest over the following 15 years.

4.5 SCENARIO 4: ACCELERATED GROWTH

The high road/ high growth scenario reflects a much more optimistic scenario. However, this scenario will require direct decisive interventions. The high-growth scenario will require exceptional growth rates of above 3%[11] (which is deemed a healthy growth rate). It will require decisive and well thought through, accurately aimed public sector interventions. There should be a refrain from following a "blanket approach" where politics determine expenditure. Future development should be bound by economic rationale – meaning that money should be invested in locations where it will have maximum impact. This will result in an improved spatial development pattern, with:

- Strong private sector investment in high growth areas, supported by focused government infrastructure investment to optimise the growth effect and subsequent income-generating, revenue side of the tax equation (i.e. accelerate taxable / productive investment);
- Onus for infrastructure upgrade vests with government and is not shifted to private sector.
- Private sector responds, establishing higher confidence levels, which lead to greater investment propensity;
- More tax revenue is generated – creating more scope for social investment in low growth areas;

[11] *Key initiatives to achieve a higher growth rate is to look at Advanced Manufacturing (automation, use of lates technology, equipment and chemicals), Improved infrastructure productivity (public / private partnerships, maximising use of existing assets and improved maintenance), Exports (this requires national support to improve an open export markets), Agricultural transformation (through accessing the rising sub-saharan African markets as consumption and the need for food secturity rises)*

- Government investment in low growth / marginal markets should be highly focused and strategically aimed at high potential nodes and corridors – enhancing attractiveness for (income generating) private sector investment (multibillion Rand private sector investments have a much greater and more sensible job creation impact – and success rate – compared with relatively small scale, government-funded entrepreneurial projects);
- The emphasis will gradually shift from government investment in social services and non-revenue generating subsidy housing to new income generating commercial developments, job creation and concomitant tax base expansion – yielding a more equitable and sustainable overall development scenario;
- Focused economic development in the high population concentrations within the John Taolo Gaetsewe District (Rural areas) activity nodes as Economic Focus Zones to be developed in tandem with the provincial growth centres; and
- The aforementioned will stimulate broad based tax base growth; effectively rewarding private sector initiative; and ultimately reducing the tax burden on individual contributors.

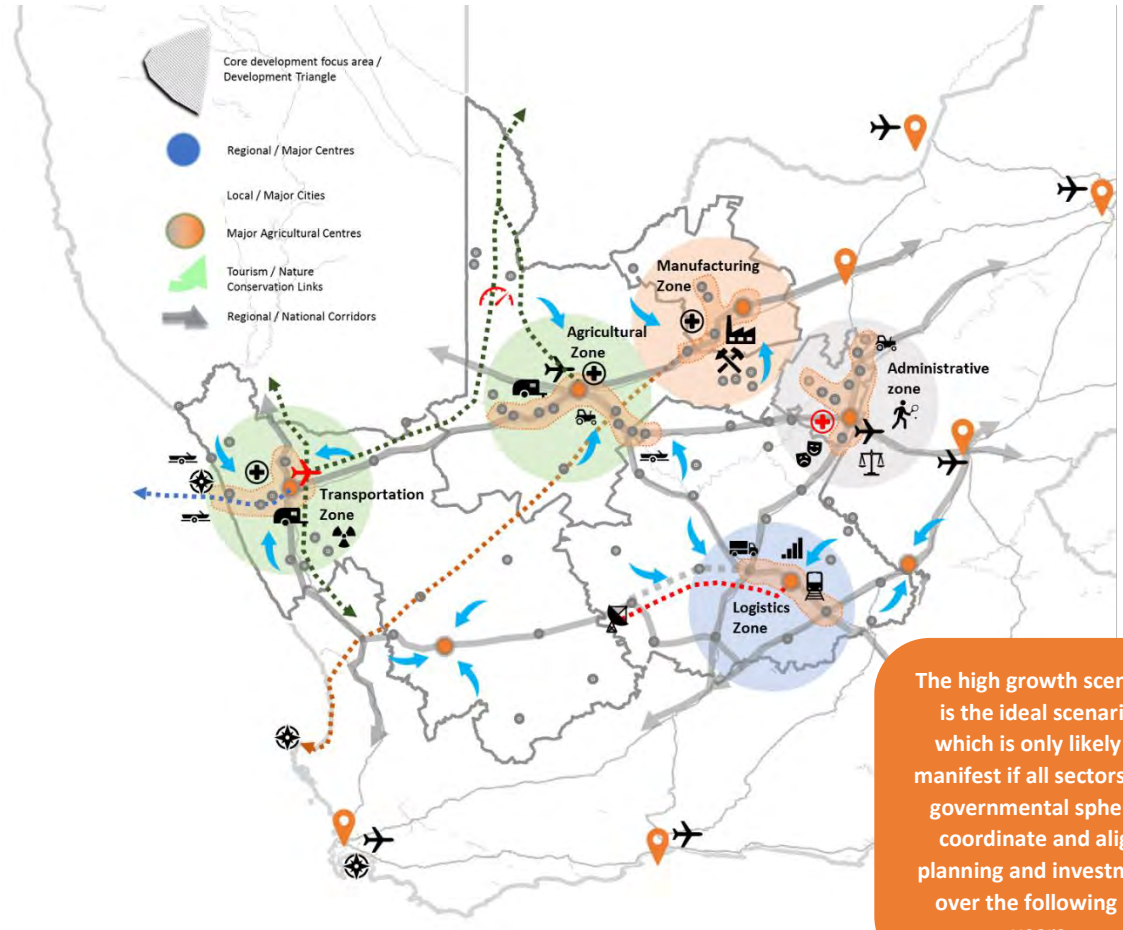


Figure 29: High growth scenario

This scenario will need to include planning for the following issues:

4.5.1 LAND USE MANAGEMENT

- The massive demand for urban and peripheral urban land requires strong, integrated and transparent land use planning and management systems at a local level, where potential land use conflicts can be resolved; and

- Land use planning within the rural areas and communal land areas are also vital and conflicts in terms of land allocation, planning and management between local government and traditional authorities should be resolved.

4.5.2 SETTLEMENT PLANNING

- The extensive demand for urban and peripheral urban sites requires high quality integrated planning between the main government service providers of housing, water, waste and sanitation, education, health, roads and transport;
- It is vital that strong and integrated settlement planning capacity is built at local level to provide well planned, located and serviced urban and peripheral urban sites;
- Improved and integrated settlement planning will be achieved within the next 15 to 20 years, enabling formalisation of compact settlements along effective transport routes; and
- Informal township areas should be formalised and effectively serviced and provided with the required social and educational facilities. Accessibility to these townships should also be increased in order to ensure proper linkages to economic / labour nodes.

4.5.3 ECONOMIC DEVELOPMENT

- Employment creation is vital in the rural areas and rural towns of the province. It goes without saying that the main task of government is to facilitate business investment, growth and development to create these jobs. The economic sectors of growth and opportunity in the province should be targeted, namely:
    - Agriculture;
    - Mining;
    - Manufacturing;
    - Trade;
    - Finance and business services;
    - General government services; and
    - Construction.
- The establishment, nurturing and growth of small businesses, which tends to employ more people, relative to the scale of their investment, are especially important, particularly in the context of rural development. Some of the key constraints to business growth and development include lack of land tenure, lack of business, technical or managerial skills, lack of market information and knowledge, lack of access to credit, isolation from markets through poor roads and infrastructure and insufficient demand to support sufficient sales in poor communities. It is critical that resources are targeted at businesses that have a sound business model, a good prospect for success and a clear path to commercial independence.

4.5.4 INFRASTRUCTURE

- The high-growth scenario must be based on successful implementation of integrated infrastructure development which will be geared towards sustaining both rural and urban development initiatives; and
- Strategic transport corridors should link the rural areas with urban areas. Integrated programmes need to be carried out in shared impact areas of potential and economic opportunity.

4.5.5 HUMAN RESOURCE DEVELOPMENT

- Lack of co-ordination and capacity constraints in key provincial departments and agencies, compounded by leadership and staff changes in crucial departments and entities has led to the non-implementation of government policy; and
- If no efforts are directed towards redressing this situation in 15 to 20 years, no plans would be implemented and there would be complete chaos with each department championing their cause at the expense of the next depart.

4.5.6 GOVERNANCE

- Irreversible physical damage to the environment would increase in future, if no action is taken to correct the problem of overlapping legislation and policy instruments. The managed development scenario as prescribed by SPLUMA assumes that a single legislative instrument is established at national and provincial levels to ensure that a wall to wall planning and land use management system is introduced;
- The long-term vision of formalisation of compact settlements will need co-ordination and cooperation across all government spheres and relevant stakeholders, in particular focusing on peripheral urban and rural settlements; and
- Lack of coordination and capacity constraints have a direct impact on the quality of development management, resulting in scattered development rather than integration. Issues of lack of coordination also apply in cases where other government spheres are preparing spatial plans and the need for a framework to guide all these processes cannot be over emphasised.

4.6 ACHIEVING VISION 2040

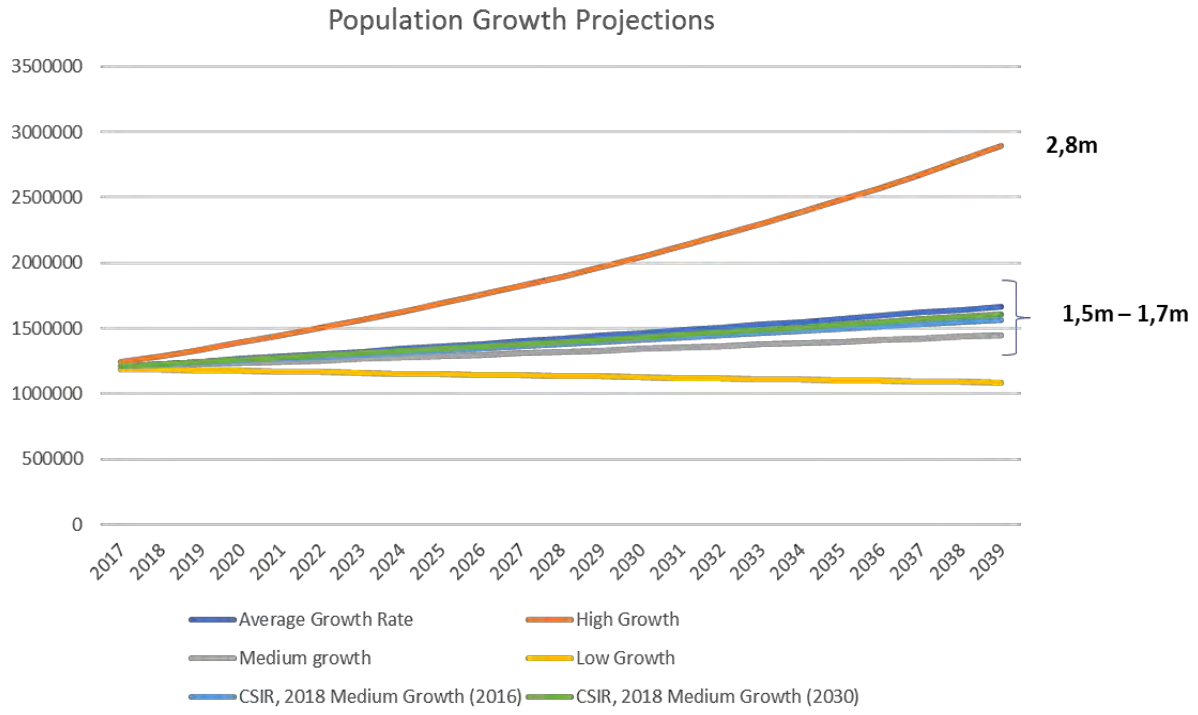
The goals of the NDP is to eliminate poverty and reduce inequality by 2030. This calls for sustained growth of 5.4% and a 6% decrease in unemployment by 2030. However, , growth is expected at 1.5% in 2018, according to Treasury, and unemployment remains uncomfortably high at 26.7%. In order for the Northern Cape to fight the high unemployment rate and grow the provincial economy to be able to sustain the socio-economic demands a High Growth Scenario would be required. The current status quo won't be able to create the required opportunities for growth as outlined under the Low Growth or Tempered Growth Scenarios. The high Growth Scenario aims towards a 3% or higher growth rate in order to meet in the socio-economic needs of the residents of the Province by 2040. Key to the success of this Scenario would be underpinned by the following:

- It is expected that strategic and integrated development plans (PGDP, IDP, NDP, and other Regional, District Strategies) and spatial plans (SDF's) within the different spheres will need to provide a uniform spatial specific/place specific vision for the future development of an area which coincides with the overall development vision of the Province. Long term plans need to highlight the area's role in the region for the next 20-30 years to achieve broader development outcomes. Current 5-year spatial development frameworks, integrated infrastructure and sector plans, as well as capital investment frameworks would form part of a phased approach to realise the vision.
- Urbanisation could fuel major societal and political upheaval and turmoil, or it could be the catalyst for significant economic and social development and transformation. To move from a negative to a positive scenario, cities need to become the drivers of rapid, inclusive and sustainable economic growth, as well as societal and spatial transformation. Specific reference is made towards the IUDF targets and priority towns/cities which targets Upington , Kuruman and Kimberley in the Northern Cape Province.
- To promote Transit-Oriented Development (TOD) which is based on creating a more balanced and efficient Province (also combating urban sprawl and lowering emissions thus fighting climate change as well), linked directly to the optimum functioning of the transportation network (based on development corridors and development nodes). The possible impact on households' most probable location choices and their ability to access jobs for a minimum amount spent on public transport is self-explanatory to improve the well-being of our communities. The feasibility of TOD would rely on the specific land use (zoning) and density requirements, as well as phased land release that will be required, to enable higher density corridor development around public transport investment.

- Economic Investment should follow an 80/20 principle, where 80% of public investment should be allocated towards ereas that show economic viability and sustainability and the remaining 20% towards addressing the socio-economic needs of the less viable and sustainable areas. In terms of the principle of equity, it implies that social and economic upliftment programmes in rural areas and villages should focus primarily on human resource development, labour market intelligence and social transfers, to give people in these areas better information and opportunities to gravitate towards areas with greater economic potential from the localities in which they currently reside. This approach would improve the return on public investment as the impact and return would by far out perform investment that follow a vice-versa stance. An even distribution of the provincial budget over all municipalities ("blanket/balanced approach") might mean that resources will be spread so thinly that nobody gets "warm" or experience the effect of dispersed development efforts. The financial rational and implication of the high growth scenario is that capital expenditure programmes will focus to a large extent on regional growth centres and priority development nodes.
- Sustainable and more effective use of natural resources through improved technology, improved resource management (which speficially targets infrastructure maintenance, water, environment and agricultural conservation). It is foreseen that the Northern Cape Province would be adversely affected by the impact of climate change, this would require new thoughts on addressing the services demands of the Province. The use, access and protection of resources has a direct impact on pushing the High Growth scenario of the Province.
- Recent years have shown how susceptible the Northern Cape Province is to economic shocks and fluctuations in currencies and commodity prices, especially with regards to the primary economic sector. Many benefits accrue from diversified economies, such as resilience to external shocks. As trade volume grows resulting in higher productivity in the economy, Provincial Government needs to create a regulatory framework that is attractive to investors and allows entrepreneurs to thrive. Key sectors to support economic diversification in the Province include:
    - Tourism;
    - Mining;
    - Agriculture;
    - Knowledge Economy;
    - Oceans Economy;
    - Space Economy; and
    - Energy.
- Towards "smart growth" is seen as the most efficient way of developing both urban and rural areas. Smart Growth is a collection of urban development strategies (structuring elements) aimed at reducing sprawl and promoting growth that is sustainable and fiscally, environmentally and socially responsible. Smart Growth tries to promote growth and development in areas with optimal opportunity and offers an antidote to the sprawl that has resulted from unlimited low-density development further and further away from the urban centres. Rather than simply restricting development, smart growth is focussed on how and where new development should be accommodated. The principles of smart growth are:
- New growth and development must be leveraged to improve existing areas of opportunity and economic potential.
- Redevelopment of existing areas must be promoted rather than abandoning existing infrastructure and facilities only to rebuild it farther out.
- Development must be "town-centre", transit and pedestrian oriented.
- Integrated, mixed-land uses must be promoted in strategic locations.

4.6.1 GROWTH PROJECTIONS

Projected population and need of sustainable human settlements within Northern Cape are based on an average growth scenario (1.47 % growth rate per annum, measured between 1996 - 2016), a high growth scenario (3.93 % p.a., measured between 2001 and 2011) a medium growth scenario (0.84 % p.a., measured between 2011 and 2016) and low growth scenario (-0.42% p.a., measured between 1996 - 2001). For the projected analysis an average growth scenario will be adopted. In addition, population projections by the CSIR[12] (as based in the NSDF) has been used to reaffirm the projections calculated using the above projection rates. Medium to high growth rates projected varies between 1.19% based on 2016 population statistics and 1,47% towards the end of 2050. The NSDF envisage a development shift from the west towards the east of South Africa and this could prevail growth projects experienced between 1996 and 2001. Urbanisation[13] would also have certain growth implications in the Province (especially towards the central and eastern regions such as Upington, Kuruman and Kimberley).



4.6.1.1 FUTURE DEMANDS

Taking the expected population growth projections into considerations, it would be logical to assume that the envisaged population growth of between 250 000 and 350 000 can be expected. The potential development demands to accommodate the additional growth would place an additional burden on the already under serviced infrastructure network of the Northern Cape Province. It is therefore critical to look at the potential future demands for sustainable human settlements.

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[12] CSIR, 2018 National level projections used as basis for the CSIR/IRDC Green Book on Climate Change Adaptation 2018)

[13] "More than 60% of South Africans live in urban areas, and this figure is projected to increase to 71.3% and 80% by 2030 and 2050 respectively. It is, therefore, important that we put in place mechanisms to respond to this urbanisation trend in a way that helps us to reap the benefits of urbanisation, while minimising the impacts of badly managed urbanisation" - IUDF, 2016.

4.6.1.1.1 HOUSING

The demand for future housing has been estimated based on the demand that will be generated through population growth. Based on the above various growth scenarios, corresponding housing and land requirements have been calculated. It is assumed that 3,37 people per household will occupy a dwelling unit and that the average future gross dwelling unit density will be 20 dwelling units (medium density) per hectare.

Table 47: Projected future demand for housing development

Actual Population (2016)	Average Growth Rate	Less likely scenario	More likely scenario	Possible scenario
		High Growth	Medium growth	Low Growth
1 193 780[14]	Based on Overall Population Growth average from 1996 - 2016	Measured from growth rate between 2011 and 2001	Based on medium growth measured between 2011 and 2016	Measured from 1996 to 2001 statistics
2018	1229028	1289395	1213833	1183803
2025	1360794	1688505	1286707	1149536
2030	1463477	2047183	1341424	1125669
2035	1573908	2482053	1398467	1102297
2040	1692672	3009300	1457937	1079410
Difference		1815520,4	264156,6	-114369,6
Average Household Size / Number of Housing required	**3,37**	**538730,1**	**78384,7**	**-33937,6**
Hectare required / Dwelling Houses @ 20 du per hectare		26936,5	3919,2	-1696,9
Rounded Ha Required for Township Establishment		**26940 ha**	**3920 ha**	**-1700 ha**

4.6.1.1.2 BASIC SERVICES

Estimated required Bulk services has been calculated to service the foreseen the future demand for housing in the Province. Calculations has been made to project services demands on the foreseen Growth projects.

Table 48: Expected services demands to meet in the needs of future demands for Housing[15]

Growth projections	Estimated Units (Rounded)	Water (@ 600l/day/erf per Household)	Sewer (@ 200l/erf/day per Household)	Electricity (@ 6 KvA per Household)
Low Growth	-34 000 units	-20362200 (- 20,36 M/l)	-6787400 (-6,8 M/l)	-203622 (-203 MW)
Medium growth	78 000 units	47030400 (47 M/l)	15676800 (15,7 M/l)	470304 (470 MW)
High Growth	540 000 units	323238000 (323,24 M/l)	107746000 (107,8 M/l)	3232380 (3200 MW)

The opportunity does exist that the Province would experience a decline in Population Growth which could cause a scenario where a over demand of services can prevail.

[14] *STATSA, Community Survey 2016 Population figures of the Northern Cape Province*

[15] *Calculations are based on the Guidelines for Human Settlement Planning and Design, Volume 2 as published by the CSIR, https://www.csir.co.za/red-book-volume-2*

4.6.1.1.3 SOCIAL AMENITIES

Table 49 provides a brief reflection of the key Social Amenities required in the Northern Cape to address the needs of a moderate growth projection for the Province. **Figure 28** below provides a spatial overview of existing high-level social services and proposed services required to improve the current social services base of the Province.

Table 49: Brief overview of social amenities/facilities required to meet in the demands of future growth

Facility Type	Existing facilities	Population estimate by year (using a moderate growth rate of 1,19% as foreseen by the CSIR – see growth projections)			
	2018	2016	2025	2030	2040
Labour Centre	7	12	14	16	18
Primary School	316	271,4	301,9	320,3	360,5
Secondary School (not considering the 113 combined schools)	121	199,0	221,4	234,8	264,3
Clics (all types)	± 200	130	140	150	160
General / District Hospital	16	15	17	18	20
Home Affairs Office	8	6,0	6,6	7,0	7,9
Public Library	141	47,8	53,1	56,4	63,4
Thusong Centre	5	6,0	6,6	7,0	7,9

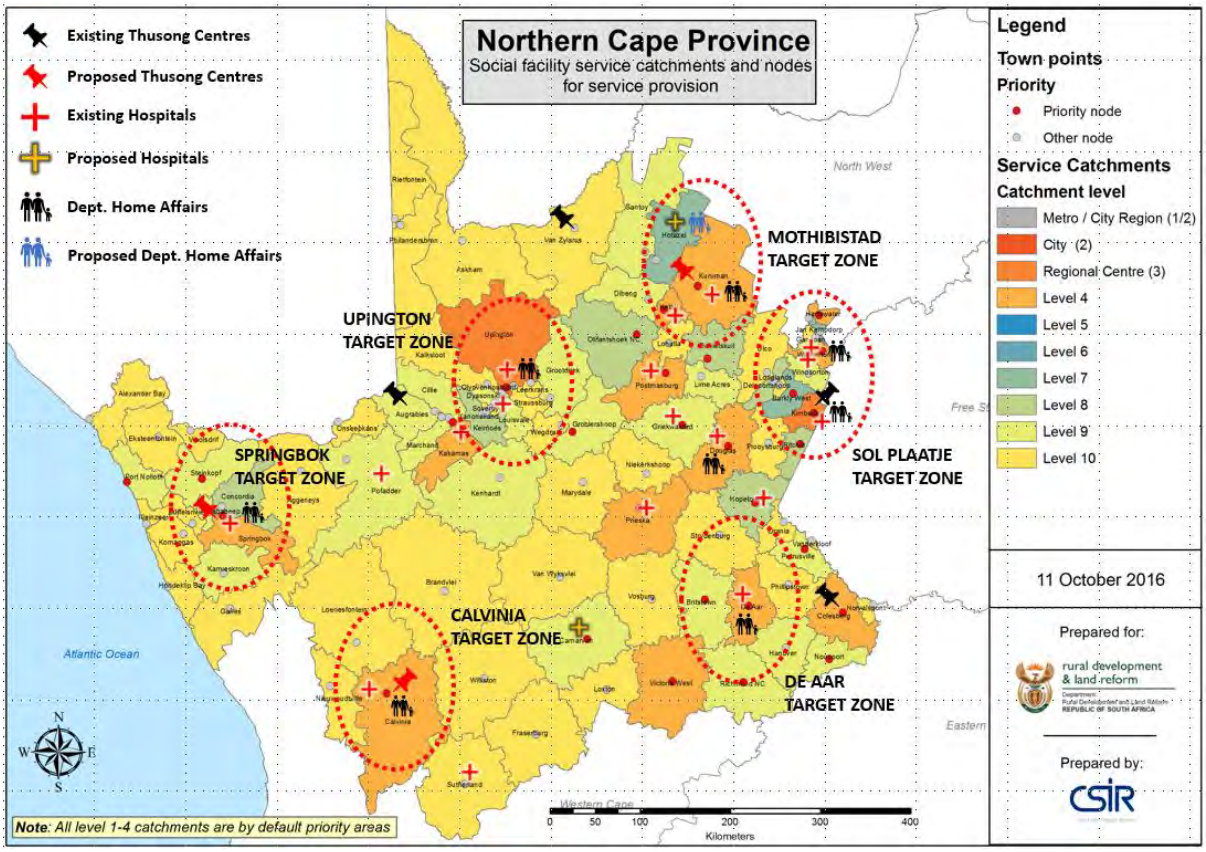


Figure 30: Spatial overview of existing social services and proposed additional services for the Northern Cape Province[16]

[16] *Refer to the Social Facility Provision Toolkit as developed by the CSIR, https://www.socialfacilityprovisiontoolkit.co.za/#!/*

5 COMPOSITE SPATIAL MAP

As a first step towards a holistic spatial development strategy for Northern Cape Province, a Composite Spatial Map was formulated. The Composite Spatial Map model's spatial direction and context to future developments. This framework promotes, clarifies and refines the spatial development principles and development priorities supported by relevant policies and legislation and define the desired spatial form of Northern Cape Province. The Composite Spatial Map is depicted in **Map 2**.

5.1.1 COLLATION OF THE COMPOSITE PLAN

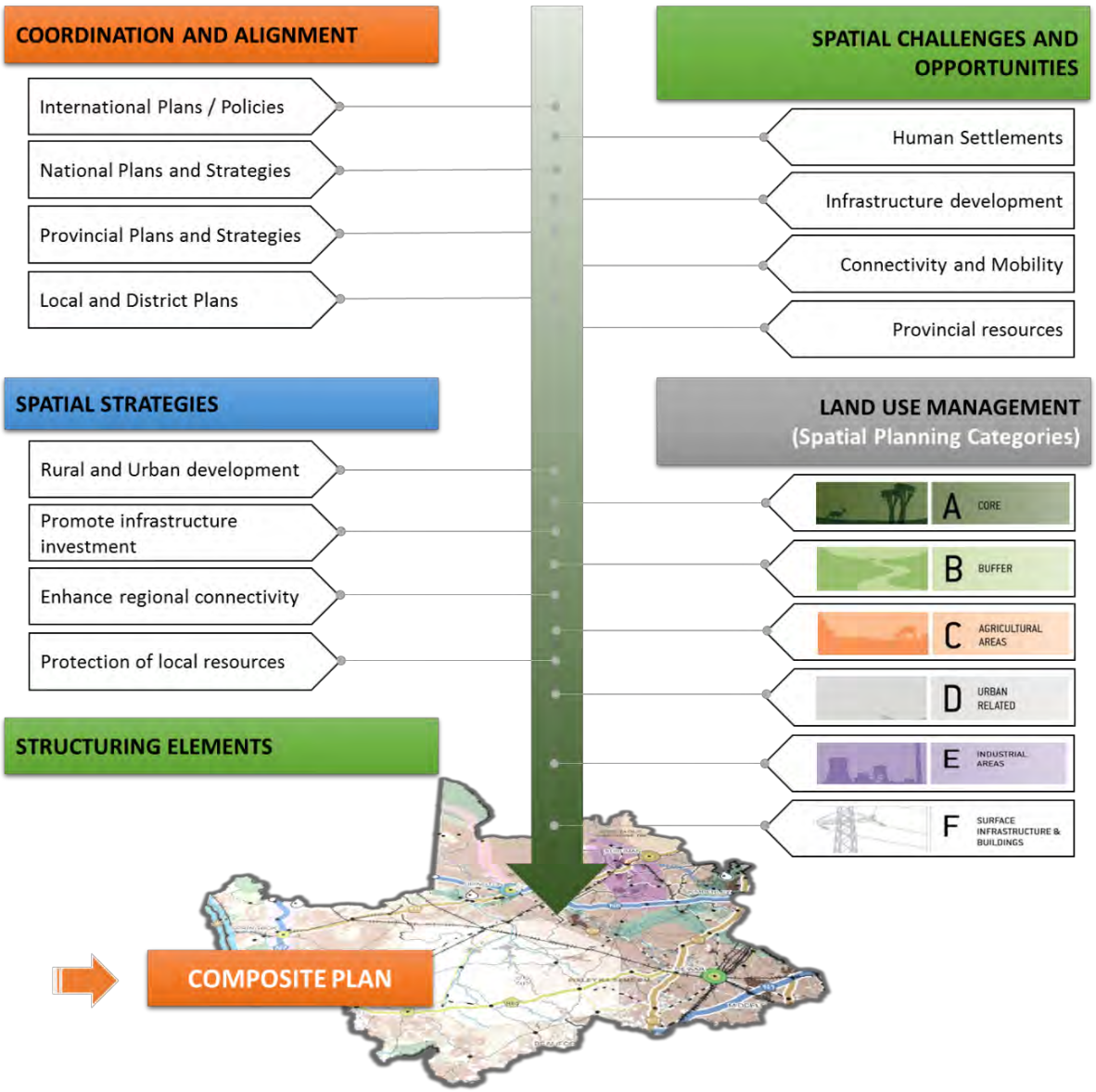


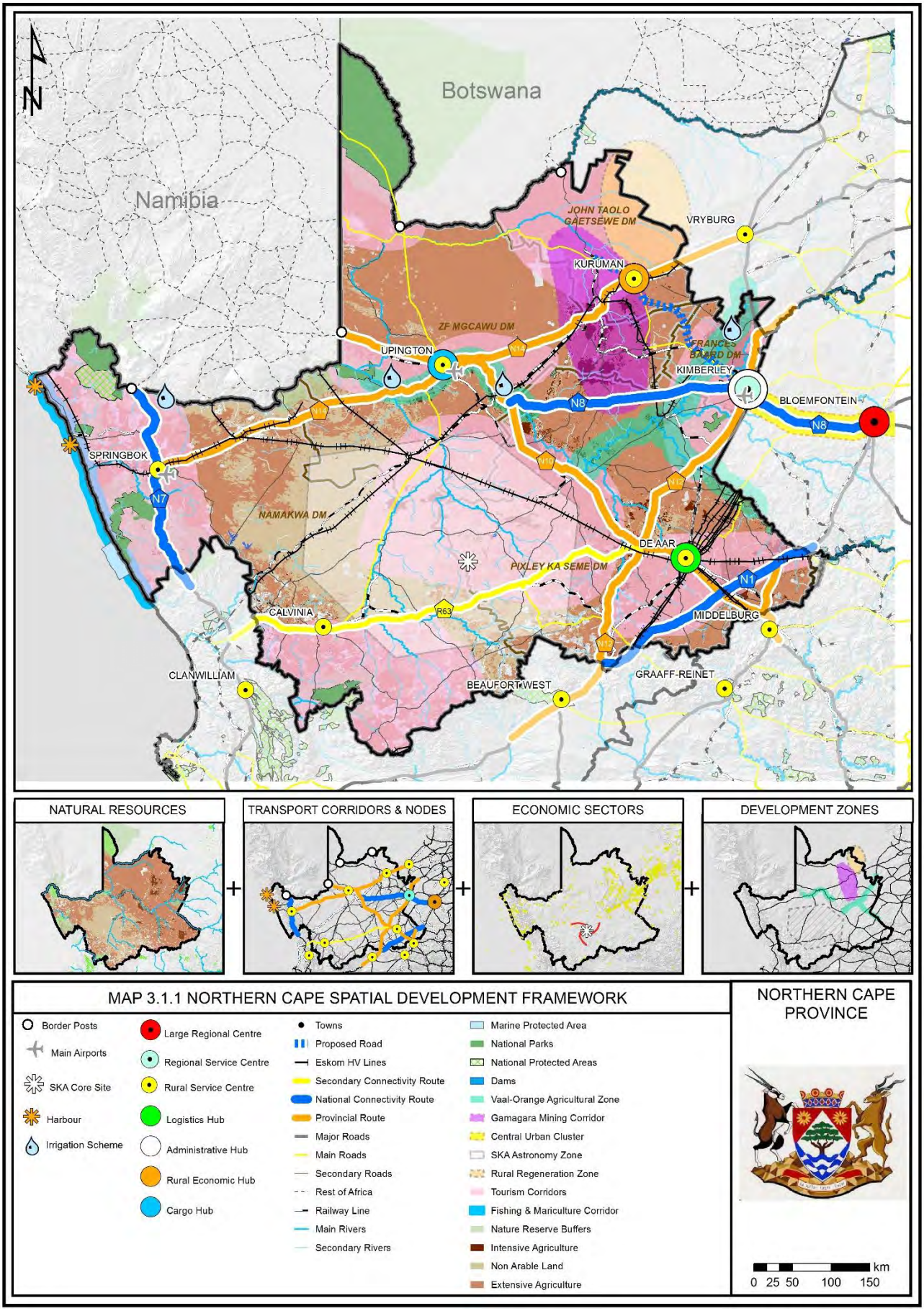
Figure 31: 'Layering' of sectoral spatial plans, policies and strategies to compile the Composite Spatial Plan.

The sectoral spatial plans are premised upon the base maps put forward in Chapters 3, 4 and 5 incorporate the interventions proposed by the PGDP, Spatial Opportunities, Sectoral Strategies, Land Use Management guidelines as guided by the Spatial Planning Categories and the input received from the stakeholders that participated in the drafting of the PSDF.

The relevant spatial plans are:

- Spatial overview of the key development opportunities as reflected in Chapter 4;
- Spatial representation of the key development strategies presented to effect development change and management in the Northern Cape Province;
- Spatial plan for UNESCO biosphere reserves in the Northern Cape;
- Spatial plan for the Northern Cape as a pivot between surrounding provinces and countries;
- Conceptual bioregional borders for the Northern Cape;
- Reviewed Spatial plan for SPC A and SPC B areas, i.e. protected and conservation-worthy land that is essential for environmental integrity and human well-being;
- Reviewed Spatial plan for SPC C areas, i.e. agricultural land which constitutes the resource base for the agricultural sector;
- Reviewed Spatial Plan for SPC D, i.e. indicating urban areas categorised in terms of their relative levels of human need and economic potential and, in particular, the investment typology required and proposed;
- Reviewed Spatial plan for SPC E, i.e. industrial areas. This refers to, in particular, the development corridors where the main mining, industrial and energy sectors are concentrated. Economic development focal areas including potential industrial development nodes are indicated; and
- Reviewed Spatial plan for SPC F, i.e. bulk services, main access routes, and infrastructure required to sustain the economic sectors that support the economy of the province.

The spatial vision for the Northern Cape is depicted by the composite spatial plan below:



Map 2: Northern Cape Province Composite Spatial Plan

6 STRATEGY DEVELOPMENT

6.1 INTRODUCTION

Figure 32: Development strategies structural layout

The development strategies of the Northern Cape Province Spatial Development Framework need to be supportive of the objectives of the Vision 2030 National Development Plan and international and national policies, principles and initiatives to reduce poverty and inequality over the next two decades. The National Development Plan 2030 provides desired socio-economic outcomes, mechanisms to achieve it and conditions necessary to provide the focus for strategic priorities. In order to provide spatial dimension to the National Development Plan 2030, the Northern Cape Province Spatial Development Framework needs to support the National Development Plan 2030 and also provide guidance for future spatial development that is aligned to national, provincial, regional, district and local planning.

6.2 DEVELOPMENT STRATEGIES

A set of interrelated spatial development strategies provide the foundation for the spatial development strategies for Northern Cape Province supporting the Spatial Development Concept. Four strategic objectives were identified providing Strategic Focus Areas (Areas of intervention on provincial, district and local level):

Spatial Development Strategy 1.

ENHANCE REGIONAL CONNECTIVITY

Spatial Development Strategy 2.

PROTECT AND MANAGE BIODIVERSITY, WATER AND AGRICULTURAL RESOURCES

Spatial Development Strategy 3.

INFRASTRUCTURE INVESTMENT

Spatial Development Strategy 4.

URBAN AND RURAL DEVELOPMENT

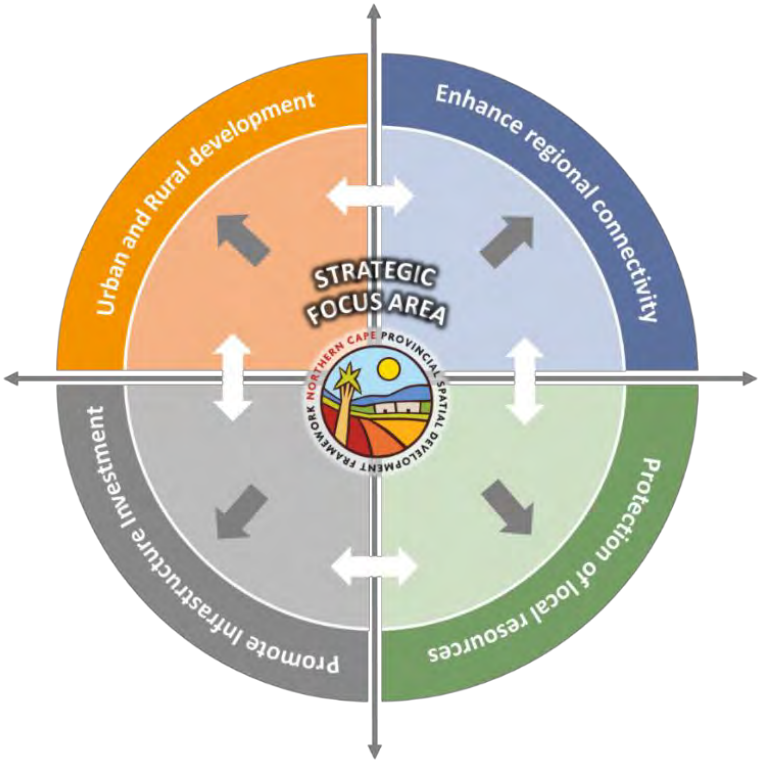


Figure 33: Spatial development Strategies

Table 50: Alignment of Spatial Strategies with PGDP and NSDF

NATIONAL AND PROVINCIAL STRATEGIC ALIGNMENT									
PSDF STRATEGY	Drivers of change (PGDP)				National Spatial Development Framework Frames (NSDF)				
	Economic Transformation	*Human Well-being*	*Environmental Integrity*	*Good Governance*	*Urban Regions, Clusters and Development Corridors*	*Productive Rural Regions and Regional Development Anchors*	*National Social Service Infrastructure Networks*	*National Connectivity and Infrastructure Networks*	*National Ecological Infrastructure System*
Infrastructure Investment	●	●	●	●	●	●	●	●	●
Enhance Regional Connectivity	●	○	●	●	●	●	●	●	○
Urban and Rural Development	●	●	●	●	●	●	●	●	●
Protect and manage biodiversity, water and agricultural resources (Protection of local resources)	○	○	●	●	○	○	○	○	●

6.2.1 SPATIAL DEVELOPMENT STRATEGY 1: ENHANCE REGIONAL CONNECTIVITY

6.2.1.1 SPATIAL DEVELOPMENT STRATEGY

Regional Connectivity needs to support the interventions of the NSDF (Draft), which involve:

- Compact, dense and diversified urban growth in the Kimberley Urban Core which 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 international trade, ports, transport, through-routes and related infrastructure;
- Support international competitiveness though effective improvement of major national road and rail freight routes. Prioritise rail system re-development;
- Support diversification of economies, tourism, the knowledge economy, the entertainment industry, the green economy and alternative energy-related enterprise development;
- Manage demand and maintain, expand and refocus the infrastructure network to enable and sustain bulk water supply and energy distribution;
- Use effective land administration and urban land reform to guide and manage the interface between settlement, land-use and infrastructure planning in fast growing cities; and
- Focus on place-making principles and green economy solutions.

6.2.1.2 STRATEGIC FOCUS AREAS:

6.2.1.2.1 PROVIDING A WELL-CONNECTED SYSTEM OF INTER-REGIONAL AND NATIONAL DEVELOPMENT CORRIDORS AND ROUTES

The following long-term development objectives support the strengthening of development corridors and routes:

- Consolidated and economic transformation within regional and national transportation corridors that links national urban cores, urban regions and regional growth centres. Within the Northern Cape. The following corridors need to be supported, improved, expanded and maintained:
    - The Ngqura (Coega) Manganese Line Corridor – The corridor connects Hotazel, Kimberley and Port Elizabeth via rail and Bloemfontein to East London via road;
    - Sishen–Saldanha Ore Line;
    - Utilise the existing roads infrastructure providing inter regional and national development corridors such as:
        - N1: Cape Town – Worcester – Beaufort West – Colesberg – Bloemfontein – Kroonstad – Johannesburg – Roodepoort – Pretoria – Polokwane – Musina – Beit Bridge (– Bulawayo, Zimbabwe) - Lusaka) -Zambia);
        - N7: Cape Town – Clanwilliam – Springbok – Vioolsdrift (– Keetmanshoop, Namibia);
        - N8: Groblershoop – Kimberley – Bloemfontein – Ladybrand – Maseru Bridge (– Maseru, Lesotho);
        - N10: Port Elizabeth – Cradock – Middelburg (EC) – De Aar – PrieSARAO – Upington – Nakop (– Keetmanshoop, Namibia);
        - N12: George – Beaufort West – Kimberley – Klerksdorp – Potchefstroom – Johannesburg – eMalahleni; and
        - N14: Springbok – Upington – Vryburg – Krugersdorp – Pretoria

    - Increase accessibility between the disadvantaged rural areas and Regional Growth Centres. These include:
        - The rural settlement areas within Joe Morolong Local Municipality; and
        - The TRANCRAA settlements within The Richtersveld, Nama-Khoi and Khai-Ma local municipalities

    - Enhancing the interaction between regional development corridors, nodes and zones within Northern Cape by:
        - Enhancing the national and regional connectivity of the N1 route linking Gauteng Mega City Region, Cape Town Mega City Region Greater Bloemfontein/ Botshabelo Urban Region;
        - Providing regional accessibility to the Regional Growth Centres of Beaufort West and De Aar assupported by the Johannesburg-Cape Town railway line
        - N7 route linking Cape Town Mega City Region and Namibia;
        - Providing regional accessibility to the Regional Growth Centre of Springbok
        - N8 linking the Urban Regions of Kimberley and Greater Bloemfontein/ Botshabelo with Upington Regional Growth Centre;
        - N10 linking Upington and De Aar Regional Growth Centres with Namibia and Nelson Mandela Bay Import / Export Node supported by the Port Elizabeth-East London- De Aar- (Hotazel) – Namibia railway lines;
        - N12 linking Gauteng Mega City Region and Kimberley Urban Region and Potchefstroom Regional Growth Centres;

        - N14 linking Gauteng Mega City Region with the Springbok, Upington, Kuruman and Vryburg Regional Growth Centres;
        - A route consisting of:
            - The R63 link between Carnarvon (SARAO) to Calvinia Regional Growth Centre
            - R27 link between Calvinia to Van Rijnsdorp (N7)
            - The R384 link between Carnarvon to Britstown
            - The R373 (Kimberley-Koopmansfontein) - R31 (Koopmansfontein – Hotazel) route supported by the Hotazel- Kimberley- Bloemfontein railway line
    - Consolidating economic activity at strategic locations within development corridors thereby strengthening existing urban areas and nodes;
    - Concentrating investment in areas with potential for sustainable economic development within development corridors;
    - Enhancing the accessibility via road, rail and air within the region and sub region to provide regional access for all communities to existing and future economic opportunities;
    - Distributing, dispersing (trickle down effect) development to other development nodes; and
    - Increase regional accessibility and mobility by:
        - Continuously increasing the mobility function of the all national routes.
        - Continuously upgrading secondary and tertiary routes.
        - The upgrading of border entry facilities.
        - The provision of logistic facilities.

6.2.1.2.2 INTEGRATING GROWING URBAN CLUSTERS AND CORRIDORS WITHIN NORTHERN CAPE PROVINCE

6.2.1.2.2.1 URBAN GROWTH AND TRANSFORMATION IN A NATIONAL AND PROVINCIAL NETWORK OF GROWING URBAN CLUSTERS AND CORRIDORS

The long-term development of Northern Cape Province needs to consolidate development in future growth regions and corridors network supported by a system of Urban Regions and Regional Growth Centres that includes:

- The Urban Region of Kimberley;
- The Regional Growth Centres of:
    - Beaufort West;
    - De Aar/Colesberg;
    - Springbok;
    - Upington;
    - Kuruman; and
    - Calvinia.

6.2.1.2.2.2 DEVELOPMENT ZONES

The following development zones are provided:

A. The SARAO Astronomy Zone;
B. The Gamagara Mining Corridor;
C. The Vaal-Orange Agricultural Zone;
D. Agricultural Corridor Zone 2;
E. Nature Reserve Buffers;
F. Rural Regeneration Zone;
G. Tourism Corridor; and
H. Solar Corridor.

6.2.1.2.3 REGIONAL CONNECTIVITY AND ECONOMIC INFRASTRUCTURE NETWORKS

- Capitalise on existing and extend strategic interregional and national road, rail networks, airports;

- All roads are well surfaced, and key national road routes are prioritised for infrastructure maintenance and investment;
- Rail infrastructure is rehabilitated and expanded to support SADC and national logistic with respect to freight and passenger rail as deemed appropriate. Key focus on rail freight (promoting road to rail freight) to limit impact on road infrastructure;
- Routes, ports, harbours, trade and border posts, logistic hubs for maintenance and extension are prioritised through collaborative and pro-active long-term planning and phasing;
- Logistics hubs, ports (airports and harbours) are maintained and expanded to keep pace with national and regional growth and settlement needs;
- Linkages into the region remain operational and able to cope with increased utilisation.
- Facilities at ports/border posts are important, and should be improved and maintained to reduce delays and costs;

6.2.1.2.4 INFRASTRUCTURE TO SUPPORT WATER AND ELECTRICITY SECURITY AND FLOWS

The maintenance and timely provision and extension of key national energy and water networks to high levels of performance and efficiency should be prioritised. These include:

- Electrical Grid Infrastructure (this includes the use of alternative energy resources) to support economic and residential activity as well as national roads;
- Inter-regional water transfer and storage systems for urban cores and regional anchors/growth regions and settlements in the Northern Cape. These include:
    - The building, expansion, maintenance of dams to enhance water storage under conditions of climate change. Water recycling must be practised in all urban cores and regional anchors/growth regions; and
    - The maintenance and extension of water pipelines water pipelines to key urban cores, anchor towns and geo-specific production sites in line with national priorities and/or trade-offs.

6.2.1.2.5 PRODUCTIVE MINING AND INFRASTRUCTURE NETWORK

The maintenance, expansion and management of the impact of spatial infrastructure to support sustainable mining economy should attend to the following:

- The restricted size of mineral resources limits the life-time of mines. Where mining activity declines, economic diversification is necessary to secure long term sustainable employment;
- Scenario development, population migration projections, diversification strategies and cost considerations for regional infrastructure, municipal service delivery and cumulative impact and opportunities is required for the long-term regional development of new exploration areas;
- Rehabilitation and impact of mining which limits new settlement development; and
- Settlement formation is supported close to Anchor Town or existing small towns where adequate social services are available.
- Mining towns are not to be expanded, rather focus on the transportation of goods and services from Anhor Towns to and from mines. Alignment to the Socio-Economic Potential of Towns is critical to ensure that mining development doesn't cause unnecessary cause future socio-economic challenges for local government.

6.2.1.2.6 MANAGE IMPACT OF LARGE-SCALE LAND DEVELOPMENT CHANGES[17]

The management of large-scale land development changes need to be dealt with in a responsible manner involving national, provincial and local government as well as private sector. Issues that need to be dealt with within the Northern Cape are:

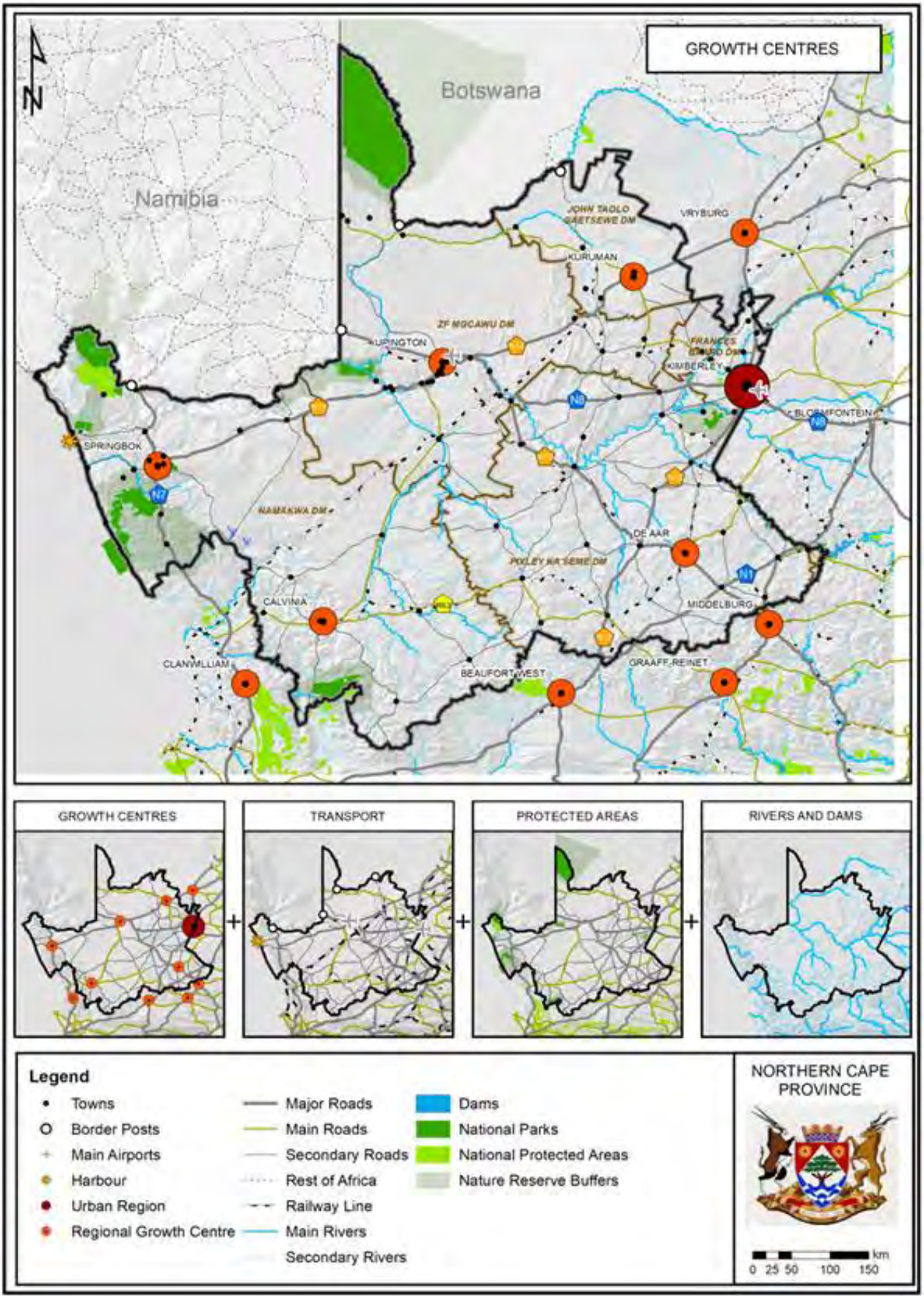
- Land use conflicts involving biodiversity, mining, agriculture and settlements;
- The impact of the SARAO;
- Future sites for storage of toxic or radioactive waste;
- Solar power generation; and
- Issues of National and Provincial Interest.

6.2.1.2.7 ENHANCE EFFICIENCY AND EXTEND ENABLING ECOLOGICAL, CONNECTIVITY (TRADE) AND SOCIAL SERVICE INFRASTRUCTURE

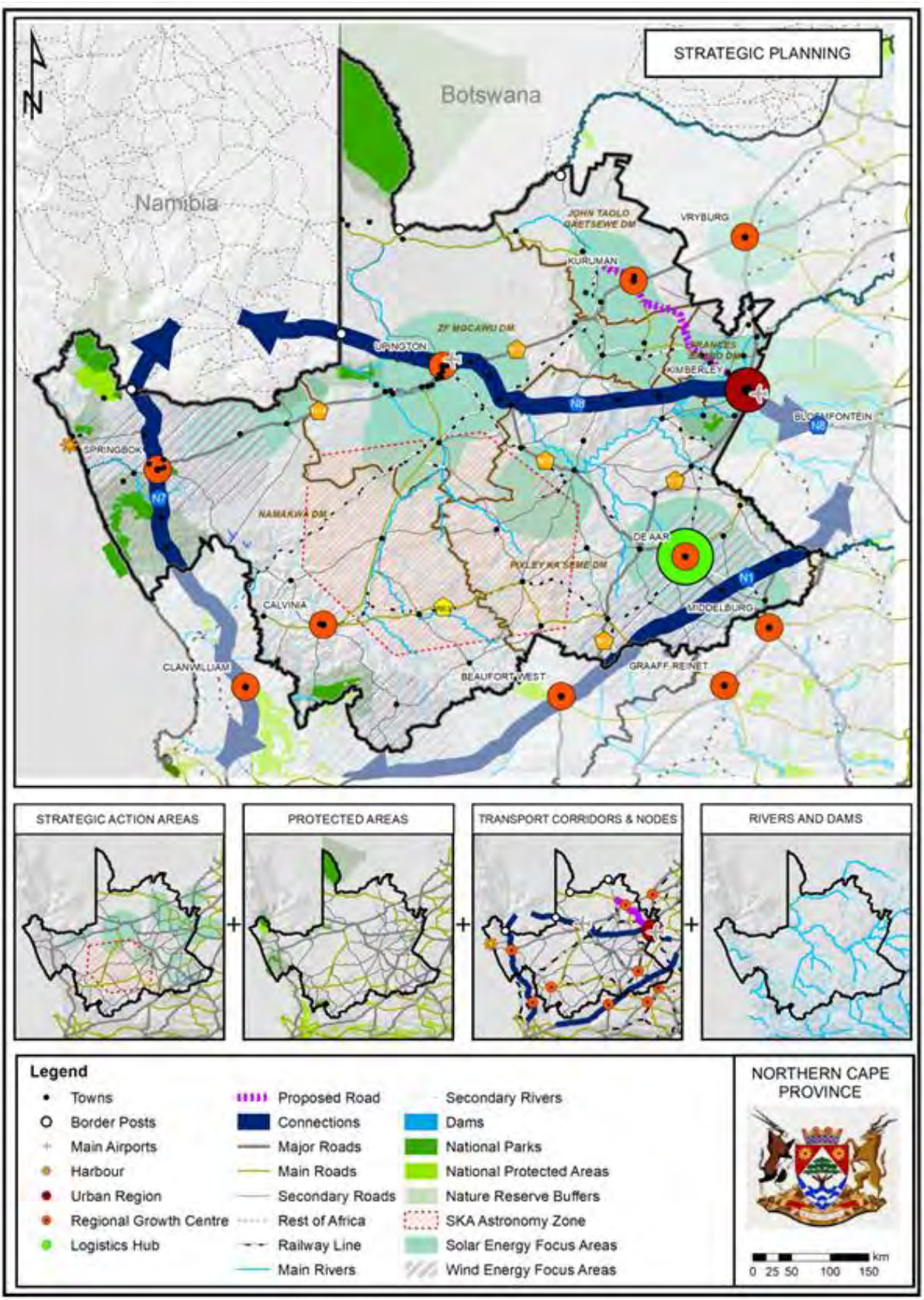
The following national **regional spatial initiative development objectives** need to be achieved:

- The mobility of movement of goods and people within the province promoting trade involving:
    - The strengthening of the transnational development corridors to ensure:
        - The efficient movement of goods;
        - The improvement of the development link between Namibia and South Africa;
        - The improvement of links between developments within Northern Cape Province adjoining provinces; and
        - The enhancement of cross border movement.

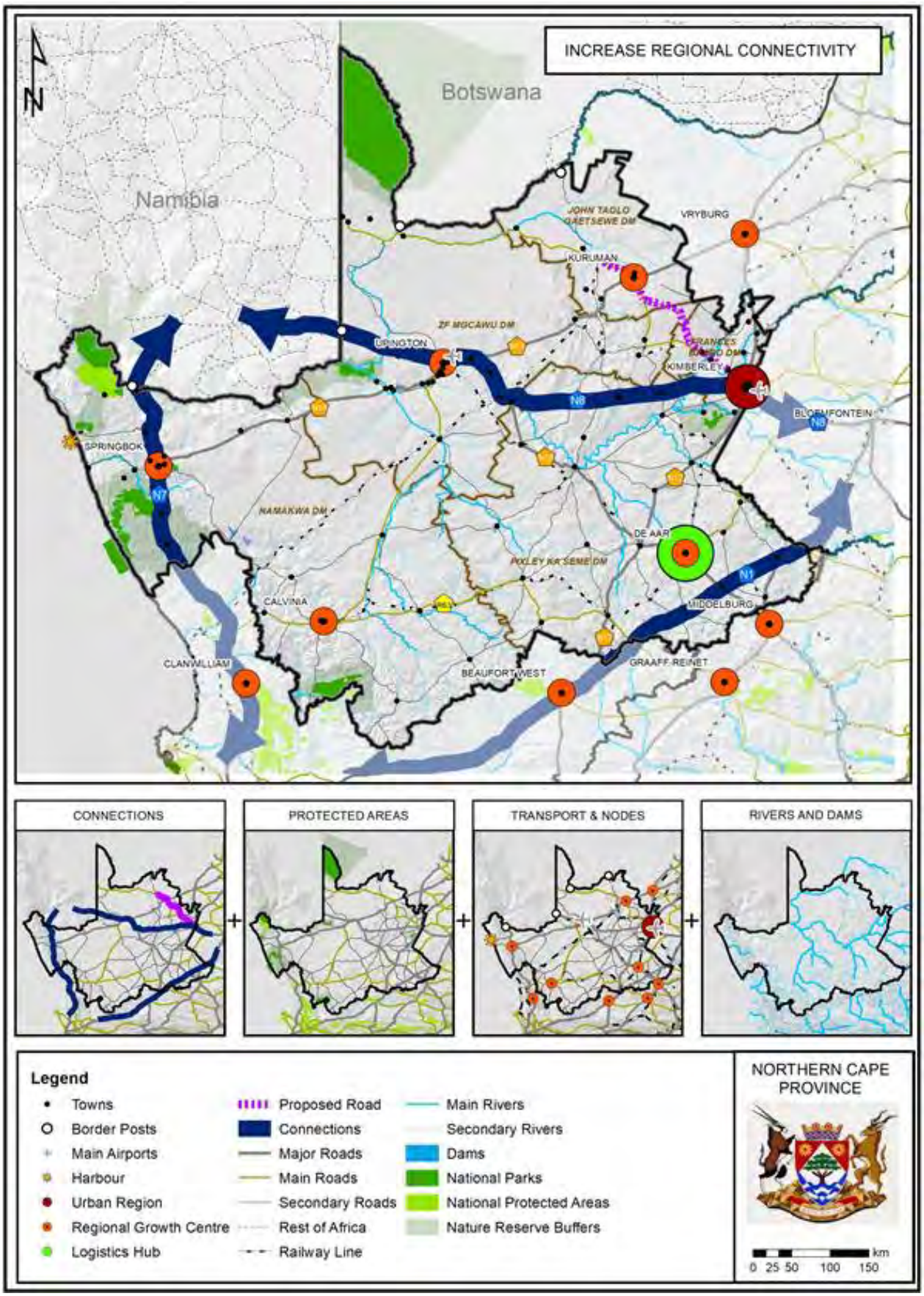
[17] Refer to Planning Toolkits for management guidelines (See Annexure B)



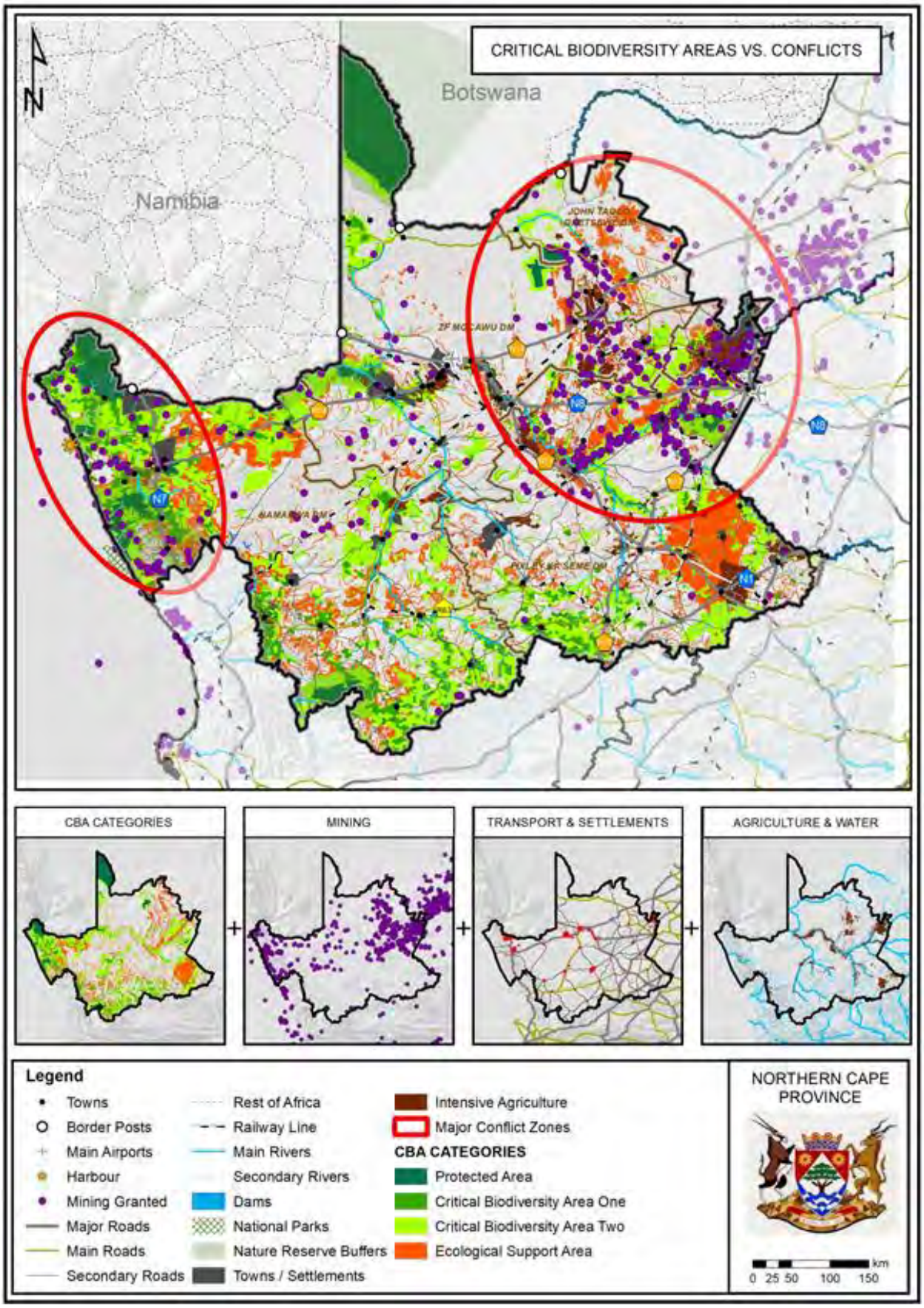
Map 3: Urban Region and Regional Growth Centres



Map 4: Strategic Planning



Map 5: Increase Regional Connectivity



Map 6: CBA's vs. Mining, Agriculture and Settlements

6.2.2 STRATEGIC OBJECTIVE 2: PROTECT AND MANAGE BIODIVERSITY, WATER AND AGRICULTURAL RESOURCES

6.2.2.1 SPATIAL DEVELOPMENT STRATEGIES

Protecting and managing biodiversity, water and agricultural resources needs to support the interventions of the NSDF (Draft), which involve:

- Protecting and managing the protected national and provincial parks, as well as protected ocean areas;
- Expand and further the establishment of the Protected Areas Network;
- Protecting strategic assets;
- Effective use of national protected and nature areas must be ensured, to support rural livelihoods, especially related to custodianship and tourism opportunities;
- Protecting and restoring Priority National Ecological Infrastructure Regions that is of national importance; and
- Protecting high potential and unique agricultural resources.

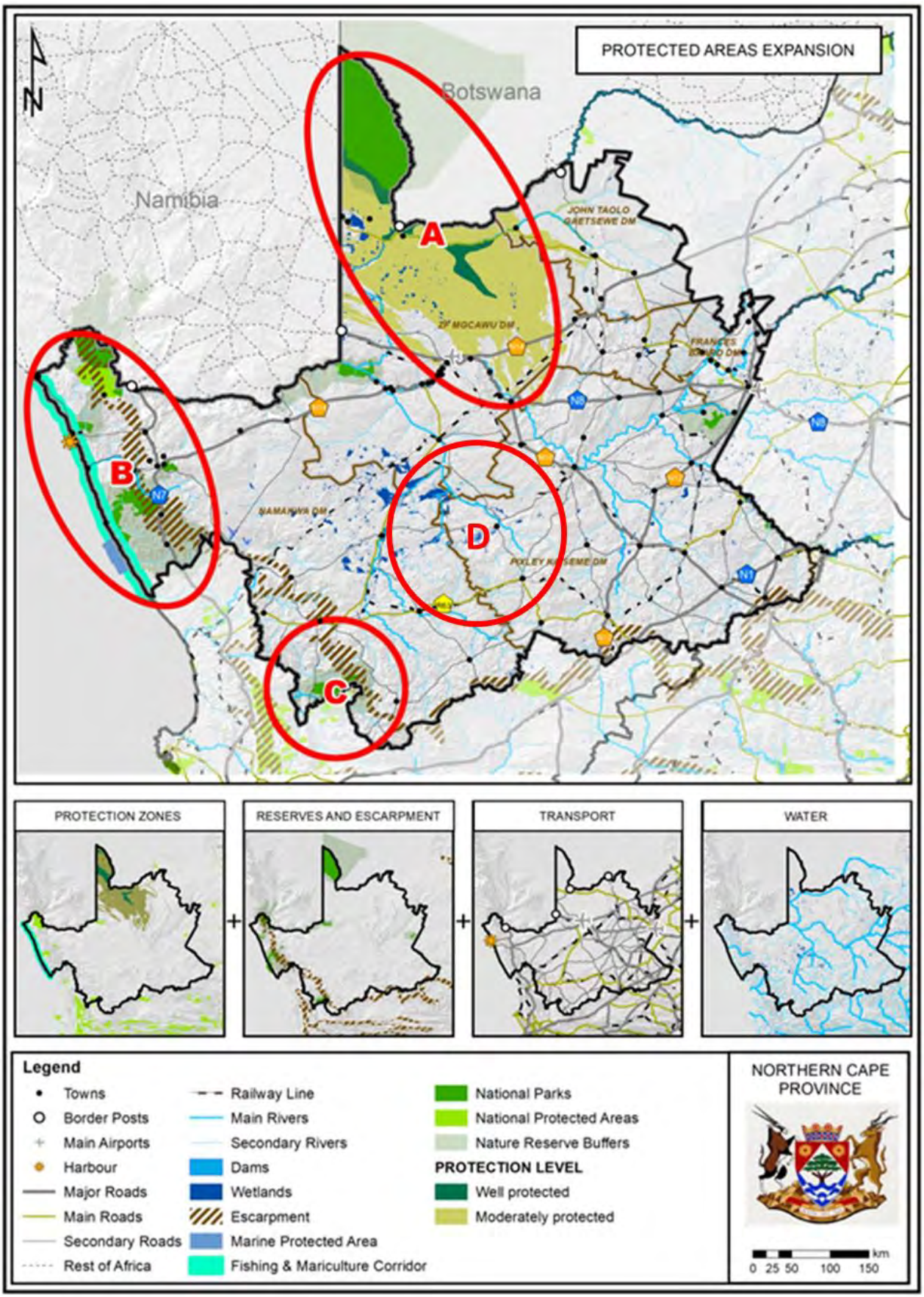
6.2.2.2 STRATEGIC FOCUS AREAS:

The following key issues should be considered, spesifically for areas A-C illustrated on Map 7, as these areas forms the majority of the ecological infrastructure of the Northern Cape:

6.2.2.2.1 PROTECTING AND MANAGING THE PROTECTED NATIONAL AND PROVINCIAL PARKS.

The management of natural assets and development of tourism initiatives enhancing economic and ecological links between regional and national tourism foci areas, include:

- The Ai-Ais/Richtersveld Transfrontier Park consisting of:
    - Richtersveld National Park (South Africa); and
    - Ai-Ais Hot Springs (Namibia).
- The Kgalagadi Transfrontier Park consisting of:
    - Kalahari Gemsbok National Park(South Africa); and
    - Gemsbok National Park (Botswana).
- Augrabies Falls National Park;
- Mokala National Park;
- Namaqua National Park; and
- Tankwa Karoo National Park.



Map 7: Protected Areas Expansion

6.2.2.2.2 EXPAND AND FURTHER THE ESTABLISHMENT OF THE PROTECTED AREAS NETWORK

A Protected Area Expansion Strategy for the Northern Cape (20-year) needs to be formulated for the establishment of a protected areas expansion network through the Protected Areas Act (Act 57 of 2003) to achieve the protection goals of the National Protected Areas Expansion Strategy 2016 including:

- Existing National Protected areas;
- National Fresh Water Protection Areas;
- Transfrontier Parks;
- Biosphere reserves;
- Mountainous areas, largely natural due to slopes and typography; and
- Critical Biodiversity Areas meeting targets as set by the National Biodiversity Framework (NBF) and National Biodiversity Strategy and Action Plan (NBSAP).

The potential Protected Areas are to be included into an expansion strategy are indicated on **Map 7**.

6.2.2.2.3 PROTECTING STRATEGIC ASSETS

6.2.2.2.3.1 STRATEGIC GROUNDWATER AREAS

Strategic Groundwater Areas in the central and arid regions are critical for many towns that are dependent on scarce groundwater sources.

- The Agri – Arid Region in the Northern Cape needs to focus on:
- Aqua Culture;
- Irrigation;
- Mining; and
- Rural enterprise development in game farming and tourism.

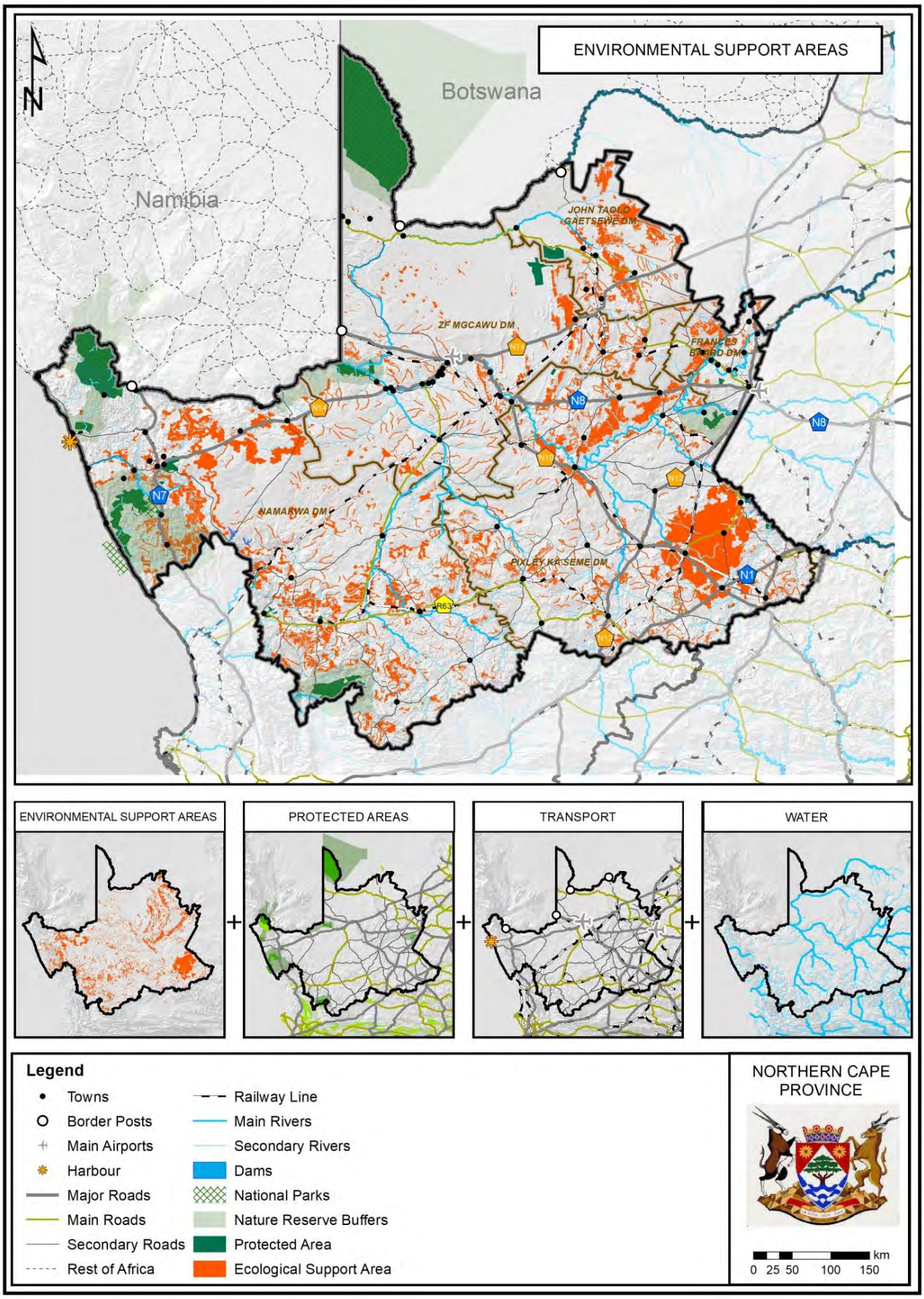
6.2.2.2.3.2 INTER-REGIONAL RESOURCE MANAGEMENT

The following area need to focus on the management of inter-regional catchments:

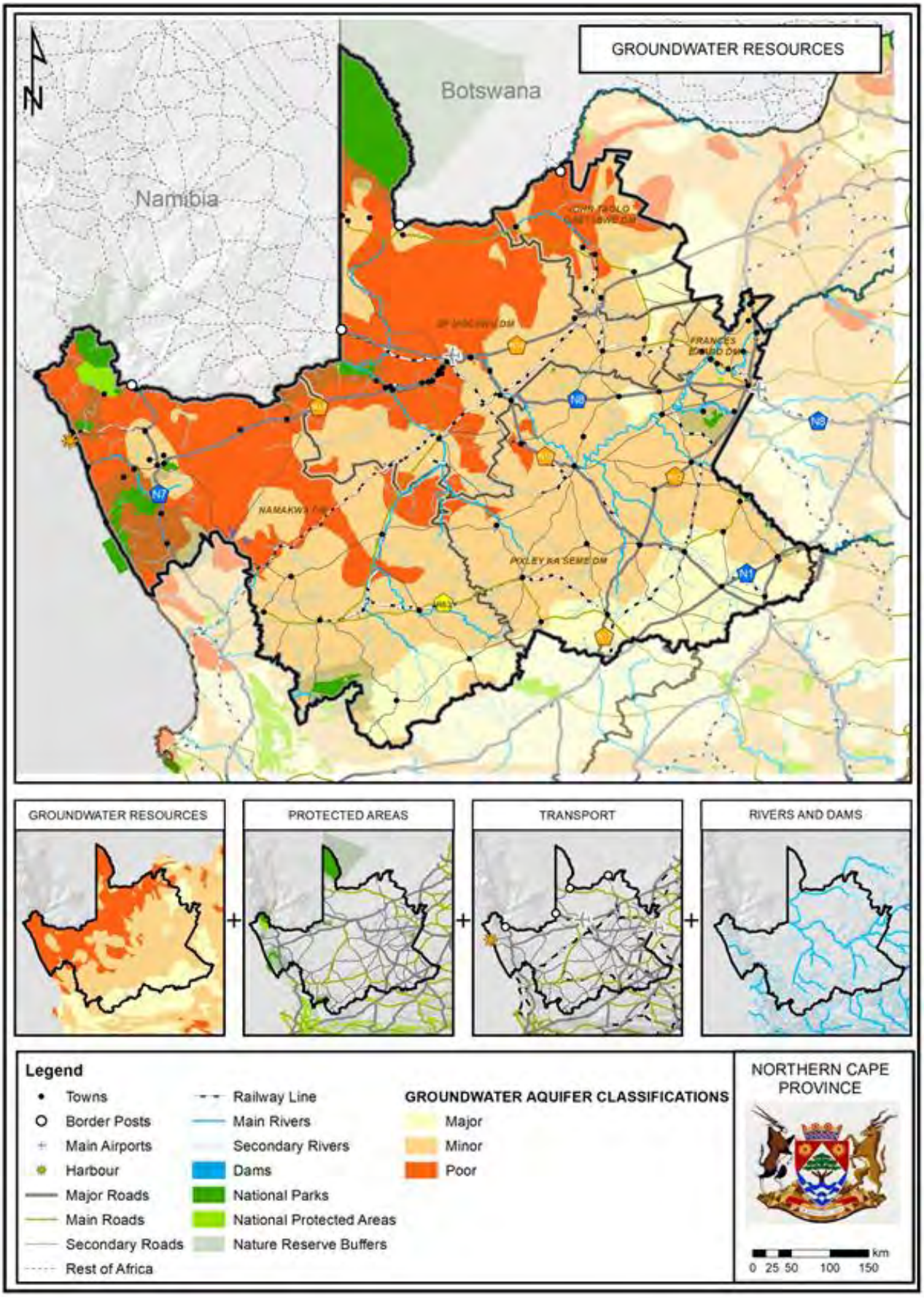
- The Ai-Ais/Richtersveld Transfrontier Park consisting of:
- Richtersveld National Park (South Africa); and
- Ai-Ais Hot Springs (Namibia).
- The Kgalagadi Transfrontier Park consisting of:
- Kalahari Gemsbok National Park(South Africa); and
- Gemsbok National Park (Botswana).

6.2.2.2.3.3 ECOSYSTEM RESOURCE PROTECTION AREAS

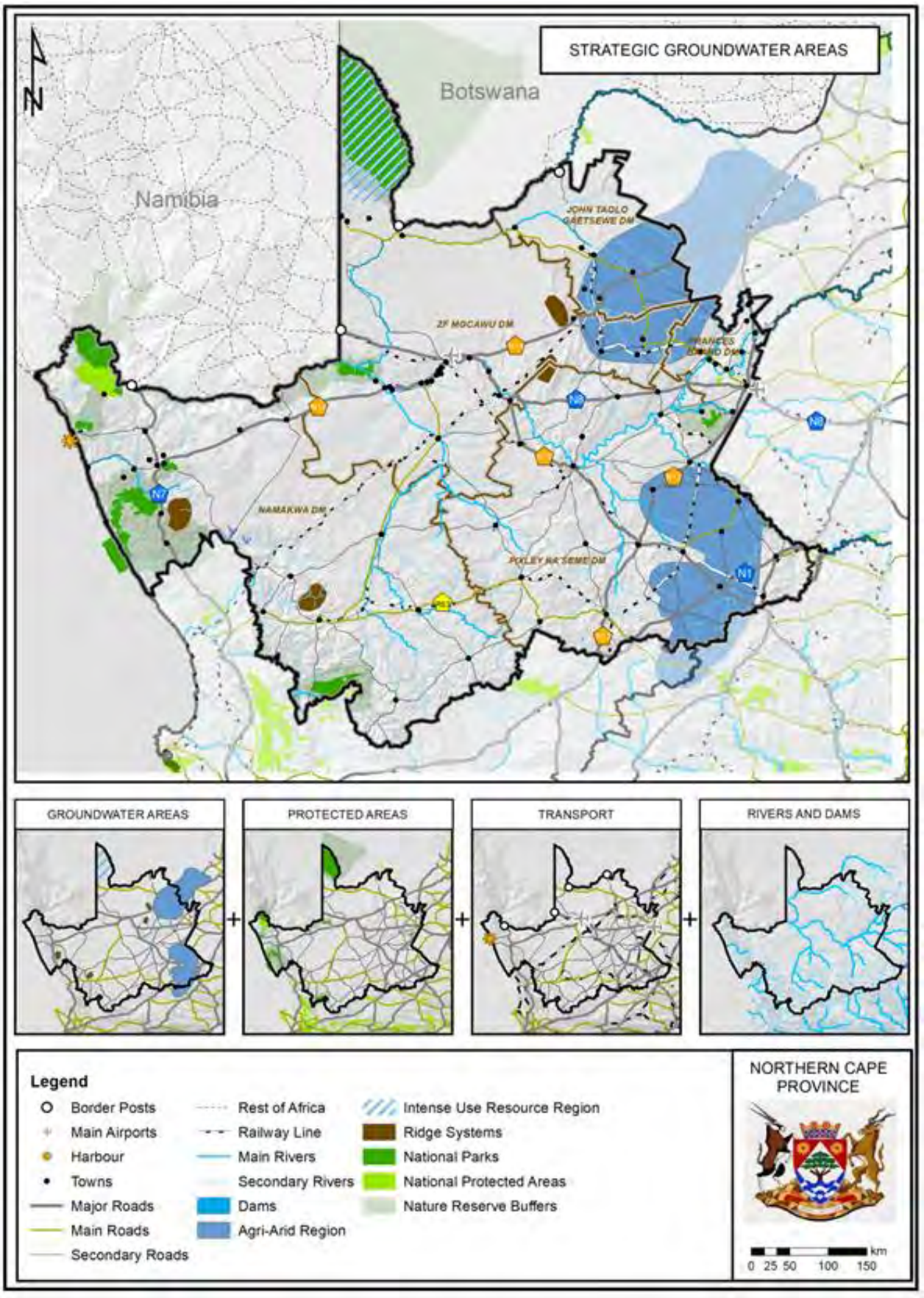
- The ecosystem resource protection areas focus on:
- Protecting pristine natural resource areas; and
- See: Terrestrial Critical Biodiversity Areas.



Map 8: Environmental Support Areas



Map 9: Groundwater Resources



Map 10: Strategic Groundwater Areas

6.2.2.2.3.4 CRITICAL BIODIVERSITY AREAS (CBA)

Critical Biodiversity Areas are irreplaceable, which means there are no other places in the landscape where the conservation and ecological objectives associated with those CBA's can be met. Protected areas and CBA's as primary biodiversity or environmental areas, needs to be conserved and expanded where possible to meet targets as set by the National Biodiversity Framework (NBF) and National Biodiversity Strategy and Action Plan (NBSAP). Land Management Objectives need to be incorporated into municipal SDF's and Land Use Schemes (LUS's). See **Table 51** below for a framework for linking the spatial planning categories (CBA Map categories) to land use planning and decision-making guidelines at a strategic level.

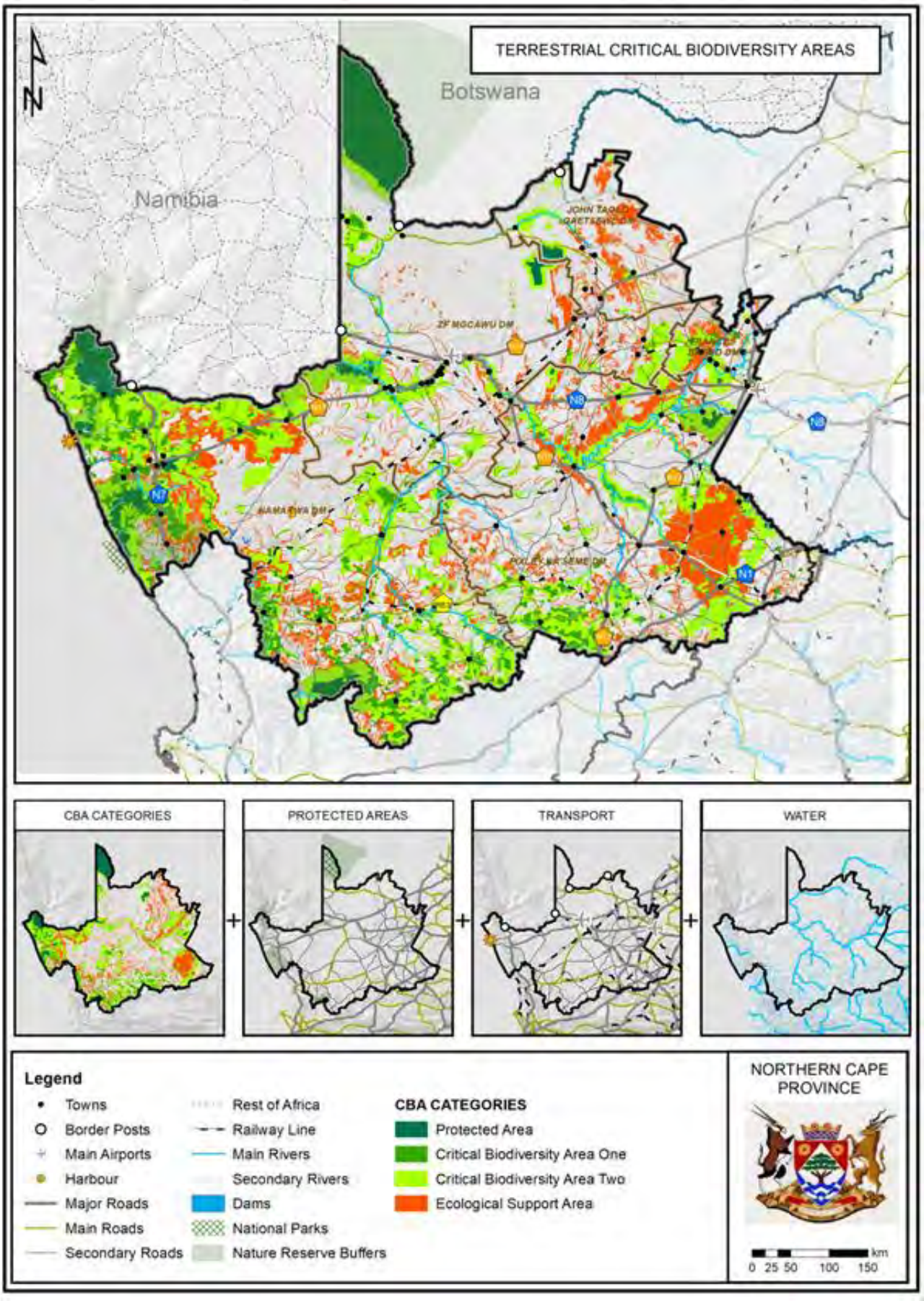
Table 51: A Framework for Linking the Spatial Planning Categories (CBA Map Categories) to Land Use Planning and Decision-Making Guidelines

CBA MAP CATEGORY	LAND MANAGEMENT OBJECTIVE
Protected Areas & Critical Biodiversity Area 1 (CBA1)	***Maintain as natural conservation or production landscapes that maximize the retention of biodiversity pattern and ecological process:*** • Ecosystems and species fully intact and undisturbed • These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be obtained. • These are landscapes that are at or passed their limits of acceptable change.
Critical Biodiversity Area 2 (CBA2)	***Maintain as near-natural production landscapes that maximize the retention of biodiversity pattern and ecological process:*** • Ecosystems and species largely intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets. • These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Area 1 (ESA1)	***Maintain as ecologically functional landscapes that retain basic natural attributes (generally natural or near-natural areas)***: • Ecosystem still in a natural or near-natural state and has not been previously developed. • Ecosystems moderately to significantly disturb but still able to maintain basic functionality. • Individual species or other biodiversity indicators may be severely disturbed or reduced. • These are areas with low irreplaceability with respect to biodiversity pattern targets only.
Ecological Support Area 2 (ESA2)	***Maintain partly-functional ecologically landscapes that retain some natural attributes (generally cultivated areas)***: • Maintain current land use or restore area to a natural state • Ecosystem NOT in a natural or near-natural state and has been previously developed (e.g. ploughed). • Ecosystems significantly disturbed but still able to maintain some ecological functionality. • Individual species or other biodiversity indicators are severely disturbed or reduced and these are areas with low irreplaceability with respect to biodiversity pattern targets.

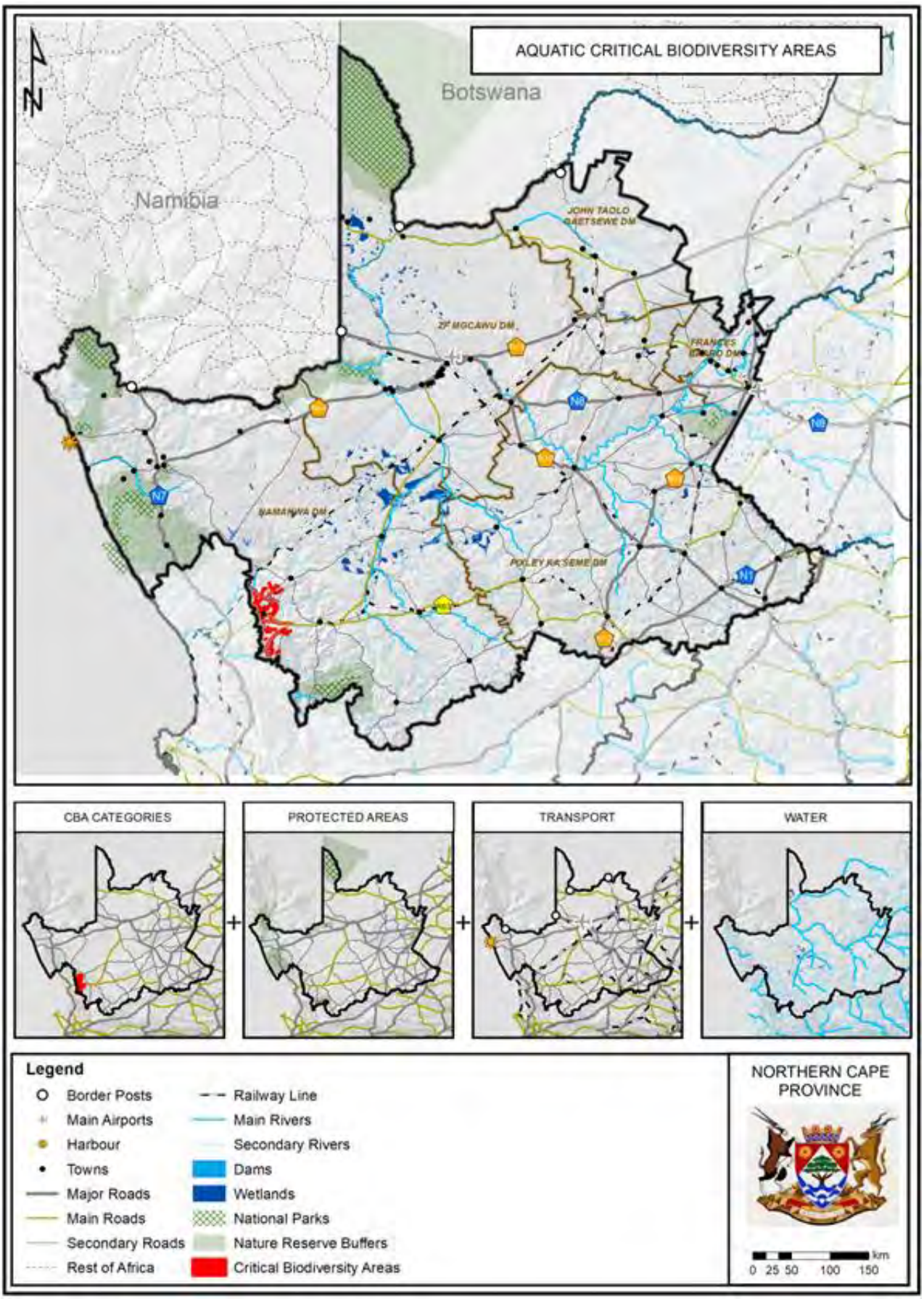
CBA MAP CATEGORY	LAND MANAGEMENT OBJECTIVE
Other Natural Areas and No Natural Habitat Remaining	***Production landscapes***: manage land to optimise sustainable utilization of natural areas.

Table 52: Alignment towards the Spatial Planning Categories (SPC's)

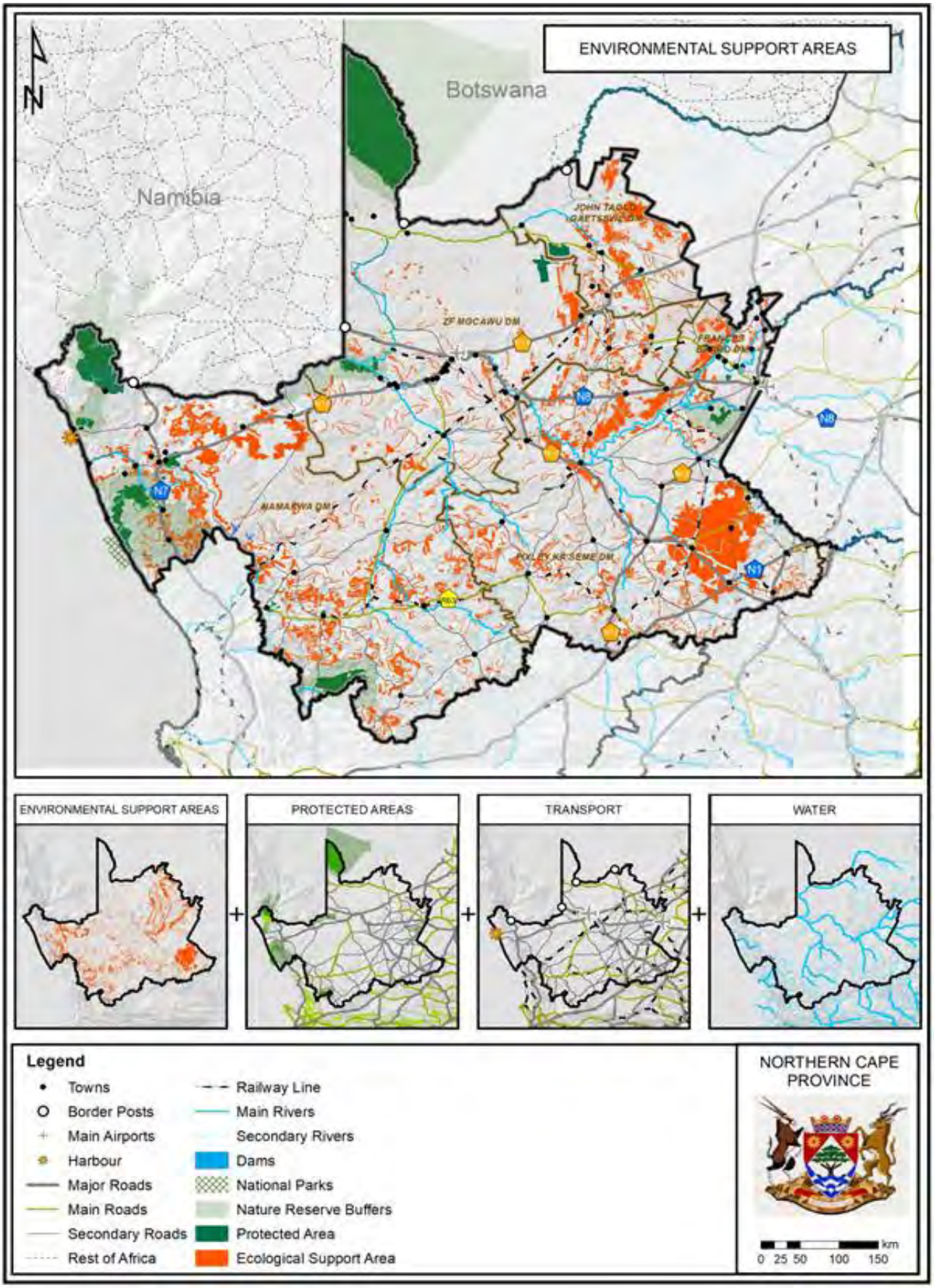
SPC	BIODIVERSITY PLAN CATEGORY	COMPATIBLE LAND USES
A.a, B.b	**CBA irreplaceable**	• Conservation and associated activities (e.g. eco-tourism operations) and required support infrastructure.
B.a, B.c	**CBA optimal**	• Existing agricultural practises including arable agriculture; • Eco-tourism, game farming, extensive livestock production is most suited; • Conservation and associated activities; • Extensive game farming and eco-tourism operations with strict control on environmental impacts and carrying capacities, where there is an overall gain; • Extensive Livestock Production; • High impact and other development options are not necessarily excluded, but if allowed, must not compromise ecological integrity; • Urban Open Space Systems; and • Required support infrastructure for the above activities.
B.c	**ESA 1**	• Conservation and associated activities. • Extensive game farming and eco-tourism operations. • Extensive Livestock Production. • Urban Open Space Systems. • Low density rural residential, smallholdings or resorts or other developments where development design and overall development densities allow maintenance of ecological functioning.
B.c	**ESA 2**	• Existing activities (e.g. arable agriculture) should be maintained, but where possible a transition to less intensive land uses or ecological restoration should be promoted/favoured.
C.a	**Other natural areas**	n/a
C.b , Da – Dr, Ea – Ee, Fa – Fl	**Transformed**	n/a



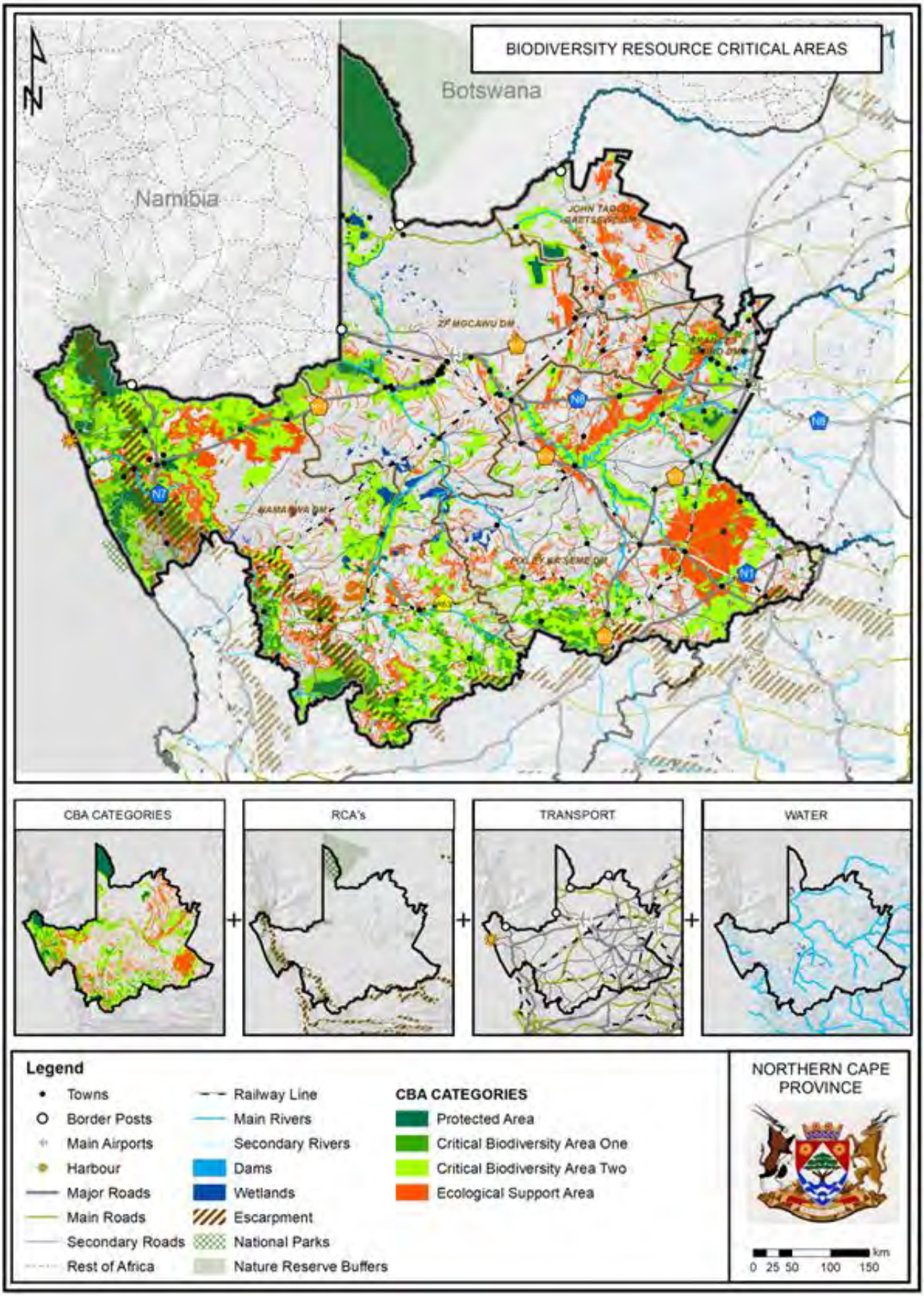
Map 11: Terrestrial Critical Biodiversity Areas



Map 12: Aquatic Critical Biodiversity Areas



Map 13: Environmental Support Areas



Map 14: Biodiversity Resource Critical Areas

6.2.2.2.4 ECOLOGICAL SUPPORT AREAS (ESA'S)

Good management of the region's water resources, especially the ecological infrastructure that delivers this invaluable resource, ensuring the following:

- Maintaining the water recharge for water resource areas. Dolomitic aquifers acting as sponges absorbing rainfall and providing valuable sub-terranean (underground) water reservoirs. Land use activities in these landscapes must not interrupt (reduce) or degrade (water quality) recharge of these aquifers.

In addition to the river and wetland features, other important areas for water-related processes include:

- Wetland systems, which plays a key regulatory role in the hydrology of the province by:
- absorbing and storing freshwater;
- maintaining and moderating the flow of rivers;
- improving water quality;
- maintaining the ecological and structural integrity of river systems; and
- buffering surrounding landscapes (and associated land uses) from flooding

6.2.2.2.5 THE PROTECTION OF HIGH POTENTIAL AND UNIQUE AGRICULTURE LAND AGAINST DEVELOPMENT.

The available large-scale agricultural land will need to be protected from being encroached by settlements; this can be done through proper zoning of these land parcels to prevent loss of good agricultural and production potential. Along with government, rural authorities can play a significant role towards achieving this as such that they need to be involved (in their capacity as custodians of land) in relevant workshops or meetings to ensure that agricultural land is protected and only utilized for sustainable agricultural production.

Poor resource (veld) management such as overstocking, the development of land for settlement (mainly in land reform projects) and other non-agricultural uses has led to the loss of significant areas of good agricultural land leaving land degraded and unproductive. The Department of Agriculture, Environmental Affairs and Rural Development has a responsibility to protect agricultural land from development that leads to its alienation from its primary purpose or to the diminishment of productivity. Thus, the protection of good agricultural land within the Northern Cape Province should be based on the following policy principles:

- Any proposal for non-agricultural development on agricultural land should be subject to an application[18] made to, and assessed by, the Department of Agriculture in terms of the Sub-division of Agricultural Land Act, (Act No. 70 of 1970);
- The preparation of planning schemes should include an evaluation of alternative forms of development, and significant weight should be given to those strategies which minimise the impacts on good quality agricultural land;
- The Land Use Scheme should aim to minimise cases where incompatible uses are located adjacent to agricultural operations in a manner that inhibits normal farming practice. Where such instances do arise, measures to amend potential conflicts should be devised; and
- The land use scheme should provide for a hierarchy of agricultural zones based on the agricultural development potential and impact of non-agricultural activities on agricultural

[18] This does not exclude the application for any change in land use as required by SPLUMA through the relevant Municipal Planning Bylaws.

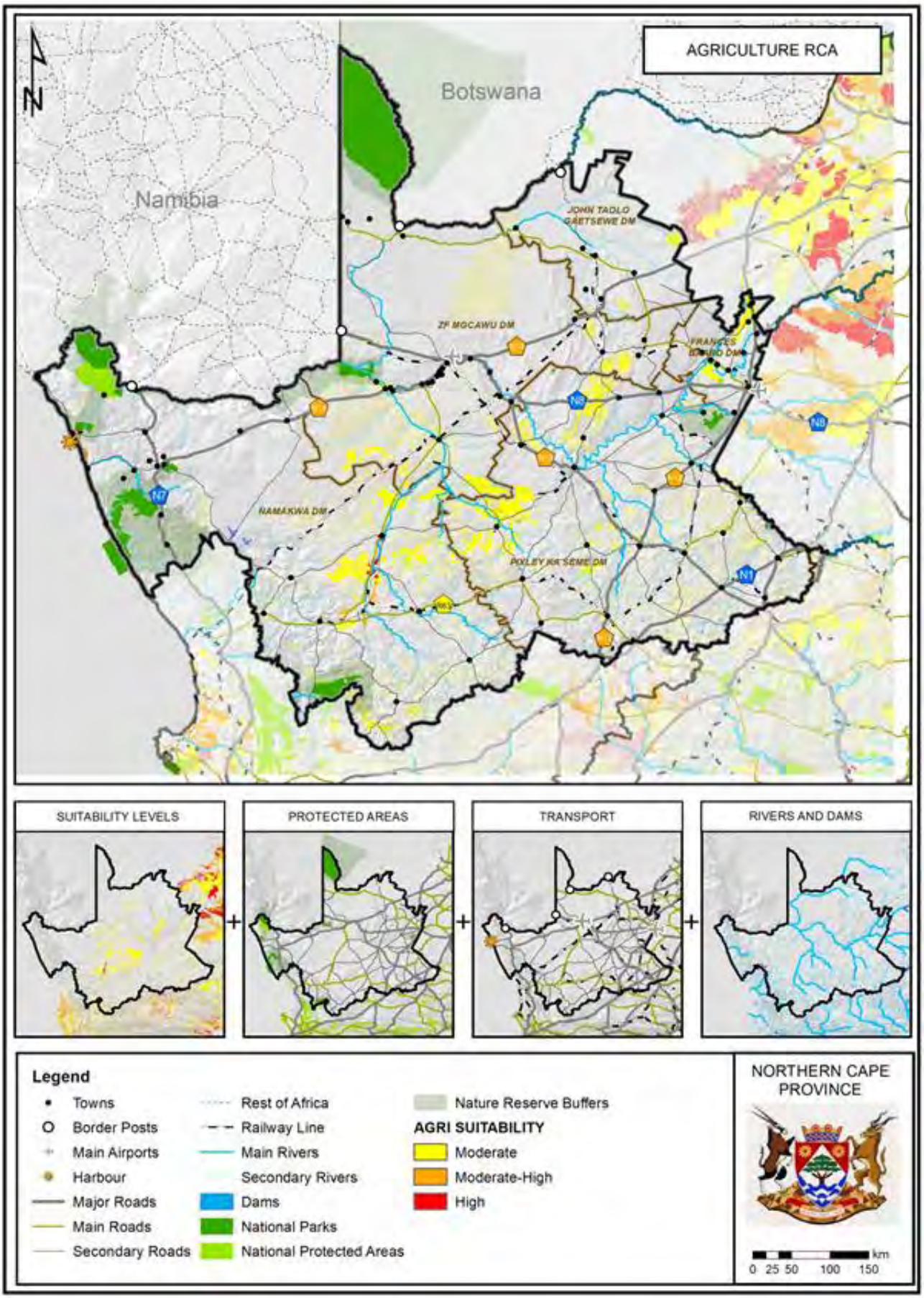
land. Non-agricultural activities such as agri-tourism and game farms with themed estates or lodges, resort developments, etc. should be located on land with low agricultural potential.

Agricultural potential should be used to establish agricultural zones in terms of the land use scheme and provide for a continuum of agricultural zones ranging from predominantly agriculture only zones to zones that allows for a mixture of agricultural and non-agricultural uses. The following criteria may be used in this regard:

- High potential agricultural land should be used for mainly agricultural activities. However, limited non-agricultural uses may be permitted especially along the corridors and within the designated development nodes. Conservation should form part of a drive to protect and enhance the quality of agricultural land. Irrigated land along the river corridors should be protected equally; and
- Low potential agricultural land should be subjected to tourism and low intensity agricultural uses. Most of it is degraded and prone to soil erosion.
- Investigate the potential for urban agriculture in redundant structures.

Management of Agricultural Areas should take cognisance of the following

- Empowering traditional leaders in respect of the consequences of allocating land for settlements in agricultural lands;
- proper disposal of sewage from human settlements to prevent run-offs to nearby water sources;
- organic farming encouraged;
- promotion of urban and smaill scale farming in settlement areas; and
- stimulating the formation of land care groups.



Map 15: Agricultural Resource Critical Areas (RCA)

6.2.3 STRATEGIC OBJECTIVE 3: INFRASTRUCTURE INVESTMENT

To maintain a balance between investments aimed at **meeting the social needs of communities**, and **investment aimed at promoting economic development[19] and job creation.**

6.2.3.1 SPATIAL DEVELOPMENT STRATEGIES

6.2.3.1.1 BASIC INFRASTRUCTURE.

- Ensure efficient supply of water, electricity and waste management services to sustain and maintain additional industry growth;
- Eradicate backlogs in water and sanitation, electricity, housing;
- Improve and maintain basic services; and
- Provide green infrastructure e.g. water tanks, renewable energy (e.g. solar).

6.2.3.1.2 SOCIAL INFRASTRUCTURE.

- Social infrastructure/facilities include education, health and emergency services, social and cultural facilities, social services, civil services, and recreational infrastructure;
- 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;
- Promote equitable access to social services for all communities and contribute to the development of integrated and sustainable human settlements through the application of norms and standards for social infrastructure requirements; and
- Ensure that sufficient land is reserved for these essential facilities.

6.2.3.1.3 ECONOMIC INFRASTRUCTURE

- Focus on projects identified as Strategic Infrastructure Projects (SIPs); and
- Concentrate investment in areas with potential for sustainable economic development.

6.2.3.2 STRATEGIC FOCUS AREAS

6.2.3.2.1 BASIC INFRASTRUCTURE

To provide basic infrastructure in support of the social needs of communities.

6.2.3.2.1.1 WATER INFRASTRUCTURE

Addressing the challenges in water resource, water source and water services of:

Table 53: Water Resource management

INFRASTRUCTURE	ADRESSING THE CHALLANGES
On-site Sanitation	Enhance the operation and management of existing sanitation installations in all municipalities focusing on: • Municipalities with the highest number of households with on-site sanitation; • Municipalities with a high risk to groundwater sources (if the water table is high and human health if groundwater sources are used for consumption) focusing on municipalities with the highest number of households reliant on groundwater as source.
Ground Water Quality	Attend to ground water quality in all regions focusing on areas where problems with groundwater quality are experienced
Ageing Infrastructure	Replace ageing infrastructure in all municipalities

[19] Also refer to the recommendations made in the Socio-Economic Potential of Towns study. Infrastructure investment should consider both the socio-economic needs of residents as well as the economic viability of towns. Congnisance towards the return on public investment is required.

INFRASTRUCTURE	ADRESSING THE CHALLANGES
Illegal Connections and Informal Settlements	Reduce illegal connections by: • Providing at least basic levels of services to all consumers; and • Upgrading / relocation of informal settlements which tend to be closer to urban areas. Thereby: o Ensuring sustainable and adequate water provision to consumers; o Reducing the risk (health) of consumers of exposing the pipelines and content to the environment; o Increasing water volumes supposedly allocated for a certain number of consumers. Maintaining pressure in the water supply pipelines; and o Increasing revenue in contributing metered water consumption.
Rural Areas	Attend to the increasing maintenance costs and staff availability due to the large distances required to travel to and from settlements or components such as pump stations or reservoirs.

Exploit Spatial Opportunities linked to the use, development and protection of the water sources within the Northern Cape Province.

Table 54: Protection of water resources

INFRASTRUCTURE	ADRESSING THE CHALLANGES
Groundwater Development including:	• The development of areas that are underlain by high-yield water potential dolomitic geological formations to ensure at least basic water supply to all consumers (including settlements and livestock production areas); • The development of regional groundwater schemes and improvement of existing groundwater supply in areas such as: • Areas where mining operations are active, where dewatering of mines can also be investigated as an opportunity to augment water supply to domestic consumers. • Water development to support agricultural activities such as crop production and livestock to enhance the economic status of people and encourage further infrastructure developments; and • The development and implementation of suitable groundwater management and monitoring programmes by the WSA's in the NWP starting with metering of water abstractions and water use. This would assist greatly in developing water balances for the aquifers utilised for domestic consumption.
Surface Water Development including the further development of:	• Surface water sources for water use in the larger catchment areas; • Improved operating rules of water resources; • Dams along with smaller water bodies and rivers for recreational use and to promote further tourism development; and • Awareness to conserve and protect the natural resources and attract further investment into the Northern Cape Province.
Water Conservation and Water Demand Management	Achieving sustainable water supply and sanitation services by utilising local water sources, optimising existing infrastructure and conservation of the water resources by: • Industries and mining including: o Recycling to ensure re-use of water in mining process and limited release of effluent. o Utilising treated effluent from WWTW, reducing therefore their need for potable water and creating a revenue stream for municipalities • Improved efficiency measures by the irrigation sector such as refurbishment of canals and improved irrigation technology making more water available for other developments (urban, agricultural, industrial, etc.).

INFRASTRUCTURE	ADRESSING THE CHALLANGES
	• Improved control of water spillage in irrigation systems, this can be mitigated with projects such as the Vioolsdrift Dam[20] initiative. • The overall management and operation of water resources in a particular catchment area, or in shared water courses.
Surface water quality	As the Orange and Vaal tributaries do not originate within the boundaries of the province, cross boundary collaboration is required to ensure all effluent released by Local Municipalities and users adjacent to the river systems comply with the required and applicable policy and legislation standards.
Water Re-Use	The re use of water **MUST** be done: • Some wastewater treatment works in the district have a fairly large treatment capacity for the re-use of treated effluent by the municipality or other (such as for irrigation or industrial users) consumers; • New wastewater works or the upgrading of wastewater works need to consider this option in the designing thereof; and • Keeping and maintaining the operational standards of the WWTW at a low risk.
Urban Development	Densification and infill development need to be considered in urban development: • To provide more cost-effective services to a larger portion of the population; • To allow for existing infrastructure upgrades versus the extension of infrastructure to new areas; and • To reduce the extent of suitable land required for urban development as this poses a challenge for many municipalities. • To adopt improved water re-use and harvesting of water policies in towns.
Irrigation Efficiency	Savings from irrigation efficiency[21] should be achieved in the following irrigation areas: • The Vaal-Harts Irrigation Scheme; • The Noordoewer/Vioolsdrif Irrigation Scheme; • Kakamas Irrigation Scheme; and • Boegoeberg Irrigation Scheme.
Rainwater and Greywater Harvesting	Water harvesting to assist in alleviating the water requirements from formal water supply infrastructure must include: • Households equipped with rainwater harvesting tanks; • Raw water for non-potable purposes such as cleaning, washing of clothes or watering the garden. • Re-use of purified effluent for irrigation purposes (e.g Hydroponic systems)
Water for Development: Tourism and Recreation	Dams, pans and rivers forming part of conservation areas must be developed to ensure the protection of the water and the surrounding environment.

6.2.3.2.1.2 ENERGY INFRASTRUCTURE

Energy infrastructure within Northern Cape Province must be provided in terms of the Integrated Resource Plan (IRP) intended to drive all new generation capacity development. The Long-term Electricity Planning goal is to ensure sustainable development considering technical, economic and social constraints and externalities. The provision of bulk electricity by Eskom within Northern Cape Province in terms of the Integrated Resource Plan (IRP) needs to:

[20] The main purpose of the dam would be to control spillage from the Orange River into the Atlantic Ocean. Currently there is no control structure along the Orange River downstream of Vanderkloof Dam - approximately 1 400 km upstream. As a result, if more water than needed by the downstream users is released from Vanderkloof Dam, it will simply run into the ocean and be lost. A new dam and reservoir at Vioolsdrift would provide the needed storage with which to control the flows to the river mouth and in so doing, reduce the spillages through the river mouth to only those required for the environment.

[21] Irrigation efficiency includes to revision of commodity types used in each scheme as well as the types of irrigation systems used to improve water usage.

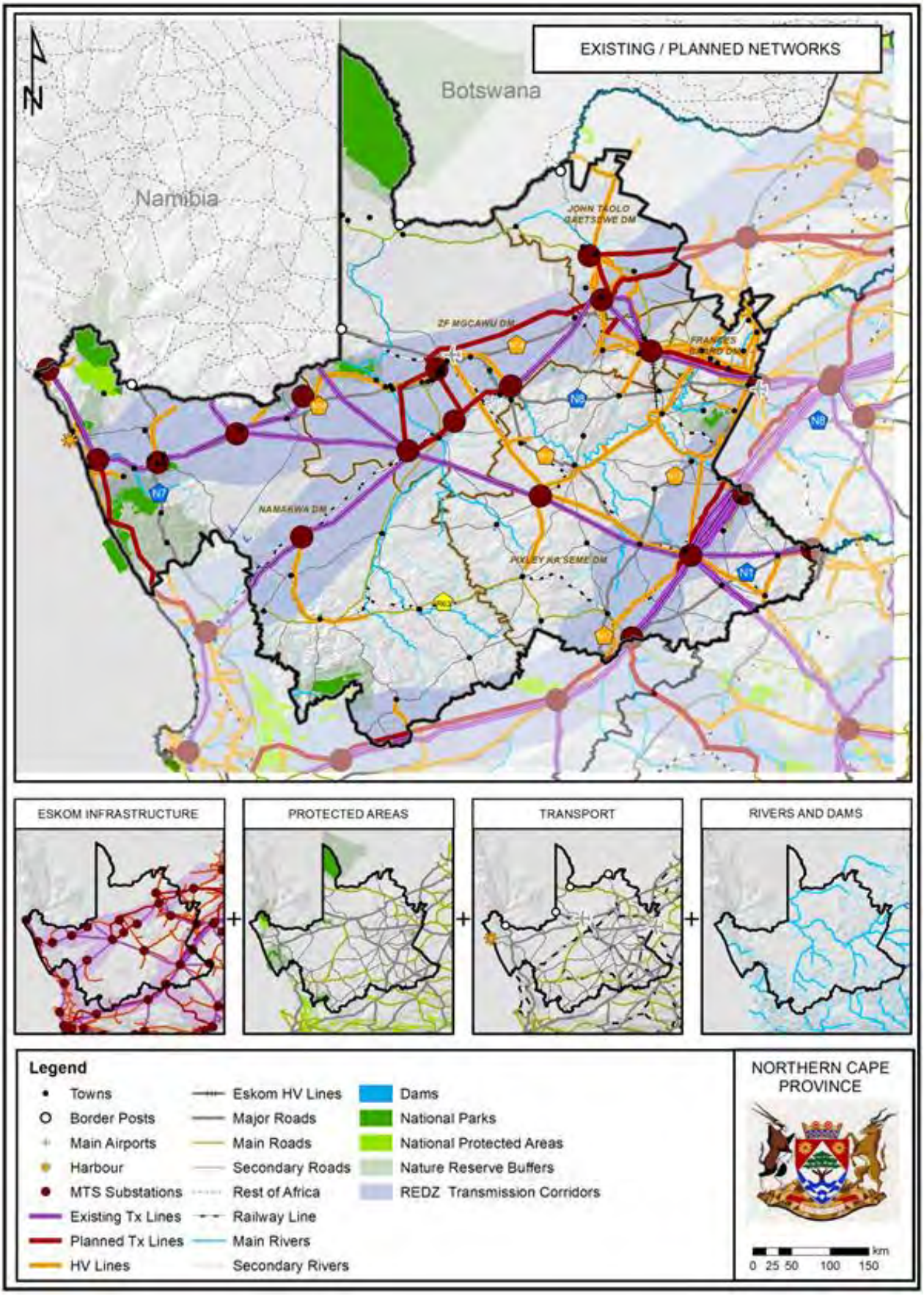
- Identify the requisite investments in the electricity sector that allows the province and country to meet the forecasted demand;
- Identify opportunities for off-grid electrical provision of towns to promote local economic development (In this regard amendments to the Integrated Resource Plan (IRP) is required to promote off-grid networks for towns);
- Be implemented in terms of a Strategic Grid Plan (20 years updated every 2 - 3 years), which formulates long term strategic transmission corridor requirements;
- Be implemented in terms of The Transmission Development Plan (TDP) [22](10 years) representing the transmission network infrastructure investment requirements mainly for the introduction of 400 kV lines and transformation to support or relieve the existing networks;
- Be implemented in accordance to the spatial proposals and recommendations made in the PSDF; and
- Transmission power corridors[23] and substations to provide a flexible and robust network that could respond and meet the needs of future Independent Power Producer and IRP Integrated Resource Plan requirements.

Distribution to all consumers and households by Eskom and municipalities within Northern Cape Province needs to prioritise:

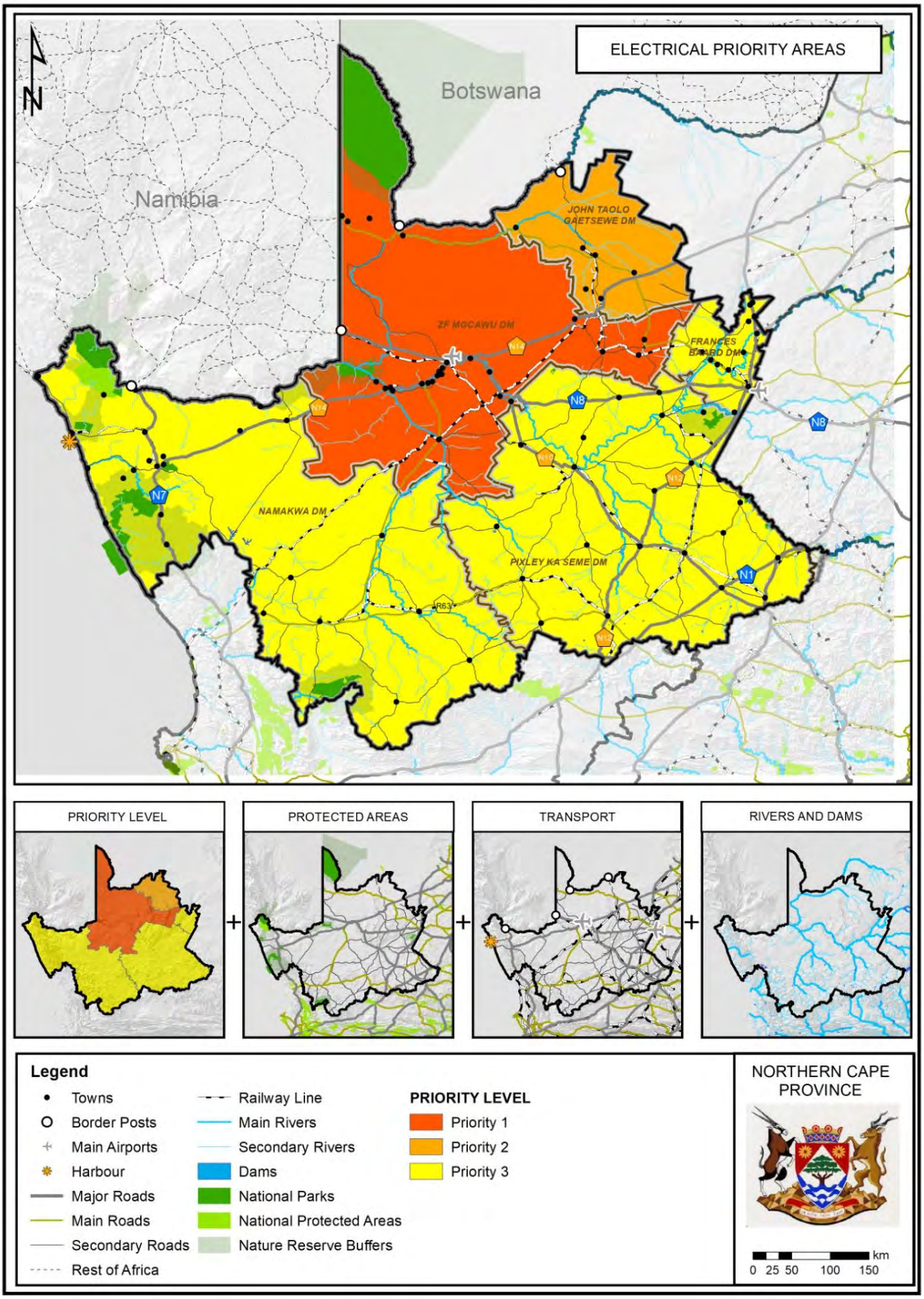
- Areas of high economic activity;
- The Socio-Economic Potential of Towns; and
- Households within rural areas where access is relatively low (preference to the use of solar systems is required).

[22] *Eskom Transmission Development Plan 2018-2027*

[23] *The installation and development of electricity distributuion lines are to respect the SPC's – the shortest route is not necessarily the preferred route / esthetics of distribution lines – protection of tourism areas and vistas (sightlines) – e.g not on top of a hill*



Map 16: Existing and Planned Transmission Power Corridors



Map 17: Electricity Priority Areas

6.2.3.2.1.3 SOCIAL INFRASTRUCTURE

The provision of social infrastructure needs to attend to the following:

- Improve and maintain education, health, sport facilities, etc;
- Eradicate backlogs and improve social infrastructure in accordance to the Northern Cape Socio-Economic Potetial of Towns Study;
- Provide public and non-motorised transport and facilities to improve accessibility to urban functions and job opportunities;
- Implement norms and standards for the provision of education facilities;
- Develop and implement a comprehensive infrastructure plan, responsive to needs by 2040, to produce an environment conducive for the public to access health services;
- To eradicate backlogs and improve education:
- Distribute the tertiary educational advantages provided by the Sol Plaatje University to other educational institutions including schools in the Northern Cape Province (Edcuational programs are to extend towards towns where specialised skills are required, such as an engineering related faculty in Kuruman to address the skills gaps in the mining and manufacturing environment, a similar approach is required in the renwable energy sector to be based in Upington);
- Distribute the provision of other tertiary education and artisan training facilities to all primary and secondary nodes;
- Initiate alternative utilisation of facilities e.g. underutilised schools; and

The aim is to deliver better quality health care (upgrade and maintain facilities) in accordance with the priority areas identified in the Socio-Economic Potential of Towns Study:

- Construct new clinics with accommodation;
- Construct new accommodation for personnel;
- The quality of health services: consolidate and expand the implementation of the health system;
- By improving district hospitals and primary health care facilities;
- By improving human resources; and
- Revitalise healthcare infrastructure.

6.2.3.3 TARGET INVESTMENT ON ECONOMIC INFRASTRUCTURE:

6.2.3.3.1 SUPPORTING THE FOLLOWING DEVELOPMENT CORRIDORS AND REGIONAL ZONES:

A. The SARAO Astronomy Zone;
B. The Gamagara Mining Corridor;
C. The Vaal Orange Agricultural Zone;
D. Agricultural Corridor Zone 2;
E. Nature Reserve Buffers;
F. Rural Regeneration Zone;
G. Tourism Corridor; and
H. Solar corridor.

6.2.3.3.2 SUPPORTING ACTIVITY NODES INCLUDING:

Table 55: Targeted investment on economic infrastructure: activity areas

ACTIVITY AREA	DESCRIPTION
Urban Region	• The Urban Region of Kimberley
Regional Growth centres	• Regional Growth Centres of: o De Aar; o Springbok; o Upington; and o Kuruman;

ACTIVITY AREA	DESCRIPTION
Achor Towns	• Anchor towns are towns classified as local towns as refered to in table 40 in the PSDF (Local Towns):
Economically viable towns	• In order to effectively provide social infrastructure, investment should be focussed in areas with the highest population concentrations, or economical growth potential in order to be able to justify the the high cost of infrastructure provision; • The Socio-Economic Potential of Town Study provides guidance regarding the perceived growth potential of towns, and should be implemented in conjuction with the proposed strategies within the PSDF. • The NSDF identifies the following Rural – Urban development anchors (Prioritised investment nodes): o Springbok; o Upington; o Kuruman; o De aar; o Calvinia; o Colesberg; and o Other towns have been identied as Small service centres and rural villages.
Rural settlements	• Supporting rural development and the regeneration of settlements and villages; • Enhancing the functional diversity of economic activity of these nodes in order to broaden the economic base of the province and to enhance service delivery to local and surrounding rural communities. Typical actions in this regard would include investment in agro industries, commercial and light industrial activities, business activities (office and retail) in well-managed Business Districts (CBD's) and government services. • The Rural Development Plans of each District needs to be captured and reflected in the Local Spatial Development Frameworks, accountability of the actions and strategies of these plans are also directed at Sector Departments.
Tourism development	The Province is strongly associated with Biodiversity Corridors and Nodes to provide functional tourism routes. Tourism development should focus on the natural and heritage assets and provide for the following: • The integration of regional tourism development as part of the regional tourism initiatives also providing a system promoting interaction with local tourism initiatives; • The clustering of the existing tourism activities into corridors and nodes supported by economic infrastructure and a road system to strengthen the 'critical mass' of product and therefore the overall depth of the experience across the region; • The protection and development of the natural environmental assets for tourism or other development needs to take place within the development parameters set by strategic and detailed environmental assessments; • The development of the following key tourism areas: o Wildlife and nature tourism; o Activity and adventure tourism; o Resort tourism, sports tourism; o Agri Tourism; o Conference facilities; o Leisure/entertainment; o Industrial and township tourism; o Training and education to ensure capitalisation of tourism related job opportunities; o Cultural heritage; and o Events tourism.

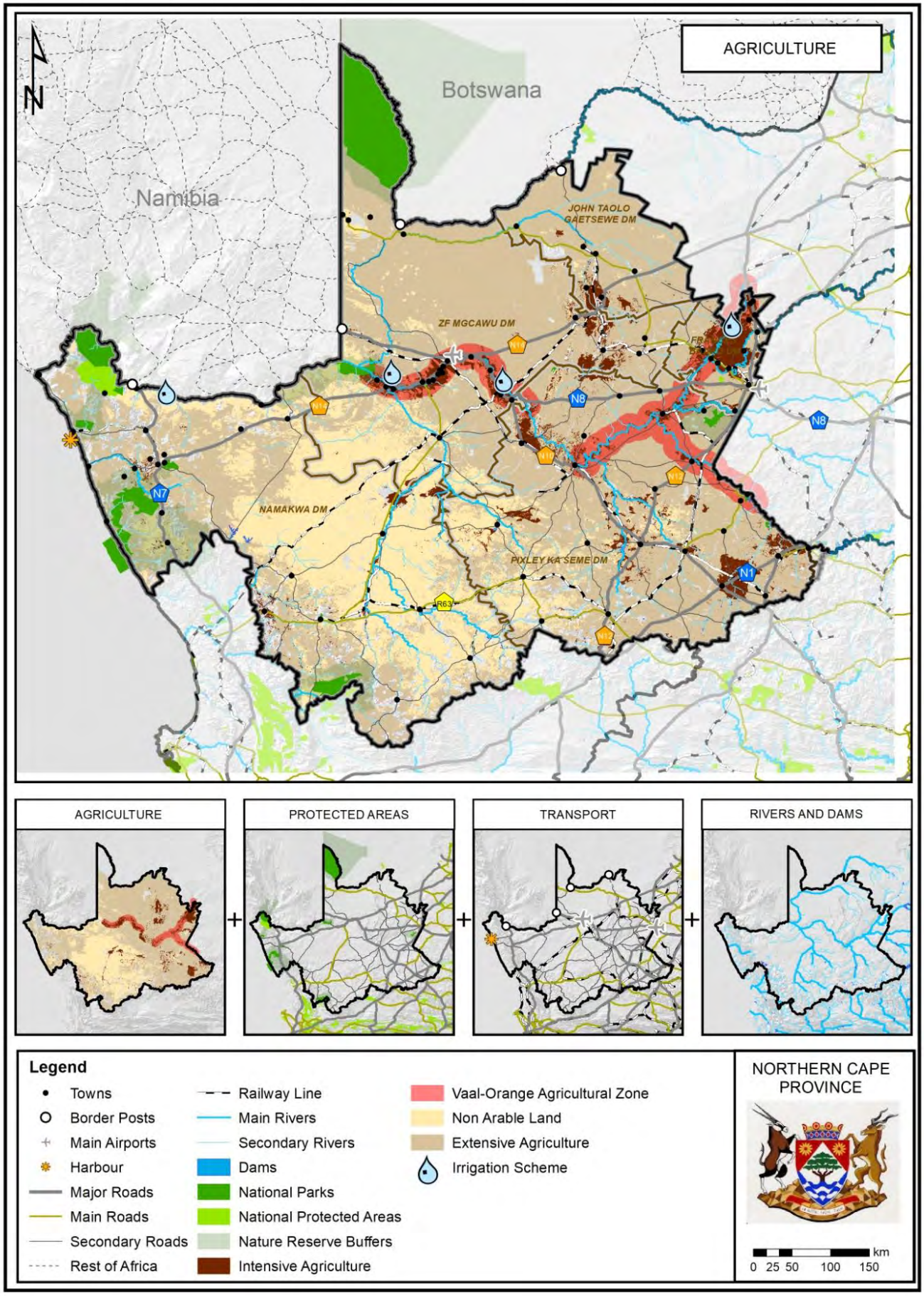
ACTIVITY AREA	DESCRIPTION
	• Main Initiatives that need to be focused on including the existing National parks of: o Richtersveld National Park; o Kalahari Gemsbok National Park; o Augrabies Falls National Park; o Mokala National Park; o Namaqua National Park; o Tankwa Karoo National Park; and o Proposed SAROA Protected Area (to be managed by SANParks). • The Sol Plaatje University as regional educational and sport tourism hub; • Heritage routes; • The development of existing nature reserves; • Transformation in the wildlife sector; • Tourism related investment should be channelled into main functional areas in Northern Cape; • Projects supporting tourism, needs to aim at enhancing community development; The development of the wildlife economy should focus on economic activities dependent directly on the biophysical environment of Northern Cape Province. These include: • Training centres linked to conservation and tourism economic opportunities; • Activities directly linked to nature conservation and management; • Game viewing in public and private nature reserves; • Hunting, game sales, game breeding, fishing and livestock farming which is dependent on natural veld and rangelands; • Traditional and cultural uses of resources such as medicinal plants derived from the wild; • Ecotourism, adventure tourism, bird watching, hiking, game viewing and associated infrastructure (such as lodging/accommodation, etc) which are reliant on natural areas; and • The provision of goods and services to the wildlife economy e.g. transport, infrastructure, catering, security, veterinary services, fuel, etc.
Agricultural Development	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 in line with the objectives of the Comprehensive Rural Development Programme (CRDP) Typical investment in these areas should include: • Agri-parks (Including Agri-hubs and respective FPSU's, implemented according to the District Rural Development Plans); • Support Land Reform Programme with emerging farmers; • Farming equipment, irrigation systems, agricultural training facilities (colleges) and the establishment of small local fresh produce markets which could lead to the establishment of small scale agro industries focusing on processing and/or packaging of local products before exporting it to larger centres; and • Artisan and other skills training initiatives and facilities.
Social Development	• Social infrastructure in the form of centrally-located Thusong centres[24] serving the rural areas, and which provide a comprehensive range of community

[24] *Existing Thusong Centres in the Province include:*
- *Augrabies Thusong Service centre in Kai !Garib Local Municipality*
- *Colesberg Thusong Service Centre in Umsobomvu Local Municipality*

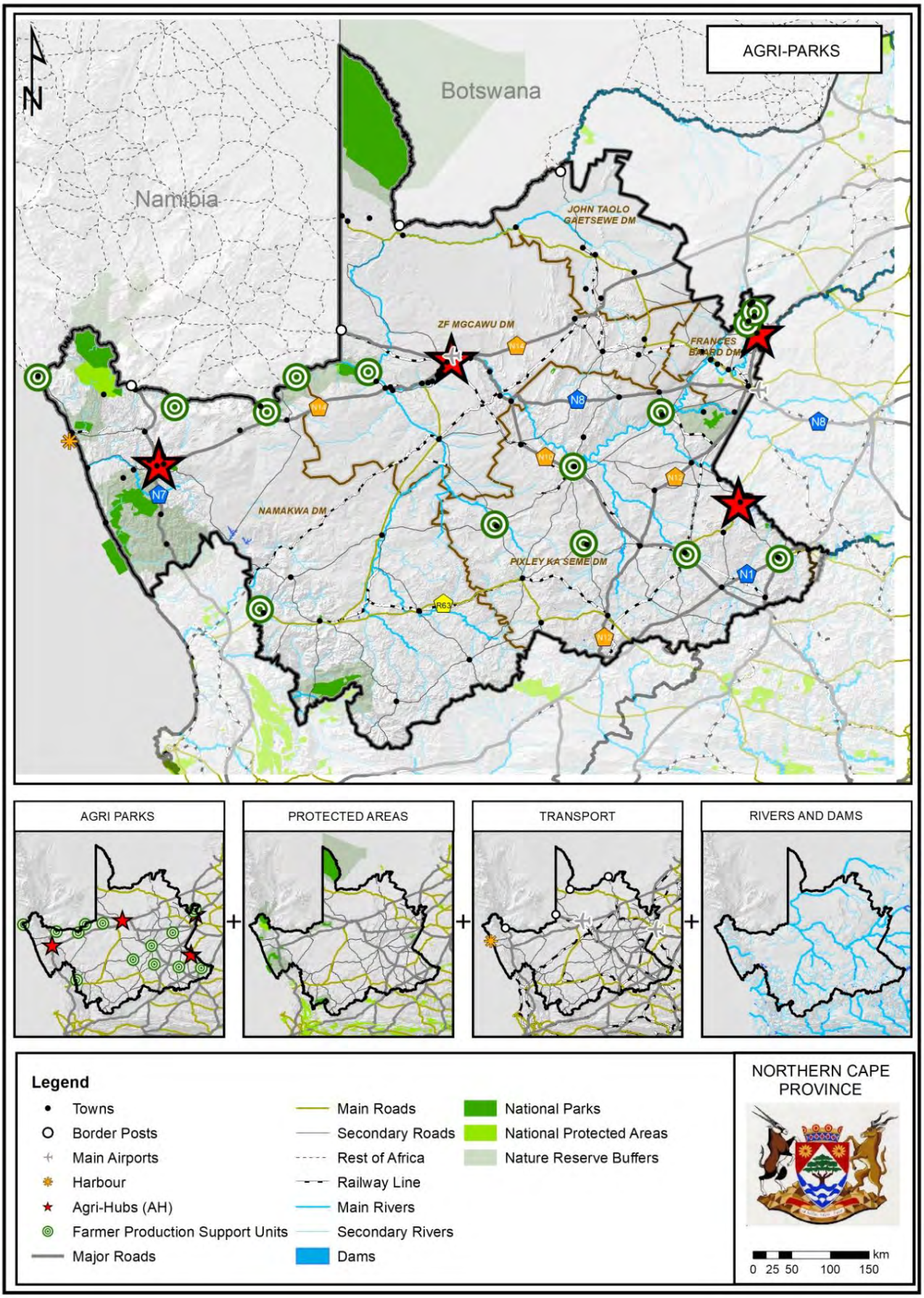
ACTIVITY AREA	DESCRIPTION
	facilities at an one-stop destination among these rural communities; Thusong Centres to be considered based on the criteria as set out by the Second generation Business Plans for Thusong Centres[25] include: o Calvinia (population concentration, distance from Government services) o Mothibistad (population concentration , cost of transport, availability of services) • Rural housing programmes are also to be consolidated around these Thusong centres which will not only improve the utilisation of the community facilities located here, but also create the "critical mass" required to enhance the potential for local economic development – including the fresh produce market and associated agro-processing activities.
Industrial Development	• Infrastructure investment aimed at enhancing the agriculture industry should focus on beneficiation of agriculture produce. Infrastructure investment should focus on the Agriparks; and • Infrastructure investment aimed at manufacturing should be exploited and also expanded to focus on the competitive advantage of this sector within to support both corridor and nodal development (this includes the development of SEZ's and REZ's). **The development of the manufacturing industry requires that:** • Accessibility and mobility links within and between development nodes be enhanced; • Accessibility to the above nodes be improved;

- *Kgomotsego (Vanzylsrus) Thusong Service Centre in Joe Morolong Local Municipality*
- *Manne Dipico (Kimberley) Thusong Service Centre in Sol Plaatje Local Municipality*
- *Tlhokomelo (Kimberley) Thusong Service Centre in Sol Plaatje Local Municipality*

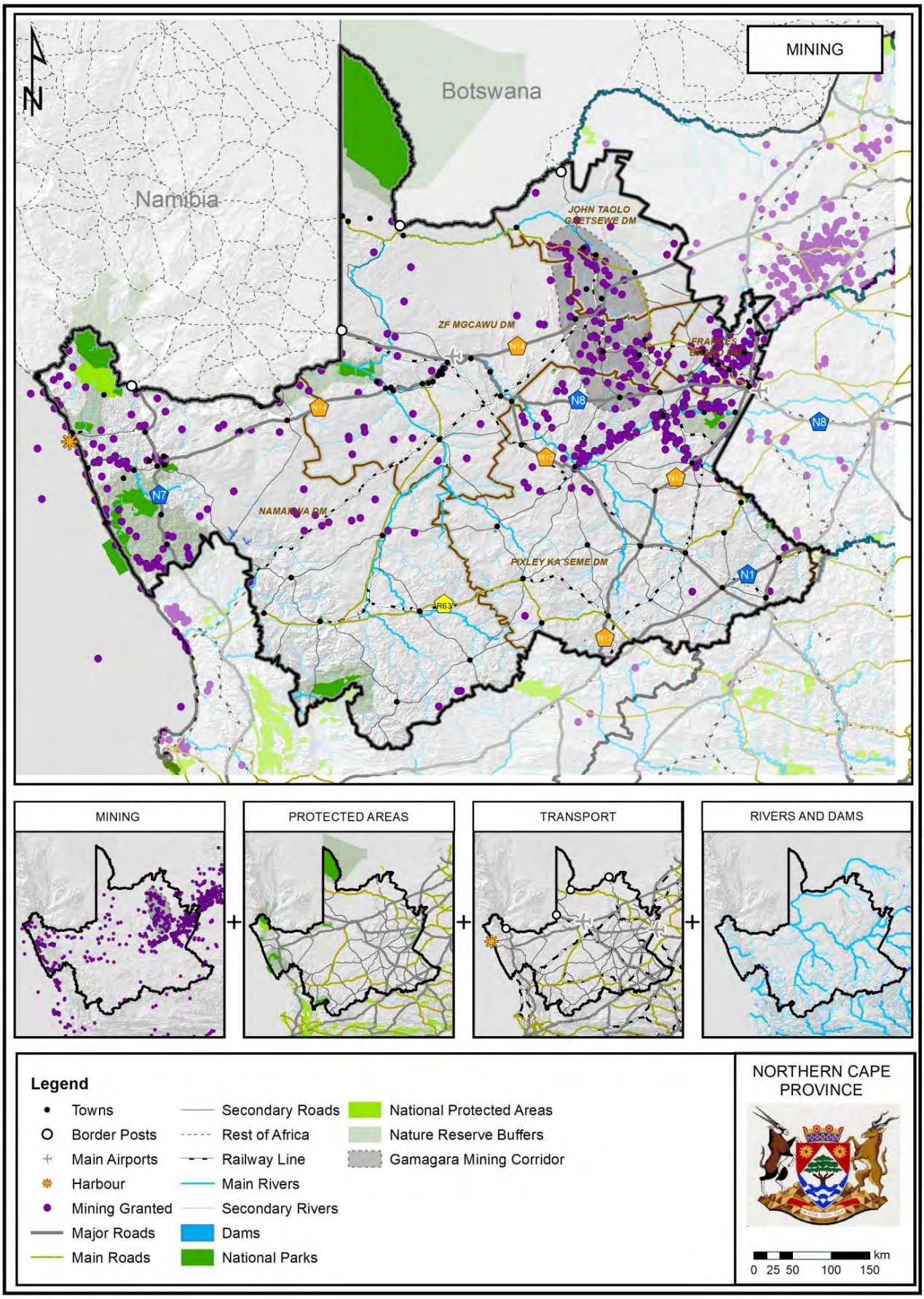
[25] *http://www.thusong.gov.za/documents/establish_rollout/business_plan/reports/thusongbusplan.pdf*



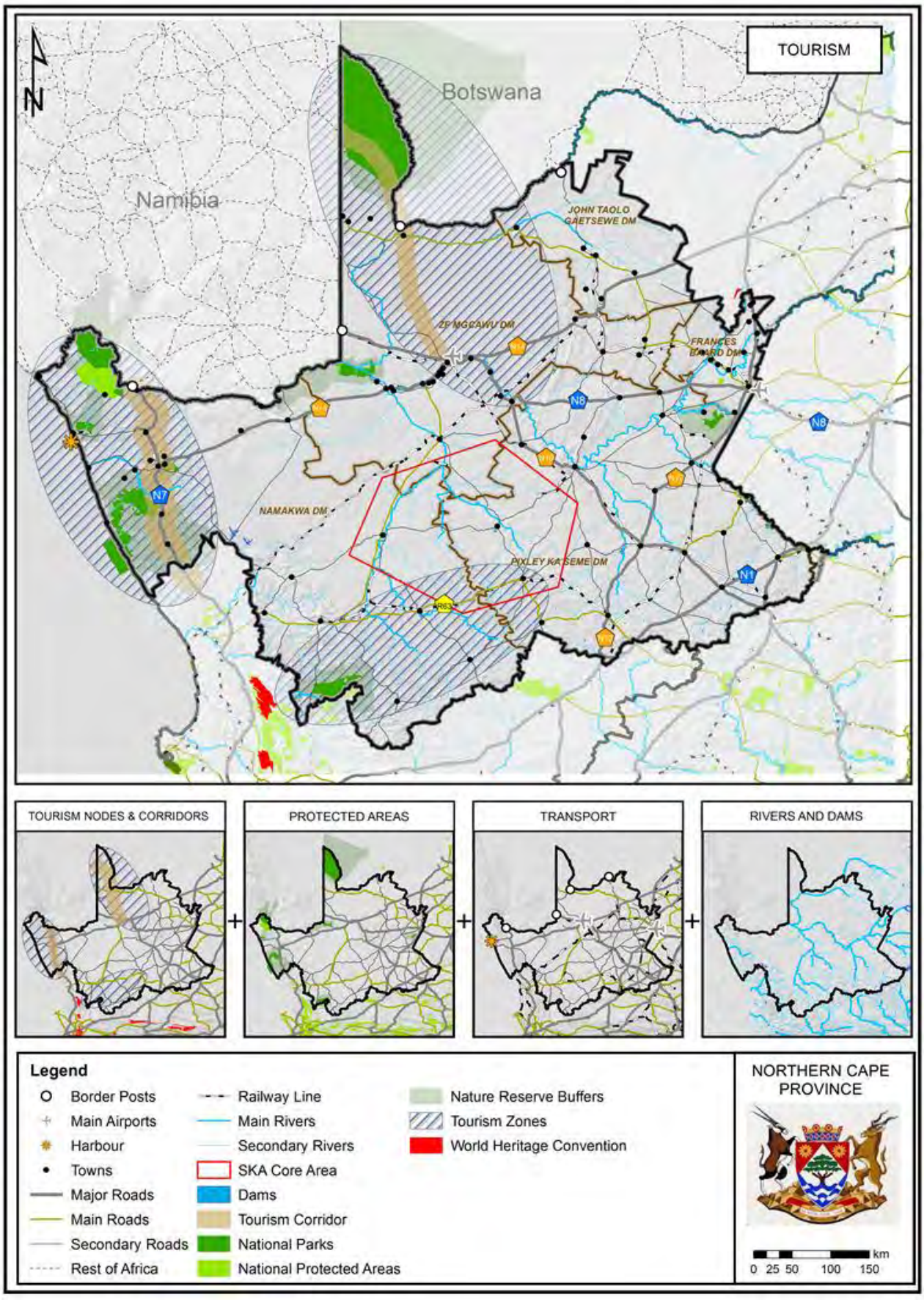
Map 18: Agriculture Potential Critical Resources



Map 19: Agri-Parks



Map 20: Mining



Map 21: Development of Tourism Routes and Nodes

6.2.3.3.3 INTEGRATING INFRASTRUCTURE INTO DEVELOPMENT NODES AND DENSELY POPULATED LARGE POPULATION CONCENTRATIONS

Infrastructure provision for the development of nodes and densely large population concentrations needs to focus on development nodes as well as large and densely populated regions.

6.2.3.3.3.1 STRATEGIC PROJECTS

- Develop and implement a comprehensive district infrastructure plan, responsive to needs including:
- Water infrastructure;
- Water reclamation;
- Roads and transportation;
- Energy efficiency-retrofitting;
- Education; and
- Health.
- Study on access to sustainable water sources for emerging farmers;
- Develop and implement comprehensive Land Transportation Plans for the Northern Cape Province and primary nodes;
- Develop and implement a Tourism Master Plan for the District; and
- Develop and implement Thusong Centres roll out plan.

6.2.4 STRATEGIC OBJECTIVE 4: URBAN AND RURAL DEVELOPMENT

6.2.4.1 SPATIAL DEVELOPMENT STRATEGIES

This requires the following interrelated spatial development strategies[26]:

- The development of sustainable urban regions, regional growth centres, towns and settlements where people, jobs, livelihood opportunities and services are aligned, to create a more functional integrated, balanced and vibrant urban settlements and townships;
- The integration of urban and rural areas focusing on linkages between rural and urban areas thereby enhancing growth by facilitating the flow of resources to where they have the largest net economic and social benefits[27]; and
- Reviving rural areas into vibrant, equitable and sustainable rural communities.

6.2.4.2 STRATEGIC FOCUS AREAS:

6.2.4.2.1 THE DEVELOPMENT OF SUSTAINABLE URBAN REGIONS, REGIONAL GROWTH CENTRES, TOWNS AND SETTLEMENTS

A strategy providing sustainable Regional Urban Cores and Rural – Urban Anchors within the Northern Cape Province requires a holistic approach involving all urban and rural settlements within the province, which involves:

- Firstly, accommodating the urbanisation trend in urban settlements, with high growth potential within which a balanced settlement pattern can take place;
- Apply differentiated growth and development strategies to other settlements.

6.2.4.2.2 GROWTH AND DEVELOPMENT STRATEGIES[28]

Five growth and development strategies are proposed to assist the province and municipalities in managing future growth of settlements. The first four strategies were developed inline with the findings of the Socio-Economic Potential of Town Study Review. During various consulation processes the need was identified to include an additional strategy, in order to manage development associated with mining activities.

- **STRATEGY 1:** A Diversification and Maintenance Strategy for settlements with a Low Social Need and High Development Potential (60% of the provincial population);
- **STRATEGY 2:** A Growth Management Strategy for settlements with a High Social Need and High Development Potential. (20% of the provincial population);
- **STRATEGY 3:** A Migration and Maintenance Strategy for settlements with a High Social Need and Low Development Potential. (10% of the provincial population);
- **STRATEGY 4:** A Sustainable Livelihood Strategy for settlements with Low Social Need and Low Development Potential (10% of the provincial population); and
- **STRATEGY 5:** Mining development management strategy.

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[26] The spatial development strategies should be read with the Principles of SPLUMA, more specifically Spatial Justice and Sustainability.

[27] Department of Cooperative Governance and Traditional Affairs (COGTA). Integrated Urban Development Framework: 2016

[28] Refer to the Socio-economic Potential of Towns Study more more detail regarding the methodology followed to differentiate between the different strategies proposed.

Each of these strategies are briefly outlined below.

6.2.4.2.2.1 STRATEGY 1: DIVERSIFICATION AND MAINTENANCE STRATEGY

Table 56: Diversification and Maintenance Strategy

Application	Settlements with Low Social Need / High Development Potential
Rationale	Focus development primarily on: • Strengthen the economies' position; • Focus on growth and expansion; • Government investment focussed on strategic projects; • Focus on diversification and identification of new opportunities including: o Value chain development; o SMME development; and o Private Public Partnerships. • Ensure attractive building stock and physical business environment; • Investment marketing; • Provide basic services to: o Ensure efficient supply of water, electricity and waste management services to sustain additional industry growth; and o Eradicate backlogs in water and sanitation, electricity, housing. • Provide social services infrastructure including: o Education, health, sport facilities to enhance human capital development; o Training facilities for artisans; and o Public transport to long distance commuter areas. • Eradicate backlogs in social infrastructure; • Enhance Economic Infrastructure providing: o Roads, rail, pipelines, ICT broadband fibre access to stimulate growth in main industries; and o Improve access from long distances commuter areas to enhance employment opportunities. • Enhancing the urban environment through ongoing urban regeneration initiatives; • Focused intervention is required to protect investments from declining cycles and stabilising the municipalities' rates base.
Initiatives	• Protect and expand investment and municipal tax base; • Develop a framework with regard to priority investment areas and liase with the business community; • Expand the nodal hierarchy – and the urban property markets accommodated within key nodes; • Diversify the local economy – focus on forward and backward linkages; • Uphold business environment and property investment maintenance – contribute to retain and instill business confidence; • Ensure effective municipal management and service excellence; and • Uphold public sector commitment – maintenance and expansion of existing public infrastructure and amenities.

Table 57 - Strategy 1: Diversification and Maintenance Strategy (Low Social Need / High Development Potential)

LM	SETTLEMENT	COMPOSITE DEVELOPMENT INDEX	COMPOSITE NEEDS INDEX	SUSTAINABILITY INDEX	POPULATION
Sol Plaatje	Kimberley	2.82	0.27	2.16	225155
Dawid Kruiper	Upington	1.35	0.31	1.25	67581
Tsantsabane	Postmasburg	0.21	0.03	0.19	30089
Emthanjeni	De Aar	0.32	0.08	0.06	29989
Siyancuma	Douglas	0.41	0.05	0.07	20082

LM	SETTLEMENT	COMPOSITE DEVELOPMENT INDEX	COMPOSITE NEEDS INDEX	SUSTAINABILITY INDEX	POPULATION
Umsobomvu	Colesberg	0.39	0.4	-0.26	16870
Siyathemba	Prieska	0.18	0.13	-0.14	14246
Nama Khoi	Springbok	0.61	1	0.04	12789
Gamagara	Kathu	0.78	0.52	0.32	11510
Gamagara	Olifantshoek	0.51	0.37	-0.08	10234
Kai !Garib	Kakamas	0.43	0.53	0.36	9539
Kai !Garib	Keimoes	0.24	0.23	0.53	9501
Ubuntu	Victoria West	0.13	0.03	-0.2	8254
Gamagara	Dibeng	-0.21	-0.6	-0.03	7848
Umsobomvu	Noupoort	-0.05	-0.1	-0.52	7848
Nama Khoi	Steinkopf	-0.17	-0.07	-0.45	7842
Siyancuma	Griekwastad	-0.19	-0.27	-0.15	6428
Dikgatlong	Windsorton	-0.05	-0.75	0.34	6250
Renosterberg	Petrusville	-0.28	-0.22	-0.23	5211
Kai !Garib	Augrabies	0.17	0.7	0.22	3627
Phokwane	Ganspan	-0.06	-1	0.49	3518
Khai-Ma	Pofadder	-0.16	-0.13	-0.26	3287
Kai !Garib	Marchand	0.05	0.37	0.3	3223
Nama Khoi	Komaggas	-0.47	-0.57	-0.4	3116
Thembelihle	Strydenburg	-0.17	-0.22	-0.54	2987
!Kheis	Grootdrink	-0.22	-0.15	-0.04	2645
Siyathemba	Marydale	-0.23	-0.4	-0.39	2624
Dawid Kruiper	Rietfontein	-0.89	-0.12	-0.99	2293
Kai !Garib	Kanoneiland	0.1	0.41	0.59	2251
!Kheis	Wegdraai	-0.3	-0.79	0.06	2189
Siyancuma	Campbell	-0.31	-0.93	-0.15	2179
Kamiesberg	Garies	0.02	0.35	-0.61	2105
Kai !Garib	Cillie	0.18	0.39	0.35	1969
Dikgatlong	Ulco	-0.1	-0.16	0.14	1754
Siyathemba	Niekerkshoop	-0.27	-0.28	-0.56	1729
Kareeberg	Van Wyksvlei	-0.46	-0.45	-0.73	1721
Thembelihle	Orania	0.23	0.83	-0.36	1400
Dawid Kruiper	Leerkrans	-0.1	-0.25	0.21	1383
Nama Khoi	Carolusberg	0.01	0.56	-0.11	1335
Umsobomvu	Norvalspont	-0.16	-0.58	-0.6	1198
Dawid Kruiper	Philandersbron	-0.83	-0.55	-0.92	1081
Nama Khoi	Buffelsrivier	-0.37	-0.36	-0.48	1065
Kamiesberg	Kamieskroon	-0.23	-0.39	-0.65	893
Kai !Garib	Riemvasmaak	-1	-0.83	-0.99	694
Dawid Kruiper	Askham	-0.53	-0.39	-0.96	607

LM	SETTLEMENT	COMPOSITE DEVELOPMENT INDEX	COMPOSITE NEEDS INDEX	SUSTAINABILITY INDEX	POPULATION
Siyancuma	Plooysburg	-0.13	-0.05	-0.17	594
Kai !Garib	Dyasonsklip	0.29	0.02	0.79	580
Kamiesberg	Hondeklip Bay	-0.3	-0.15	-0.57	540
Richtersveld	Eksteenfontein	-0.47	-0.23	-0.95	520
Dikgatlong	Longlands	-0.06	-0.71	0.38	507
Dawid Kruiper	Groot Mier	-0.9	-0.96	-0.99	500
Dawid Kruiper	Straussburg	0.08	0.19	0.78	450
Dawid Kruiper	Klein Mier	-0.89	-0.99	-0.99	449
Joe Morolong	Van Zylsrus	-0.32	-0.37	-0.41	438

6.2.4.2.3 STRATEGY 2: GROWTH MANAGEMENT STRATEGY

Table 58: Growth Management Strategy

Application	Settlements with High Social Need / High Development Potential
Rationale	The Growth Management Strategy requires the enhancement of social needs in support of economic development. It is vitally important that the development potential of the settlements be maintained and should continue to grow, whilst the social needs of the residents be enhanced. The following interventions need to be focussed on: • Prioritise and accelerate the provision of basic services to: o Ensure efficient supply of water, electricity and waste management services to sustain additional industry growth; and o Eradicate backlogs in water and sanitation, electricity, housing. • Prioritise and accelerate the provision of social services infrastructure including: o Education, health, sport facilities to enhance human capital development o Training facilities for artisans; o Public transport to long distance commuter areas; and o Eradicating backlogs in social infrastructure. • Prioritise and accelerate the provision of Economic Infrastructure providing: o Roads, rail, pipelines, ICT broadband fibre access to stimulate growth in main industries; and o Improve access from long distances commuter areas to enhance employment opportunities. • Enhancing the urban environment through quick win and ongoing urban regeneration initiatives; • Strengthen the economies' position and focus on further growth and expansion; • Government investment focussed on strategic projects; • Focus on diversification and identification of new opportunities including: o Vallue chain development; o SMME development; and o Private Public Partnerships. • Ensure attractive building stock and physical business environment; and • Investment marketing.
Initiatives	• Managed settlement development and growth; • Focus on preventing urban decay; • Delineate nodal boundaries in order to encourage agglomeration advantages – urban edge; • Develop a detailed investment strategy, framework and growth plan for each primary node/urban core; • Investment brokerage – take opportunities to the market; and

	• Maintain and operate public space and infrastructure near investments.

Table 59 - Strategy 2: Growth Management Strategy (High Social Need / High Development Potential)

LM	SETTLEMENT	COMPOSITE HUMAN NEEDS INDEX	COMPOSITE DEVELOPMENT INDEX	SUSTAINABILITY INDEX	POPULATION
Phokwane	Jan Kempdorp	-0.22	0.40	0.72	23003
Magareng	Warrenton	-0.17	0.27	0.25	22588
Dikgatlong	Barkly West	-0.34	0.41	0.61	20105
Sol Plaatje	Ritchie	-0.11	0.69	0.34	14850
Kgatelopele	Danielskuil	-0.02	0.00	0.21	13598
Ga-Segonyana	Kuruman	-0.44	1.00	0.85	13057
Phokwane	Hartswater	-0.90	0.33	0.72	10465
Dikgatlong	Delpoortshoop	-0.55	0.07	0.32	10346
Thembelihle	Hopetown	-0.03	0.26	0.11	10260
Emthanjeni	Britstown	-0.14	0.08	-0.35	5145
!Kheis	Groblershoop	-0.03	0.01	-0.04	4938
Dawid Kruiper	Kalksloot	-0.45	0.23	1.00	2752
Phokwane	Pampierstad	-0.16	0.15	0.84	2272
Joe Morolong	Hotazel	-0.21	0.05	0.04	1756
Dawid Kruiper	Louisvale	-0.34	0.17	0.73	1637
Kai !Garib	Olynvenhoutsdrif	-0.69	0.05	1.00	389

6.2.4.2.4 MIGRATION AND MAINTENANCE STRATEGY

Table 60: Migration and Maintenance Strategy

Application	Settlements with High Need / Low Development Potential
Rationale	The strategy focuses on: • Encouraging no growth or limited growth in population and public investment accommodating the trend of migration of people to urban regions and regional growth centres; • Enhancing ICT connectivity; • Uphold public sector commitment in: o Maintaining basic services; o Provide green infrastructure e.g. water tanks, renewable energy; and o Maintaining basic social amenities. • Enhance human capital development by: o Providing access to basic education facilities; o Enhancing existing skills base; and o Increasing access to internet based skills training. • Promoting private investment only in cases where: o Sustainable opportunities exist for the use of the settlements for other purposes such as tourism development, retirement villages; and o Independent town management is feasible making the settlements less government dependent.
Initiatives	• Service maintenance; and • Public sector commitment – basic public sector infrastructure and amenities.

Table 61 - Strategy 3: Migration and Maintenance Strategy (High Social Need / Low Development Potential)

LM	SETTLEMENT	COMPOSITE HUMAN NEEDS INDEX	COMPOSITE DEVELOPMENT INDEX	SUSTAINABILITY INDEX	POPULATION
Umsobomvu	Noupoort	-0.10	-0.05	-0.52	7848
Gamagara	Dibeng	-0.60	-0.21	-0.03	7848
Nama Khoi	Steinkopf	-0.07	-0.17	-0.45	7842
Siyancuma	Griekwastad	-0.27	-0.19	-0.15	6428
Dikgatlong	Windsorton	-0.75	-0.05	0.34	6250
Renosterberg	Petrusville	-0.22	-0.28	-0.23	5211
Phokwane	Ganspan	-1.00	-0.06	0.49	3518
Khai-Ma	Pofadder	-0.13	-0.16	-0.26	3287
Nama Khoi	Komaggas	-0.57	-0.47	-0.40	3116
Thembelihle	Strydenburg	-0.22	-0.17	-0.54	2987
!Kheis	Grootdrink	-0.15	-0.22	-0.04	2645
Siyathemba	Marydale	-0.40	-0.23	-0.39	2624
Dawid Kruiper	Rietfontein	-0.12	-0.89	-0.99	2293
!Kheis	Wegdraai	-0.79	-0.30	0.06	2189
Siyancuma	Campbell	-0.93	-0.31	-0.15	2179
Dikgatlong	Ulco	-0.16	-0.10	0.14	1754
Siyathemba	Niekerkshoop	-0.28	-0.27	-0.56	1729
Kareeberg	Van Wyksvlei	-0.45	-0.46	-0.73	1721
Dawid Kruiper	Leerkrans	-0.25	-0.10	0.21	1383
Umsobomvu	Norvalspont	-0.58	-0.16	-0.60	1198
Dawid Kruiper	Philandersbron	-0.55	-0.83	-0.92	1081
Nama Khoi	Buffelsrivier	-0.36	-0.37	-0.48	1065
Kamiesberg	Kamieskroon	-0.39	-0.23	-0.65	893
Kai !Garib	Riemvasmaak	-0.83	-1.00	-0.99	694
Dawid Kruiper	Askham	-0.39	-0.53	-0.96	607
Siyancuma	Plooysburg	-0.05	-0.13	-0.17	594
Kamiesberg	Hondeklip Bay	-0.15	-0.30	-0.57	540
Richtersveld	Eksteenfontein	-0.23	-0.47	-0.95	520
Dikgatlong	Longlands	-0.71	-0.06	0.38	507
Dawid Kruiper	Groot Mier	-0.96	-0.90	-0.99	500
Dawid Kruiper	Klein Mier	-0.99	-0.89	-0.99	449
Joe Morolong	Van Zylsrus	-0.37	-0.32	-0.41	438

6.2.4.2.5 STRATEGY 4: SUSTAINABLE LIVELIHOOD STRATEGY

Table 62: Sustainable Livelihood Strategy

Application	Settlements with Low Social Need / Low Development Potential
Rationale	The strategy focuses on: • Promoting the movement from a survival economy to economy circulation and exporting, promoting the local production and consumption of produce. This include settlement agriculture; • Enhancing ICT connectivity; • Strengthen corridors to closest urban functional areas; • Upgrade roads with highest volumes; • Ensure effective municipal management and service excellence; • Uphold public sector commitment in: o Rendering sustainable basic services: ▪ Eradicating backlogs and maintaining basic services; and ▪ Provide green infrastructure e.g. water tanks, renewable energy. o Rendering and maintaining sustainable social services including: ▪ Education, health, sport facilities to enhance human capital development. ▪ Public transport to long distance commuter areas; • Enhance human capital development by: o Providing equal access to basic education facilities; o Utilising and enhancing existing skills base; and o Increasing access to internet based skills training. • Providing cost effective services including: o Off-grid development linked to renewable energy projects - independent power; and o Grey water management strategies. o Preventing settlement decay and create a sense of place by applying land use management principles and policies; • Promoting private investment in cases where: o Sustainable opportunities exist for the use of the settlements for other purposes such as tourism development, retirement villages; and o Independent town management is feasible making the settlements less government dependent. • Where the settlement cease to provide an existing or future role and function as may be in the case of mining towns, demolishing of the settlement needs to be considered
Initiatives	• Service maintenance and excellence; • Public sector commitment – public sector infrastructure and amenities (multiyear public sector investment framework focused on municipal infrastructure, public amenities and social housing to serve as catalyst to start private sector investment). • Effective land use management; • Provide public land for SMME development; and • SMME business support and formalisation.

Table 63: Strategy 4: Sustainable Livelihood Strategy (Low Social Need / Low Development Potential)

LM	SETTLEMENT	POPULATION
Hantam	Calvinia	9680
Kareeberg	Carnarvon	6613
Richtersveld	Port Nolloth	6092
Nama Khoi	Nababeep	5374
Nama Khoi	Concordia	4988

LM	SETTLEMENT	POPULATION
Kai !Garib	Kenhardt	4842
Kgatelopel	Lime Acres	4408
Karoo Hoogland	Williston	3368
Renosterberg	Phillipstown	3365
Karoo Hoogland	Fraserburg	3029
Hantam	Brandvlei	2859
Karoo Hoogland	Sutherland	2836
Hantam	Loeriesfontein	2744
Khai-Ma	Pella	2470
Khai-Ma	Aggeneys	2262
Hantam	Nieuwoudtville	2093
Khai-Ma	Onseepkans	2090
Nama Khoi	Kleinzee	1946
Richtersveld	Alexander Bay	1736
Kai !Garib	Soverby	1292
Kareeberg	Vosburg	1259
Renosterberg	Vanderkloof	1228
Emthanjeni	Hanover	1200
Ubuntu	Loxton	1063
Nama Khoi	Vioolsdrift	600
Joe Morolong	Santoy	346

6.2.4.2.6 STRATEGY 5: MINING DEVELOPMENT MANAGEMENT STRATEGY

Table 64: Growth Management Strategy

Application	Settlements with Mining as the the main economic activity
Rationale	• Mining Development Management Strategy aims to limit the negative long term effects associated with mining development, by prohibiting the establishment of new mining towns. • Provision of housing and supporting infrastructure: o All housing developments and associated services that are provided by mining corporations, are to be located in existing towns or settlements; o Any investment made or contemplated by mining corporations must be aligned to the SDF and IDP of the local muncipalities; o Equal access to infrastructure is required, thus infrastructure (electrical, water etc.) must be accessable and benefit the enitre community; and o Restriction of the accessing and utlisation of virgin groundwater resources, as the re-use of water will ensure effective use of the limited resource. • Align social and capital contributions to the needs of the communties: o Utlise the IDP and SDF (as well as the DSDF, PSDF and NSDF) to determine the priority areas identified for intervention; o Skills development and training of local communties; o ICT infrastructure needs; o Protection of water resources; o Environmental legislation and regulations; o Health and safety regulations; and o Disaster Risk Management Plans
Initiatives	• Prohibit the development of new mining settlements; • Focus on public transport as a means to transport employees to and from mining sites;

Application	Settlements with Mining as the the main economic activity
	• Investigate the potential and oppertunites to re-utilise or redevelop redundant mining structures and infrastructure; • Review of the mining and mineral provincial strategy; • Promote and develop a public-private partnerships with mining corporations,NGO's, local communties as well as local and provincial government; and • Maintain and operate public space and infrastructure near investments.

6.2.5 SPATIAL GUIDELINES APPLICABLE TO URBAN AREAS WHERE ECONOMIC DEVELOPMENT POTENTIAL EXISTS:

Within urban areas within the Northern Cape where economic growth potential exists, **STRATEGY 1 AND 2** are applicable and the following spatial guidelines need to be focused on:

6.2.5.1 INTEGRATED URBAN PLANNING AND MANAGEMENT THROUGH:

- Alignment with spatial, sectoral and strategic plans;
- Quality and implementable local plans[29];
- Alignment of land use and human settlement to transport planning;
- Integration of spatial planning , sustainability and urban resilience;
- Supporting and strengthening capacity to implement SPLUMA[30];
- Improvement of urban management;
- Developing and strengthening instruments for creating compact cities and connected cities;
- Maximising Intergovernmental Relations structures as mechanism for coordinating planning; and
- Ensuring greater involvement by the Premier and the respective MECs in the compilation of local plans.

6.2.5.2 INTEGRATED TRANSPORT AND MOBILITY THROUGH THE FOLLOWING POLICY PRIORITIES:

- Empower the Kimberley Regional Urban Core in accordance with the National Land Transport Act (NLTA);
- Strengthen and integrate public transport nodes;
- Prioritise rail freight above road freight and invest in weigh bridges where high truck volumens are experienced;
- Invest along core public transport nodes and corridors; and
- Make urban areas more pedestrian and cyclist friendly.

6.2.5.3 INTEGRATED SUSTAINABLE HUMAN SETTLEMENTS THROUGH THE FOLLOWING POLICY PRIORITIES:

- Accelerate the upgrading of informal settlements;
- Prioritise the regeneration of inner cities preventing urban decay;
- Provide additional options for accessing urban opportunities;
- Promote densification including support for back-yarding;
- Regenerate townships through precinct development planning initiatives;
- Support inclusionary housing;
- Identify and fast track land for settlement interventions;

[29] *This specifically refers to a SPLUMA compliant Spatial Development Framework (SDF) and wall-to wall Land Use Scheme(LUS)*

[30] *Adequate funding and staffing is required to give effect to the requirements of SPLUMA, this is applicable across Local and Provincial Government.*

- Promote spatial clustering[31] of towns by the identification of centrally located service areas in rural settlements;
- Applying urban design principles; and
- Transform public spaces into safe places of community life.

6.2.5.4 INTEGRATED URBAN INFRASTRUCTURE THROUGH THE FOLLOWING POLICY PRIORITIES:

- Institutionalise municipal long-term infrastructure planning;
- Linkages towards the economic potential of towns;
- Protection of water resources;
- Prioritisation of renewable energy in rural areas;
- Strengthen intergovernmental planning, roles and partnerships;
- Wide resources of finance for urban infrastructure;
- Invest in ICT infrastructure and literacy;
- Develop infrastructure as a bridge between rural and urban areas; and
- Building resilience through integrated urban infrastructure.

6.2.5.5 EFFICIENT LAND GOVERNANCE AND MANAGEMENT THROUGH THE FOLLOWING POLICY PRIORITIES:

- Strengthen land- use planning and management through the implementation of the Northern Cape SPLUMA;
- Address the fragmentation in public land information;
- Improve intergovernmental relations for the acquisition or transfer of state land;
- Speed up security of land tenure;
- Promote land-value capture;
- Ensure legislative concepts are applied consistently;
- Address the impact of traditional authority areas within predominately urban municipalities;
- Improve municipal access to state- owned enterprises; and
- Improve relations between municipal councils and traditional authorities through the appointment of qualified and experienced planning resources.

6.2.5.6 INCLUSIVE ECONOMIC DEVELOPMENT THROUGH THE FOLLOWING POLICY PRIORITIES:

- Strengthen the economic role of municipalities;
- Strengthen municipal institutional capacity in spatial planning;
- Support municipalities in building and using economic intelligence;
- Initiate differentiated development strategies for cities and towns within the ambit of SPLUMA[32];
- Strengthen roles and leverage partnerships with other economic stakeholders;
- Create the local conditions for supporting enterprise development and growth;
- Progressively improve inclusive economic infrastructure and services;
- Support community-based enterprises and work;
- Support urban livelihoods and the informal sector;
- Empowered active communities;
- Improve access to quality public infrastructure and facilities;
- Effective urban management; and
- Sustainable Finances.

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[31] In this regard spatial clustering refers to the grouping or clustering of settlements in order to gain a larger homogenous area where social services can be provided. The clustered areas can ease the cost of required services.

[32] Through the implementation of a SPLUMA compliant Spatial Development Framework(SDF) and Wall -to Wall Land Use Scheme (LUS)

6.2.6 ENHANCING CONNECTIVITY BETWEEN URBAN AND RURAL AREAS AND WITHIN RURAL AREAS

6.2.6.1 URBAN RURAL CONNECTIVITY

The rural settlements and villages should link with nearby regional and sub regional nodes of economic potential through the provision of:

- Efficient roads infrastructure as well as enhanced mobility on link roads;
- Integrating transportation with rural and urban areas;
- Reviving the rail networks by supporting Government's Road to Rail Policy;
- Economic linkages between urban and rural areas need to be provided including the development and provisioning of Agri-Parks (AP's) including Agri-Hubs, Farmer Production Support Units (FPSU's) and urban and rural markets as well as ICT Networks.

6.2.6.2 RURAL-RURAL CONNECTIVITY AND SUPPORTIVE INFRASTRUCTURE

Enhance linkages within rural regions should be provided to enable access to higher order services and economic functions. These include:

- Rural-to-rural public transport and other transport and communication linkages with rural anchors;
- Good condition and well-maintained feeder roads to access local service town; and
- Establish ICT hubs in service towns and surrounding dense communities

6.2.6.3 DEVELOP PRIORITISED NODES FOR SETTLEMENT CONSOLIDATION AND SERVICE ACCESS POINTS

Within the underpopulated rural areas, the following guidelines need to apply:

- The settlements need to support their respective functions to act as service centres for the surrounding population or for tourism/local niche production or small scale geo-specific economic production activities;
- New growth or development in human settlements needs to be limited with exceptions in special cases. Focus on upgrading and/or maintenance of existing infrastructure in line with town growth or decline;
- Prioritised nodes for settlement consolidation and service access points need to be identified which act as points of settlement consolidation especially in areas of high value agricultural and ecological infrastructure. These areas should consolidate rural livelihoods, provide financial and social services to rural population, and support, agriculture production, enterprise development, services and manufacturing as well as logistic support to smaller geospecific activities, i.e. smaller mines or power installations, local mills;
- In the dryer parts of Northern Cape residents should be encouraged and supported to be self-sufficient. This includes off grid water, electricity and sanitation as well as food production. Good ICT linkages can be used to support distance learning and access to other social services is limited, and reliant of private transport; and
- Rural local and regional spatial restructuring need to be supported through regional rural development and consolidated sustainable settlement patterns.

6.2.7 STRATEGIC PROJECTS

6.2.7.1 URBAN AREAS

The Integrated Urban Development Framework has identified Kimberley , Kuruman and Upington as key recipients of pilot projects associated with the IUDF, where the potential exists to include Kuruman. The IUDF associated projects must aim to:

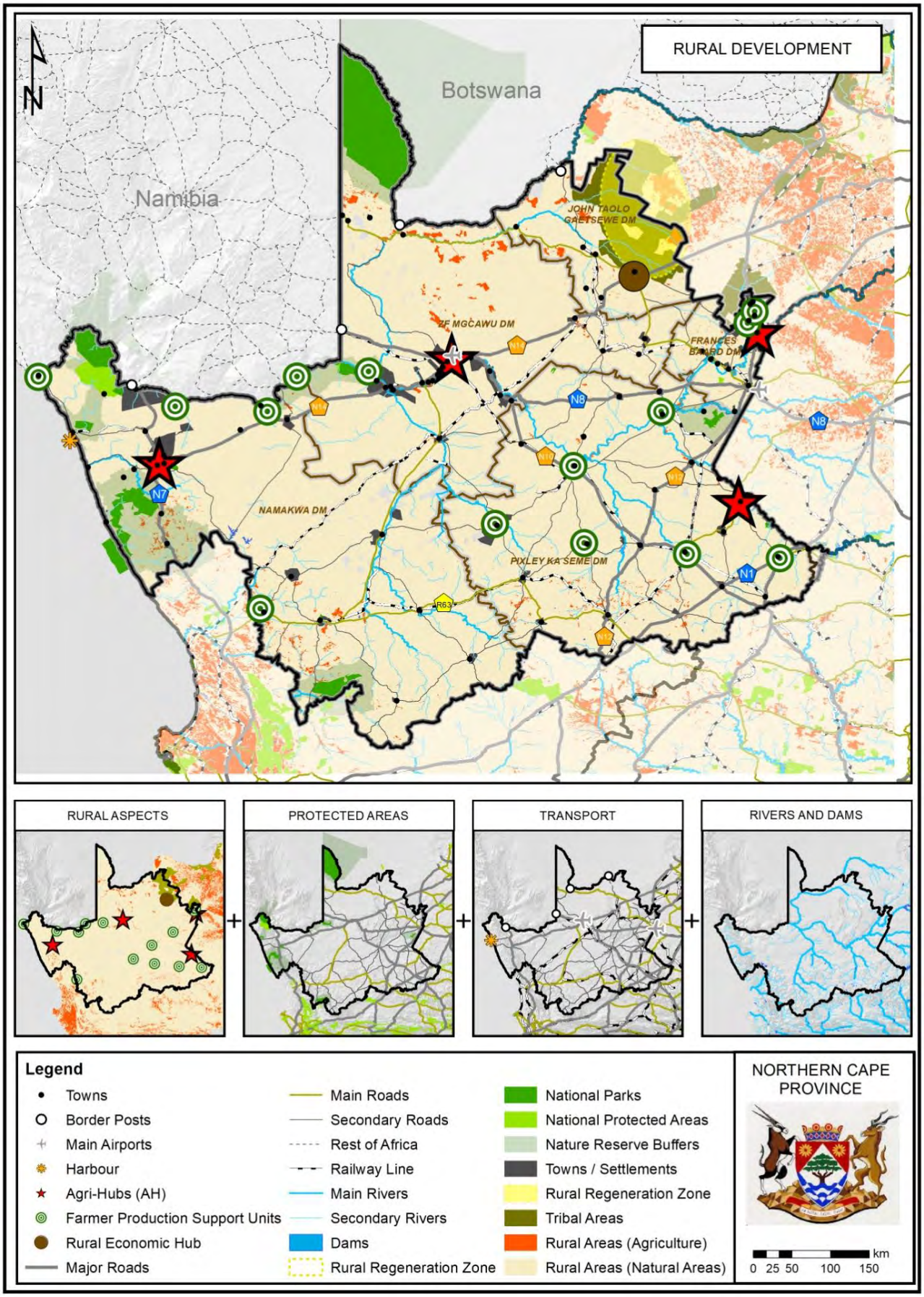
- Create more compact and connected cities and towns;
- Increase inclusive economic growth and thereby create jobs;

- Improve the employability of the unemployed (and those at risk of losing their jobs in a volatile global economy) by investing in healthcare, education, skills training and social protection;
- Anticipate the changing nature of global economic competitiveness, as international measures (e.g. the Kyoto Protocol) come into force to deal with climate change; and
- Change the governance social compact in South Africa, by giving citizens more scope to shape their own lives and improving public services and the accountability of public institutions.

6.2.7.2 RURAL AREAS

Agri-hubs supported by Farmer Production Support Units and abattoirs.

- Springbok, Namakwa DM), Warrenton (Magareng), Frances Baard DM, Petrusville, Pixley ka Seme DM, Melkstroom (Upington) ZF Mgcawu DM, and Kuruman, John Taolo Gaetsewe DM



Map 22: Rural Strategic Projects

CHAPTER 6 : LAND USE MANAGEMENT

This Chapter builds on the previous Provincial Spatial Development Framework, 2012 to ensure that uniformity of the Spatial Planning Category structure is kept. This would ensure that all planning bylaws and relevant legislation is not affected by the review of the PSDF. The Spatial Planning Categories was reviewed on the following criteria:

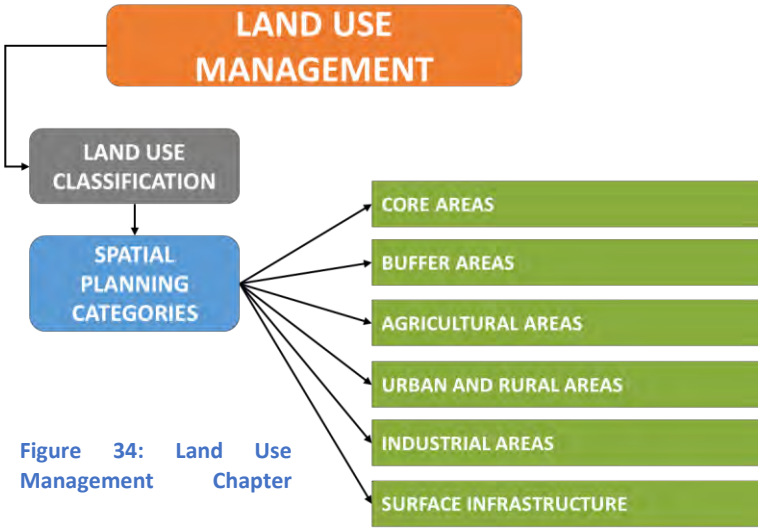


Figure 34: Land Use Management Chapter

- Updating the Spatial Planning Categories (SPC) by aligning the latest National and Provincial Policy and Legislation;
- Updating the Objectives, guidelines and relevant strategies proposed in the subsequent PSDF document; and
- New Strategies and SPC's amendments as where identified.

1 LAND USE CLASSIFICATION

1.1 SPATIAL PLANNING CATEGORIES (SPC'S)

Figure 35: Spatial Planning Categories applicable to the PSDF

The SPC's are not a blueprint for land-use classification, or a zoning scheme. The SPC's provide a framework to guide decision-making regarding land-use at all levels of planning, and they have been articulated in a spirit of creating and fostering an organised process that enables people to work together to achieve sustainable development in a coherent manner. The designation of SPC's does not change existing zoning or land-use regulations or legislation. SPC's merely help to clarify and facilitate coherent decision-making that can lead to better zoning, laws and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the province. ***It is advisable that all zoning scheme regulations be aligned with the SPC's[33].*** The land-use

[33] Refer to the Northern Cape Spatial Planning and Land Use Management Bill for further compliance requirements.

classification is based upon UNESCO's biosphere reserve zoning model as advocated by the MaB Programme. South Africa's endorsement of the MaB Programme and the adoption of a bioregional planning approach imply that the said model should logically be applied. The model provides for three broad land-use categories, i.e. a core conservation area (SPC A), a conservation-focussed buffer area (SPC B) and a transition area (SPC C-F).

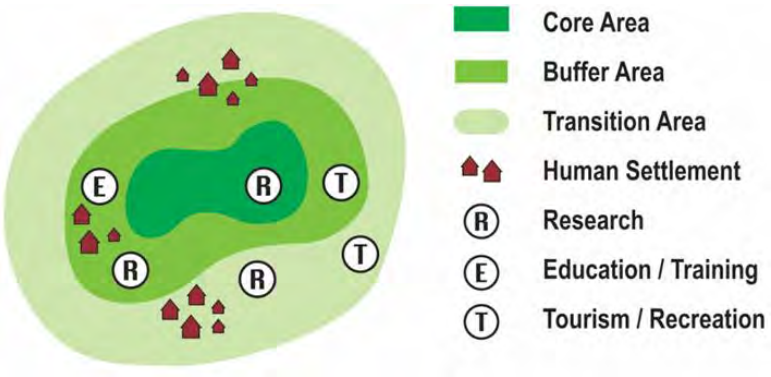


Figure 36: Land-use classification model adopted for the Northern Cape

1.1.1 SUB CATEGORIES

A comprehensive set of Sub-Categories have been created to serve as a guide for more detailed land-use planning at the district and local municipal sphere (**refer to Figure 35**). The sub-categories may be refined as required to address site-specific needs at the district and local municipal sphere.

1.1.2 INCORPORATING THE SPC'S

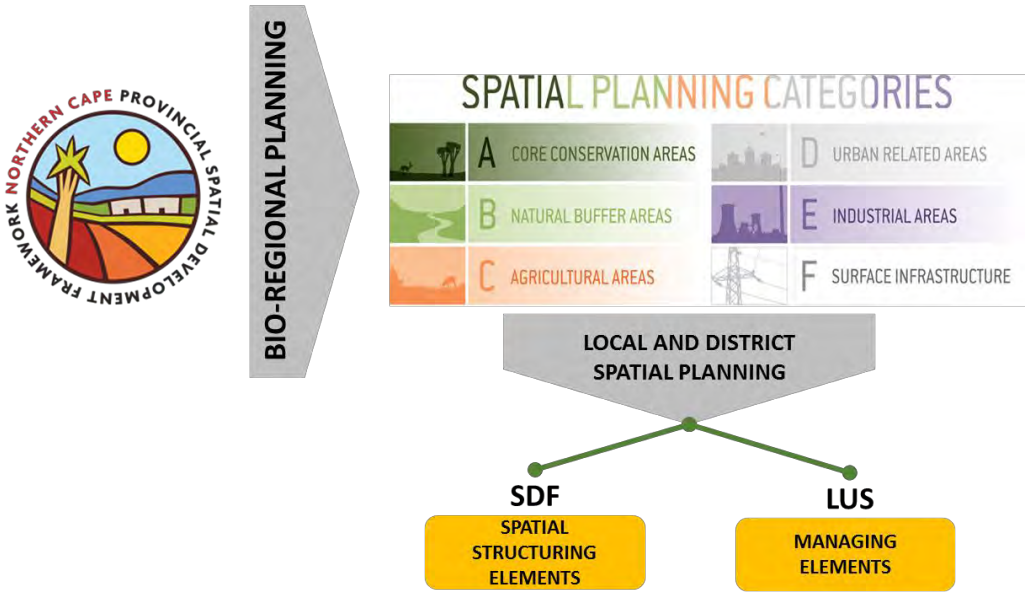


Figure 37: Incorporating the SPC's into local Plans

Municipalities should use the Spatial Planning Categories as the foundation of spatial planning, the following considerations needs to be adhered to when developing or reviewing local plans:

- The Status Quo Analysis of Locals Plans needs to refer to the Status Quo analysis developed for the PSDF, reference can also be made to shorten documents;
- Alignment of provincial spatial structuing elements (e.g. nodes, zones, corridors);

- Hierarchy of towns and settlements as well as considering the recomemndations and strategies proposed by the Socio-Economic Potential of Towns Study;
- Accessing the PSDF GIS data and to build, update data provided to strengthen the data repository of the Province through data validations;
- Strengthening of alignment between neighbouring local plans as proposed and represented in the PSDF; and
- To utilise SPC's as basis of future land use development proposals.

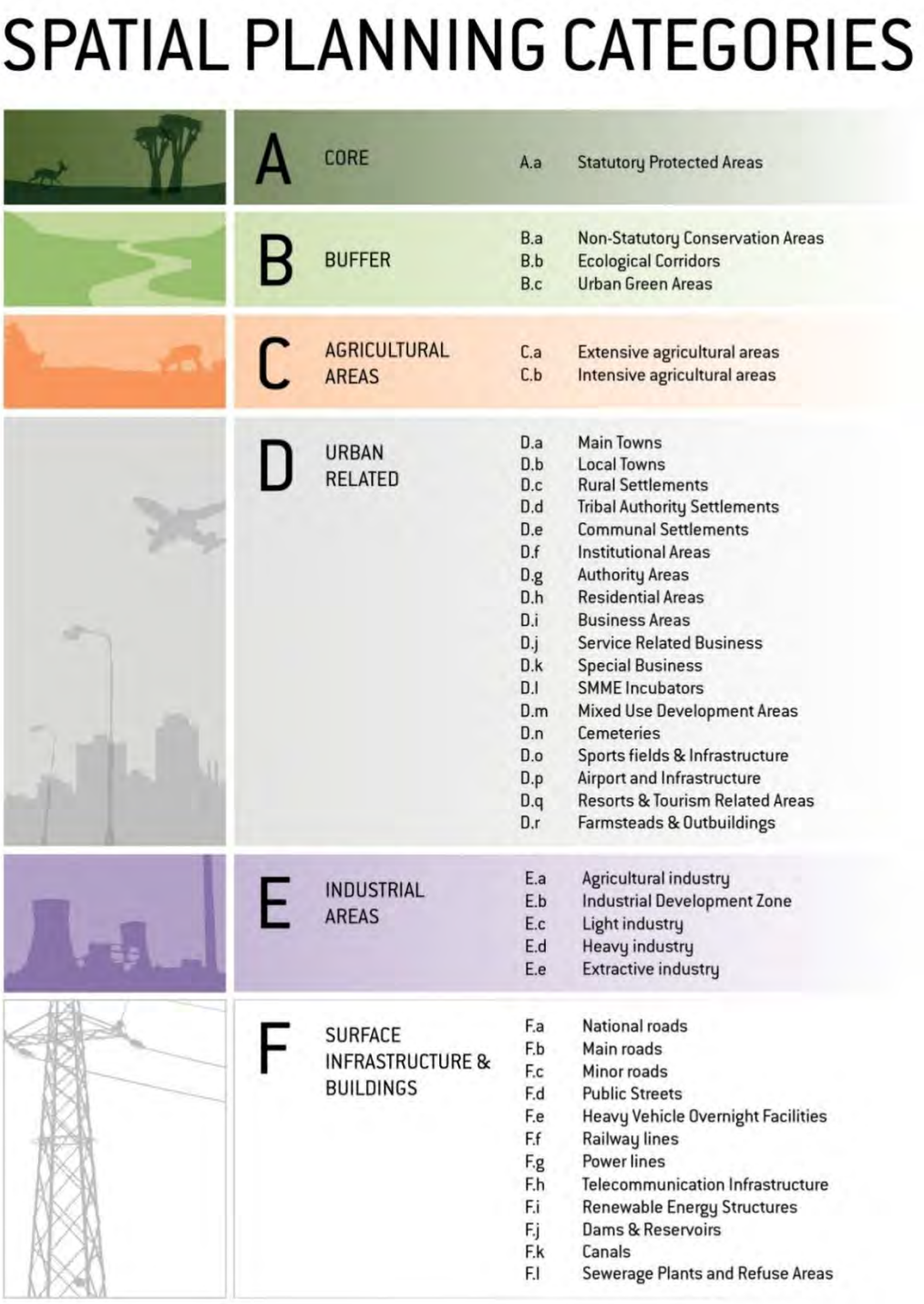


Figure 38 : Spatial Planning Categories and Sub-categories to be applied in the Northern Cape

1.1.3 POLICY IMPLICATIONS

The following policy guidelines apply:

a) Coherence to the principles of the Spatial Planning and Land Use Management Act (SPLUMA, Act 16 of 2013) is required in terms of all land use changes;
b) Land-use planning (***i.e. the drafting of SDF's***) must be undertaken in terms of the bioregional planning approach;
c) Detailed land-use planning at the district and the local municipal sphere is to be undertaken in accordance with the guidelines put forward in the PSDF (refer to Toolkit D2);
d) Land-use planning at all spheres is to be supported by a standard Spatial Planning Information System (SPISYS) (refer Toolkit D3);
e) Any land-use amendment has to conform to the PSDF. This means that the relevant organs of state must take account of and apply relevant provisions of the PSDF when making decisions that affect the use of land and other resources;
f) The PSDF does not create, or take away, land-use rights;
g) The PSDF is to be applied in a flexible and pragmatic manner that focuses on promoting a developmental state and which considers the merits and particular circumstances of each case as required by law (i.e. through an Environmental Impact Assessment undertaken in terms of the National Environmental Management Act 107 of 1998);
h) No land-use changes may be approved until the parameters of the SPC's applicable to the subject area have been verified and ground-truthed through a detailed site analysis. This is to be undertaken by the proponent of the land-use change;
i) The SPC designation illustrated by the municipal SDF's must be used as a criterion for evaluation of rezoning and development applications. In the case where an application is inconsistent with relevant SPC, or where it implies a change of SPC designation, the onus will be on the applicant to prove that the proposed change is desirable and that it will not have a significant detrimental impact on the environment;
j) Existing Zoning Scheme Regulations must be amended, where possible, to accommodate the SPCs and their applications; and
k) The guidelines put forward in the table below are to be applied in all spatial planning.

Table 65 : Development guidelines in accordance with the SPC's.

SPC	TYPE OF DEVELOPMENT	CONDITION
	Reserved for research/educational and tourism related developments	
	a) Resort development. b) Infrastructure required for research.	a) To be changed to SPC D, depending on the proposed type of development. b) Must be undertaken in accordance with site-specific design and planning guidelines (refer to Chapter 5).
	a) Agricultural development and infrastructure required for extensive and intensive agricultural land-uses. b) Resort development on game farms. c) Agricultural industry.	a) To be changed to SPC D, depending on the proposed type of development. b) Must be undertaken in accordance with site-specific design and planning guidelines.

SPC	TYPE OF DEVELOPMENT	CONDITION
	All urban-related developments.	Must be undertaken in accordance with site-specific design and planning guidelines.
	Full spectrum of industrial developments required by the economic sectors.	a) Must be undertaken in accordance with site-specific design and planning guidelines. b) All industrial activities must be regulated and managed in accordance with sustainability standards (e.g. ISO 14001).
	All surface infrastructure and buildings that are required for sustainable socio-economic development and resource use.	a) Must be undertaken in accordance with site-specific design and planning guidelines. b) All industrial activities must be regulated and managed in accordance with sustainability standards (e.g. ISO 14001).

1.2 CONCEPT

Essentially, the purpose of the PSDF is to create an environment that is conducive to economic, social and ecological sustainability and prosperity. Accordingly, the spatial vision for the Northern Cape for the following 20 years comprises the following:

- It envisages the province in an appropriate international, national and provincial context which recognises the province as a key component of the biosphere due to its inherent comparative and competitive advantages;
- It constitutes a coherently structured matrix of sustainable land-use zones that collectively support a dynamic provincial economy vested in the primary economic sectors, in particular, mining, agriculture, tourism, and the energy industry;
- Natural resource areas and critical biodiversity areas connected through a network of functional ecological corridors;
- Productive agricultural regions pivoting around the core agricultural resources;
- A coherent hierarchy of viable and appropriately-governed human settlements bordered by appropriate bioregional parameters; and
- The settlements are to be clustered in close proximity to the primary economic development corridors supported by adequate bulk services and linked by an effective transport or mobility network. In context and in compliance with the above concept, the vision for the respective comparative and competitive economic advantages of the province and the various forms of capital and associated land-uses are collated and synthesised into a composite long-term visionary plan for the province.

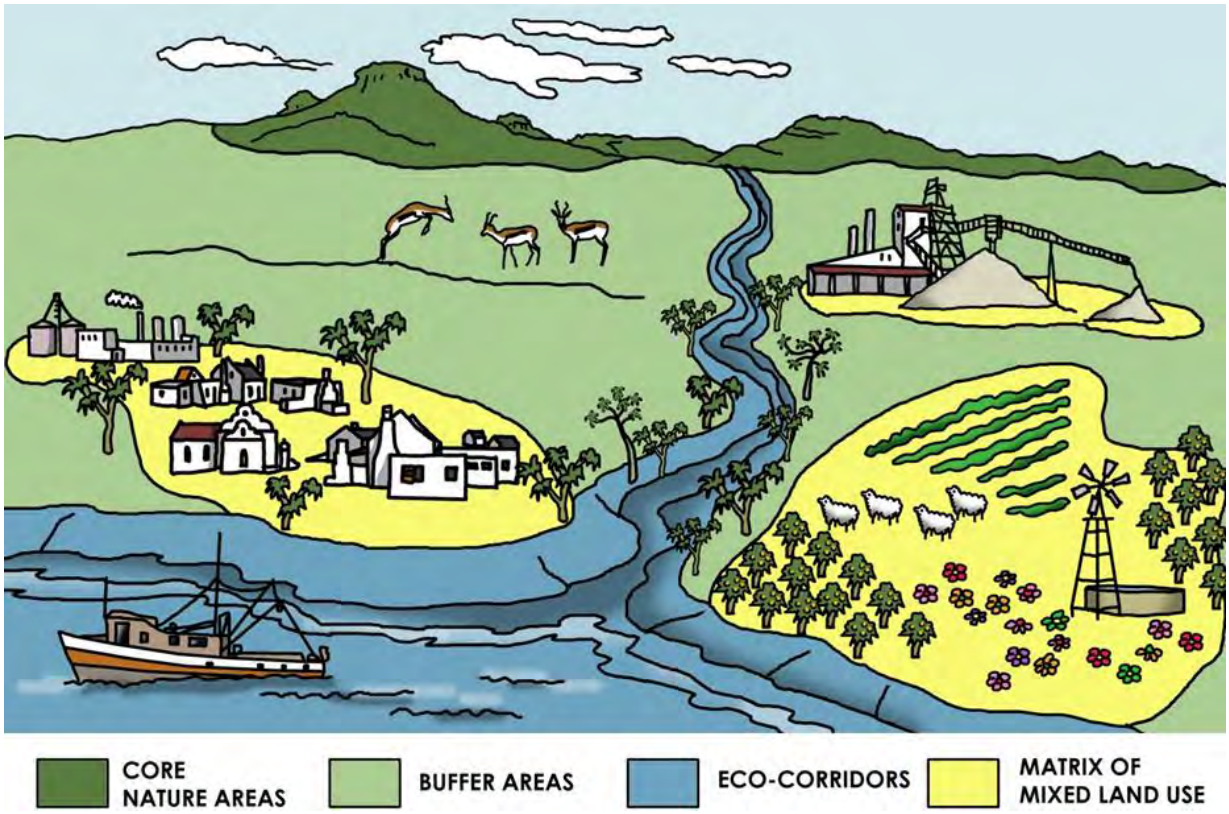


Figure 39: Conceptual spatial vision of the Spatial Planning Categories

2 NATURAL ENVIRONMENT

2.1 BACKGROUND

In meeting its international obligations of the Agenda 21. The Kyoto Protocol, Sendai Framework and Paris agreement, the South African government is required to develop national strategies, plans or programmes, or adapt existing ones, to integrate the conservation and sustainable use of biodiversity into sectoral and cross-sectoral plans, programmes and policies. To this end, the Government has published the White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity (Government Gazette No. 1095 of 1997) and promulgated NEMA (Act 107 of 1998).

The Biodiversity Policy and Strategy (DEAT, July 1997) provides for the conservation and sustainable use of the country's rich biological diversity. Of particular relevance are the following aims of the Biodiversity Policy:

Conserve the diversity of landscapes, ecosystems, habitats, communities, populations, species and genes in South Africa, through the following:

- Establishing and managing a representative and effective system of protected areas;
- Promoting environmentally sound and sustainable development in areas adjacent to, or within, protected areas, with a view to furthering protection of these areas; and
- Use biological resources sustainably and minimise adverse impacts on biological diversity, through:
- Integrating biodiversity considerations into land-use planning procedures and environmental assessments.

According to the Northern Cape State of the Environment Report (2004), a rational and consolidated system of formally protected areas is essential to ensure effective conservation of biodiversity. Current trends indicate that a systems approach to conservation is more effective than designing conservation efforts around protecting individual species (DEAT, 2001).

Such an approach is effective if the designated protected areas are located in areas that contribute to the representation of the local/regional biodiversity (Margules and Pressey, 2000). In South Africa the existing protected area system poorly represents biodiversity patterns and processes. As many as 50 of South Africa's 68 vegetation types are less than 10% conserved.

Natural biodiversity is essential to human survival. On the genetic level, for example, biodiversity underpins the development of cultivated food crops varieties and animal breeds. Many of the Northern Cape's people have livelihoods dependent on direct use of species, including the gathering, harvesting or hunting of animals and plants for food, medicine, shelter, fuel and fibre (Wynberg, 2002).

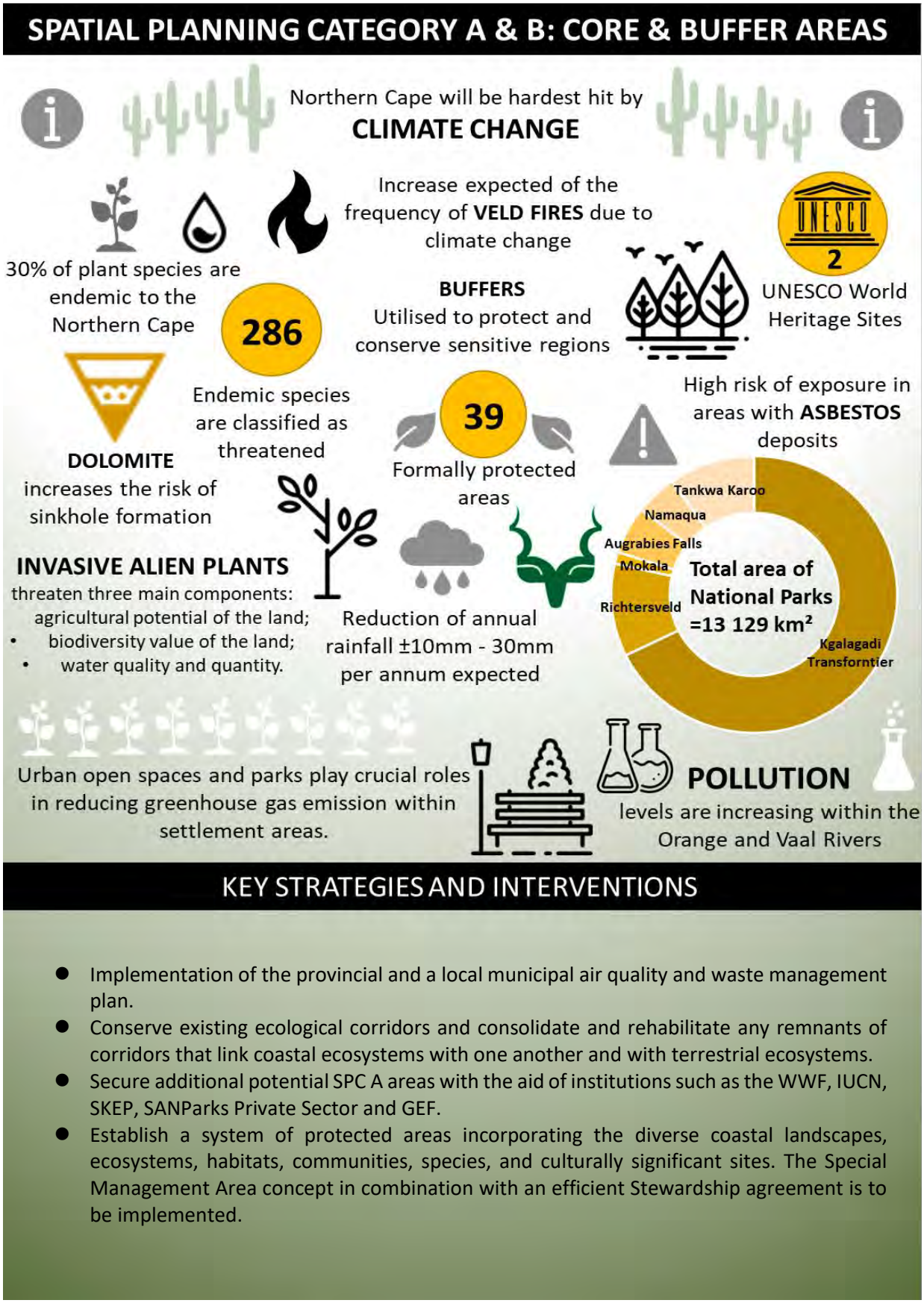
Ecosystem services such as the maintenance of soil fertility, climate regulation and natural pest control, as well as intangible benefits such as aesthetic and cultural values, all support human activity and sustain human life (Chapin et al, 2002). Biodiversity provides a variety of environmental services, including the regulation of the gaseous composition of the atmosphere, protection of coastal zones, regulation of the hydrological cycle and climate, generation and conservation of fertile soils, dispersal and breakdown of wastes, pollination of many crops, and absorption of pollutants. Biodiversity is no longer an issue confined to conservation and wildlife proponents, rather its importance to farmers, to indigenous people and their livelihoods, to human rights, political dispensations, and global trade issues (CSIR, 2004).

2.2 POLICY ALIGNMENT

Table 66: Policy alignment for Spatial Planning Categories A and B

POLICY / PLAN	DISCRIPTION		
 **Sustainable Development Goals (SDG's)** - *Life on Land*	• Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements; • By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral area; • By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development; • Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species; • Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products; • By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species; • By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts; • Mobilise and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems; • Mobilise significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation; and • By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.		
SPLUMA Principles *Key considerations and guidelines to be included are:*	**Spatial Sustainability:** Uphold consistency of land use measures in accordance with environmental management instruments.	**Efficiency** Good decision-making procedures to be put in place to minimise negative financial, social, economic or environmental impacts.	**Spatial Resilience:** Flexibility in spatial plan, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shock.
PGDP *paths to prosperity*	**Key considerations of the PGDP that needs to be accommodated in the PSDF include:** • Ensure Environmental Sustainability and resilience to create a better quality of life; • National Protected Area Expansion Strategy for South Africa – Northern Cape 3 333 000 ha of new conservations areas to be created; • Protection of the quality and supply of freshwater resources; • Conservation of biological diversity especially CBA 1 and 2's; • Protection of Wildlife and conservation areas; • National Strategy for Sustainable Development (NSSD) promotes the development of effective tools, process and frameworks to manage the integration between social demands, natural resource protection, sustainable use and economic development; and • National Environmental Management Act (NEMA) framework and key principles regarding environmental legislation and air quality.		

2.3 SPATIAL DEVELOPMENT CATEGORY A: CORE AREAS



Infographic 1: Spatial Planning Category A and B (Natural Environment)

2.3.1 DESCRIPTION

SPC A areas constitute sites of high conservation importance including terrestrial land, aquatic systems (rivers, wetlands and estuaries) and marine areas (beach or rocky headlands). Due to their highly irreplaceable status, such areas should be protected from change or restored to their former level of ecological functioning. Such SPC A areas, are a natural resource (capital) of international, national and provincial significance (refer, for example to the international status of the Kgalagadi Transfrontier Park and the Richtersveld Botanical and Landscape World Heritage Site which is the core of the Succulent Karoo Biodiversity Hotspot) within which the natural environment is able to provide a range of ecosystem services essential for sustainable life on earth. The integrity of the SPC A areas are therefore an imperative for the long-term future of the Northern Cape.

2.3.2 PURPOSE

Table 67: Purpose and description of Spatial Planning Category A

MAIN CATEGORY		PURPOSE	PARTNERS
A.a	Statutory Protected Areas	Areas designated in terms of legislation for biodiversity conservation, defined categories of outdoor recreation and non-consumptive resource use. Conservation purposes pertains to, the use of land for the protection of the natural and/or built environment, including the protection of the physical, ecological, cultural and historical characteristics of land against undesirable change as set out in Section 24(2(a)).	DENC SANParks Nat. Dept. of Environmental Affairs DWS DAF DMs LMs
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
A.a.1	**Wilderness Areas** (declared in terms of NEMPA2 57 of 2003) Areas characterised by their intrinsically wild and pristine appearance and character, or that are capable of being restored to such, and which are undeveloped, without permanent improvements or human habitation. **Such areas are declared to**: a) protect and maintain the natural character of the environment, biodiversity resources, associated natural and cultural resources; b) provide environmental goods and services; c) provide outstanding opportunities for solitude and primitive outdoor experiences; and d) provide controlled access to those who understand and appreciate wilderness, and those who wish to develop such an understanding.		DENC SANParks Nat. Dept. of Environmental Affairs
A.a.2	**Special Nature Reserves** (declared in terms of NEMPA 57 of 2003). Areas characterised by sensitive, ecologically outstanding ecosystems or natural habitats, natural communities, populations or species, or unique geological or biophysical features conserved primarily for scientific research, educational and limited nature-based recreational purposes.		DENC SANParks Nat. Dept. of Environmental Affairs
A.a.3	**National Parks** (declared in terms of NEMPA 57 of 2003). Designated to protect areas of national or international biodiversity importance; or containing a representative sample of South Africa's natural systems,		SANParks Nat. Dept. of Environmental Affairs

MAIN CATEGORY	PURPOSE	PARTNERS
	scenic areas or cultural heritage sites; or the ecological integrity of one or more ecosystems. National parks provide spiritual, scientific, educational, recreational and tourism-related opportunities which are mutually and environmentally compatible and can contribute to local and regional economic development.	
A.a.4	**Nature Reserves**, including provincial, local authority and registered private nature reserves (declared in terms of NEMPA 57 of 2003) Areas of significant ecological, biophysical, historical, or archaeological interest or that are in need of long-term protection for the maintenance of its biodiversity or for the provision of environmental goods and services. **Nature reserves are declared to:** a) supplement the systems of wilderness areas and national parks in South Africa; b) sustainably provide natural products and services to local communities; c) enable the continuation of traditional resource uses; and d) provide nature-based recreational and tourism opportunities.	DENC SANParks Nat. Dept. of Environmental Affairs LM's DM's
A.a.5	**Protected Environments** (declared in terms of NEMPA 57 of 2003). **Areas may be declared as a protected environment to:** a) Conserve the area as a buffer zone for the protection of a wilderness area, special natural reserve, national park, world heritage site or nature reserve. b) Enable owners of land to take collective action to conserve biodiversity on their land and to seek legal recognition for such actions. c) Protect the area if it is sensitive to development due to its – (i) Biological diversity; Natural, cultural, historical, archaeological or geological value; Scenic and landscape value; or (ii) Provision of environmental goods and services. d) Protect a specific ecosystem outside of a wilderness area, special nature reserve, natural park, world heritage site. e) Ensure that the use of natural resources is sustainable. f) Control change in land-use if the area is earmarked for declaration as, or inclusion in, a wilderness area, national park or nature reserve	DENC
A.a.6	**Forest Wilderness Areas / Forest Nature Reserves** (in terms of Section 8[1] of National Forests Act 84 of 1998). **Declared forest wilderness areas and forest nature reserves include:** a) natural forests, i.e. tract of indigenous trees whose crowns are largely contiguous a) and which comprise all other floral and faunal forest elements; b) woodlands, i.e. a group of indigenous trees which are not a natural forest, but whose crowns cover more than 5% of the area bounded by the trees forming the perimeter of the group; and c) natural habitats or ecosystem components.	DENC Dept. of Agriculture, Land Reform and Rural Development
A.a.7	**Marine Protected Areas** (declared in terms of Marine Living Resources Act 18 of 1998) Areas declared as a marine protected area: a) For the protection of communities, populations or species of fauna and the biophysical features on which they depend; a) To facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or	DENC Nat. Dept of Environmental Affairs

MAIN CATEGORY	PURPOSE	PARTNERS
	b) To mitigate any conflict that may arise from competing uses in that area.	
A.a.8	**World Heritage Sites** (declared in terms of the World Heritage Convention Act 49 of 1999) Cultural or natural areas that has been: a) Included on the World Heritage List, or the tentative list of the Republic, and has been proclaimed as a World Heritage Site, or b) Proclaimed to be a special heritage site for management in accordance with the Act (such areas cannot be referred to as a World Heritage Site).	DENC Nat. Dept. of Environmental Affairs Department of Arts and Culture
A.a.9	**Mountain Catchment Areas** (declared in terms of the Mountain Catchment Areas Act 63 of 1970). Areas declared as mountain catchment areas that provide for the conservation, use, management and control of such land.	Nat. Dept. of Environmental Affairs Nat. Dept. of Water and Sanitation

2.3.3 OBJECTIVES

- Adhere and conform to the SANParks park conservation anagement plans (refer to Section 41 of NEMA).
- To acknowledge and support the National Protected Area Expansion strategy[34] towards the expansion of protected areas towards improved ecological sustainability and increased resilience to climate change of microhabitats, in order to conserve the climatic gradients required to give us some leeway for climate change
- Protected areas should be expanded to incorporate altitudinal gradients and topographic range, intact river corridors, coastal dune cordons, and a greater range
- Create representative core conservation areas in all biomes, centres of endemism and in the coastal zone.
- Implement and adhere to SPC A status for all Critical Biodiversity Areas (CBA's) through innovative public-private partnerships.
- Manage SPC A areas as:
    - Benchmarks ('a base-datum of normality or naturalness') or as standards for environmental health and self-sustaining ecosystems.
    - Secure refugia for source populations and biodiversity.
    - Sites where natural processes can continue without human interference.
    - Sites providing opportunities for solitude or primitive and unconfined types of recreation.
    - Sites containing ecological, geological, or other features of scientific, educational, scenic, historical or cultural value.
    - Sites providing ecosystem functions, including the provision of a clean water from catchments, serving as carbon sinks, etc.

[34] *South Africa's protected area network currently falls far short of sustaining biodiversity and ecological processes. In this context, the goal of the National Protected Area Expansion Strategy (NPAES) is to achieve cost-effective protected area expansion for ecological sustainability and increased resilience to climate change (National Protected Area Expansion Strategy for South Africa 2008).*

2.3.4 POLICY GUIDELINES

Table 68: Policy guidelines for Spatial Planning Category A

GUIDELINES	
CRITERIA	**DISCRIPTION**
General	• The highest statutory protection must be afforded to SPC A areas. • Only non-consumptive activities are permitted, for example, passive outdoor recreation and tourism, traditional ceremonies (e.g. at grave sites), research and environmental education.
Marine and Coastal Protected Areas	• SPC A areas representative of coastal ecosystems, and typical of the various sectors of the coastal zone, and/or areas of high aesthetic value, must be identified in the municipal SDF's and their protection ensured by the relevant authorities. • The provisions of the Marine Living Resources Act 18 of 1998 with respect to controlling the harvesting of marine organisms, allowable catches, the prohibition of certain fishing methods and the use of certain equipment, must be strictly enforced. • Marine Protected Areas, established in terms of the Marine Living Resources Act 18 of 1998, must be expanded as far as possible to promote the replenishment or enhancement of the populations of marine species in adjacent utilisation areas (Marine Protected Areas are vital for restocking utilised resources by offering safe spawning and nursery habitats to fish and other organisms). • The Minister of Environmental Affairs, Mrs Edna Molewa, has published (03 February 2016) in the Government Gazette no. 39646, draft notices and regulations to declare a network of 22 new proposed Marine Protected Areas (MPAs) as part of the Operation Phakisa Initiative. The following are proposed for declaration as marine protected areas affecting the Northern Cape Province: Childs Bank, Benguela Bank, Namaqua Fossil Forest, Namaqua National Park, Benguela Muds and Orange Shelf Edge.
Provincial Reserves	• Where such pristine areas are in state control (e.g. the Admiralty Reserve), they should be conserved in Provincial Nature Reserves or National Parks (Category A.b), and if in private ownership, should be conserved in Special Management Areas or Natural Heritage Sites (Category A.b). • Proposals for new reserves must be scientifically defensible. In this regard, the establishment of protected areas must be based upon scientific information indicating the irreplaceability of habitats or broad habitat units, as provided by inter alia SKEP and the Northern Cape Biodiversity Plan, 2016. Such information must also form a fundamental element of any SDFs so as to ensure that the designation of SPC A and B areas contributes effectively to the establishment of an appropriate system of protected nature areas.
Protected Areas	• Aesthetically prominent natural features or areas should be declared Protected Natural Environments if such declaration would promote natural scenic beauty or biodiversity. No development must be allowed in proclaimed Protected Natural Environments.
Protected Areas and Land Reform (Trancraa and other Areas)	• Scope exists for protected area expansion to work in partnership with land reform for mutual benefit, for example through contract agreements which establish nature reserves or other forms of biodiversity stewardship agreement on land that remains in the hands of its owners rather than being transferred to a protected area agency. Contract agreements are increasingly used in expansion of the protected area network and represent opportunities for mutual benefit between landowners, who receive incentives and assistance with management, and protected area agencies.

GUIDELINES

CRITERIA	DISCRIPTION
	• The Richtersveld National Park provides a good example of community ownership of formal protected areas through contract agreements. The Succulent Karoo Ecosystem Programme (SKEP) provide opportunities for piloting a co-operative approach to land reform and protected area expansion. • In many rural regions, ecotourism based on protected areas provides a more viable option for economic development and livelihoods than agriculture, even though agriculture is currently often the main focus for rural socio-economic development
Expansion of Protected Areas	There are three main mechanisms for expanding the land-based protected area network: • Acquisition of land, the traditional way of establishing and expanding protected areas, involves high upfront costs and is usually used most appropriately in Quadrant 2 expansion. • Contract agreements, in which landowners maintain ownership of their land but enter into a contract with a protected area agency in return for formal protected area status, are facilitated by provisions in the Protected Areas Act. They are appropriate for Quadrant 1 or 2 expansion. Contract agreements are attractive because they tend to cost protected area agencies less than acquisition and because by far the largest proportion of land in the focus areas for protected area expansion is in private hands. • Declaration of public or state land, involves reassigning land to a protected area agency from another organ of state and is appropriate for Quadrant 1 or 2 expansion. It has limited applicability because only a small proportion of land in the focus areas for protected area expansion is public land.
Protected nature area system	• A system of protected areas must be established throughout the province in accordance with the National Environmental Management: Protected Areas Act 24 of 2008. Such a system should radiate out from core reserves and should be connected through a network of ecological corridors and buffer zones where people pursue livelihoods subject to an agreed-upon system of values and environmental ethics. • The system of protected nature areas must cover SPC A areas (refer specifically to those areas that have a high intrinsic and systemic value) in order to: o Provide a benchmark for environmental health and self-sustaining ecosystems. o Provide secure refugia for source populations and biodiversity. o Allow natural processes to continue without human interference. o Contain ecological, geological, or other features of scientific, educational, scenic, historical or cultural value. • The protected nature area system must comply with the following criteria: o It should transect the bioregions from low-to-high elevation, terrestrial, freshwater, marine systems, wetlands, rivers, and other ecosystem types, as well as the full range of climate, soil types, geology, etc. o It should be large enough to provide functional habitats for the indigenous organisms that inhabit them. Where necessary, they should be rehabilitated, and critical 'keystone' species should be re-introduced. They should be large enough to support natural disturbance regimes such as 'natural' wildfires, floods, and storms that play a critical role in their dynamics. In order to provide

A CORE	
GUIDELINES	
CRITERIA	**DISCRIPTION**
	evolutionary continuity, such disturbance regimes should either occur naturally, or be carefully mimicked through management interventions. o It should include representation from all levels of biodiversity, including populations, species, and landscapes. o It should include terrestrial, freshwater, and marine ecosystems. • The system of protected areas must be managed in a manner that honours long-standing, benign uses by local people for whom the system should include places of spiritual and cultural renewal. • The management plans for a protected area system must make provision for the following: o Effective integration of reserves with their surrounding environments, which could be achieved through the establishment of Special Management Areas and/or Stewardship agreements. o Appropriate management of ecological corridors that link the statutory conservation areas. Appropriate management of private land that forms part of the ecological corridors and sustainable use of resources, to be achieved through inter alia the establishment of Special Management Areas and/or Stewardship agreements.
Heritage Areas	• Important cultural-historic or archaeological sites, including sites of wrecks are protected in terms of the National Heritage Resources Act 25 of 1999 and must be entered into a National Registry of conservation-worthy immovable property, to facilitate their protection. Future planning and development that could affect such sites would then be controlled by the South African Heritage Resources Agency (SAHRA) and the relevant local government authority.

2.3.5 STRATEGIES

Table 69: Strategies applicable to Spatial Planning Category A

A CORE			
STRATEGIES			
NUMBER	**DESCRIPTION**	**RESPONSIBLE INSTITUTION**	**PRIORITY**
A2.3.5(a)	Prepare a dedicated biodiversity conservation plan for the Northern Cape.	DENC	Completed (2016)
A2.3.5(b)	Secure additional potential SPC A areas with the aid of institutions such as the WWF, IUCN, SKEP, SANParks Private Sector and GEF.	DENC	Medium
A2.3.5(c)	Seek international recognition for SPC A areas in terms of, for example, the World Heritage Convention, Biodiversity Convention, UNESCO's MaB Programme, Ramsar Convention, etc.	DENC	Medium
A2.3.5(d)	Establish a system of protected areas incorporating the diverse coastal landscapes, ecosystems, habitats, communities, species, and culturally significant sites. The Special Management Area concept in combination with an efficient Stewardship agreement is to be implemented.	DENC	High

STRATEGIES

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
A2.3.5(e)	Conserve existing ecological corridors and consolidate and rehabilitate any remnants of corridors that link coastal ecosystems with one another and with terrestrial ecosystems.	DENC	High
A2.3.5(f)	Manage the coastal zone in accordance with the relevant legislation which provides for the following land-use zones (Annexure C: Toolkit D9) a) Coastal public property. b) Coastal protection zone. c) Coastal access land. d) Coastal waters. e) Coastal protected area (MBA's). f) Special management areas. g) Coastal set-back lines.	DENC	High
A2.3.5(g)	Implement of the provincial and a local municipal air quality and waste management plan.	DENC	Medium

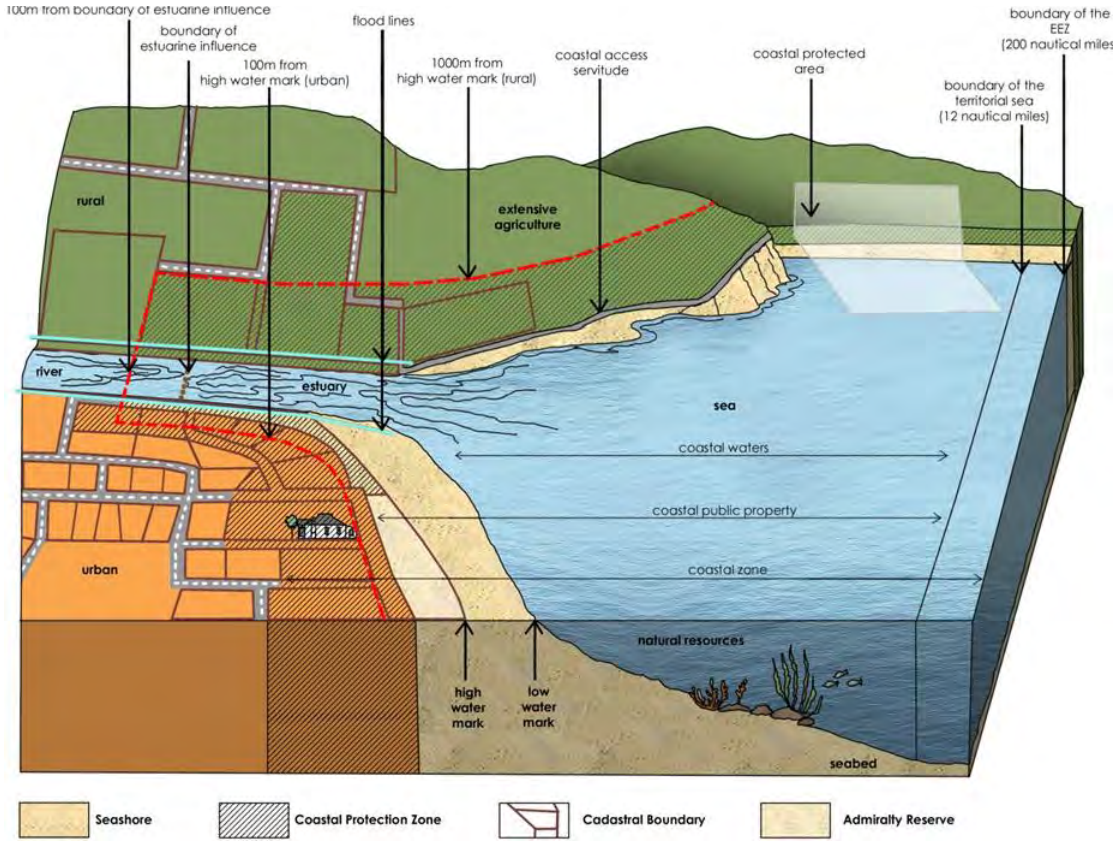


Figure 40: Zones for coastal management

2.4 SPATIAL DEVELOPMENT CATEGORY B: BUFFER AREAS

2.4.1 DESCRIPTION

Buffer areas are primarily in private ownership. Therefore, a key challenge to any land-use strategy or plan is to address the conflicts that often occur between biodiversity conservation and consumptive agricultural practices. In order to start addressing this phenomenon it is imperative to understand and appreciate the often-divergent perspectives of landowners and other stakeholders, and to respect the landowners' rights to use land in accordance with defined legal directives.

2.4.2 PURPOSE

Table 70: Purpose and description of Spatial Planning Category B

MAIN CATEGORY		PURPOSE	PARTNERS
B.a	Non-Statutory Conservation Areas	Areas voluntarily set aside by land owners and managed for conservation purposes in terms of the legislation applicable to the current zoning of such land and not in terms of dedicated conservation legislation.	DENC Private Sector Traditional Authorities
SUB-CATEGORY		**DESCRIPTION**	
B.a.1	**Contractual Conservation Areas,** Areas designated for conservation purposes in terms of an agreement with a conservation agency, or between landowners, a lease agreement, or a servitude. This category includes conservancies and biodiversity stewardship sites.		DENC
B.a.2	**Private conservation areas**, Areas zoned as private open space[35] for the primary use of conservation. Also, areas unofficially designated and managed for conservation purposes by the relevant land owner.		DENC DM's LM's
B.b	**Ecological Corridors**	Linkages between natural habitats or ecosystems that contribute to the connectivity of the latter and to the maintenance of associated natural processes	DENC DM's LM's
B.b.1	Freshwater Ecosystem Priority Areas (FEPA) (in terms of National Freshwater Ecosystem Priority Areas Project). Identified river and wetland FEPA's and fish support areas, including a generic buffer of 100m, measured from the top of bank of the river or the delineated riparian areas, whichever is larger, and measured from the outside edge of the wetland (Implementation Manual for Freshwater Ecosystem Priority Areas, Aug 2011).		DENC DM's LM's
B.b.2	Rivers or riverbeds (incl. 32 m buffer) (in terms of NEMA), All other perennial and non-perennial rivers and wetlands, including a buffer of 32m based on the generic buffer width used for aquatic features in the Listing Notices of the Environmental Impact Assessment Regulations, 2010 (GN R544, GN R545 and GN R546).		DENC DM's LM's
B.b.3	**Other Natural Areas** a) Sensitive Coastal Areas.		DENC DM's

[35] *Private Open Space refers to any land which has been set aside for utilisation primarily as a private site for sports, play, rest or recreational facilities or as an ornamental garden or pleasure garden and includes public land which is or will be leased on a long-term basis and a cemetery, whether public or private.*

B BUFFER			
MAIN CATEGORY		**PURPOSE**	**PARTNERS**
	b) Tracts of natural vegetation that form part of, or link ecosystem components (i.e. tracts of natural vegetation acting as a buffer zone between rivers located in FEPA Fish Support Areas and Fish Sanctuaries, and Category C and D areas). c) Any other natural areas that are conservation-worthy and which form linkages to natural areas within Category C and D areas.		LM's
B.c	**Urban Green Areas**	Municipal open spaces that form in integral part of the urban structure.	LM's
B.c.1	Public Park		LM's
B.c.2	Landscaped Areas		LM's

2.4.3 OBJECTIVES

- Create appropriate buffer areas around or adjacent to SPC A areas that protect the latter against consumptive or habitat-fragmenting land-use impacts.
- Create 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.).

2.4.4 POLICY GUIDELINES

Table 71: Policy guidelines applicable to Spatial Planning Category B

B BUFFER	
GUIDELINES	
CRITERIA	**DISCRIPTION**
General	• SPC B designation illustrates the following: o Extent of the area that contains conservation-worthy habitats or habitat units. o Extent of land, which should, ideally, be rehabilitated to improve the quality of the natural landscape and/or to promote biodiversity conservation. • SPC B.c and SPC B.d areas are primarily private property. The designation of SPC B.c and B.d areas does not imply that it is necessarily undesirable to undertake any development within such areas. Such designation is rather an indication that one must proceed with caution. • SPC B.c and B.d provide an explanation of the nature and extent of the landscape characteristics of the particular area and present a basis for the evaluation of development proposals in proper context. SPC B.c designation, therefore, essentially represents an ideal, the achievement of which represents a challenge to the authorities, planners, developers and landowners. • SPC B.c designation does not take away any of the landowner's rights, nor does it grant any rights. It merely indicates that the particular tract of land is of importance to biodiversity conservation and, consequently, to the well-being of the people of the area, and that due care should be taken in the management of the land. • Only activities that have an acceptable ecological footprint are permitted in SPC B. Where applications are made for such developments the onus is on the applicant to prove the desirability and sustainability of the proposed development. • Where such pristine areas are in state control (e.g. the Admiralty Zone), they should be conserved in Provincial Nature Reserves or National Parks (Category A.b), and if in private ownership, should be conserved in Special Management Areas or Natural Heritage Sites (Category A.b).

B BUFFER	
GUIDELINES	
CRITERIA	**DISCRIPTION**
	• Aesthetically prominent natural features or areas should be declared Protected Natural Environments if such declaration would promote natural scenic beauty or biodiversity. No development must be allowed in proclaimed Protected Natural Environments. • Any modification of an SPC B area is subject to an appropriate environmental off-set or quid pro quo. Such off-set could be in the form of other SPC B land being formally designated as SPC A, mitigation banking (i.e. putting an appropriate amount of monetary capital into a trust to fund conservation initiatives where required) and implementation of the SDI approach (refer to Toolkit D10).
Rivers	• Ribbon development along the coastline and riverbanks (refer specifically to the Orange River) outside the defined urban edge is prohibited. • River bank development must be behind the ecological setback lines including flood and storm surge lines (1:50 year flood line for property boundaries and 1:100 years floodline for building footprint).
Coastal areas	• Coastal resort development outside the urban edge must be nodal and restricted to less sensitive areas (sensitive areas include frontal dunes systems, estuaries, mud flats, and wetlands). • No development is permitted on open coastlines that are vulnerable to erosion, inlets that are susceptible to increased storm activity and river banks that are liable to flooding, and within coastal buffer zones and ecological setback lines in estuaries and below the 1:50 year floodline. • Sensitive coastal areas must be kept free of permanent structures, and disruptive human activities. An ecological set-back study must be undertaken to determine the seaward limit for development. • In coastal SPC B areas development is prohibited in the following areas: o Geologically unstable sites, e.g. potential hill-slide or mud-slide sites, etc. o Sites of karst topography (sinkholes) within ancient limestone/calcified sand dune areas or other unstable geological formations. o Steep slopes (>1:4). o Sites having a high, water table or constituting an aquifer. o Sites within or near the littoral active zone of the sea, or constituting a fixed frontal dune, exposed inshore dune system, or a previously stabilised dune. o Beaches and rocky shores. o Sites below the high, water mark.

2.4.5 STRATEGIES

Table 72: Strategies applicable to Spatial Planning Category B

B BUFFER			
STRATEGIES			
NUMBER	**DESCRIPTION**	**RESPONSIBLE INSTITUTION**	**PRIORITY**
B2.4.5(a)	Ensure appropriate management of SPC B areas through ongoing application of the relevant legation e.g. CARA[36] and NEMA and compliance monitoring.	DENC & DALRRD	High/ On-going
B2.4.5(b)	Obtain statutory conservation status (i.e. SPC A designation for SPC A status) for designated SPC B areas (refer in particular to CBAs in private ownership)	DENC & DALRRD.	High/ On-going

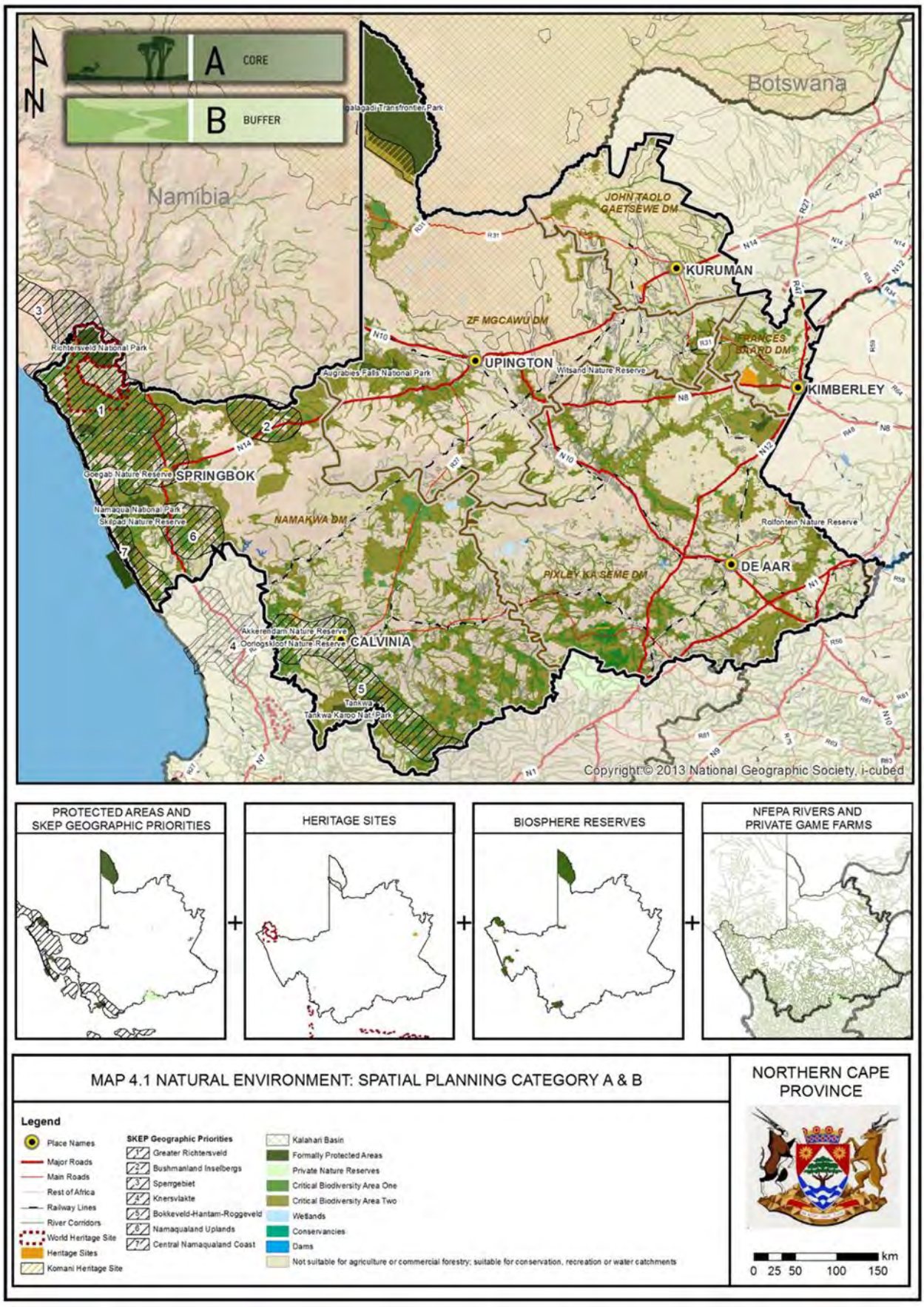
[36] *Conservation of Agricultural Resources Act 43 of 1983.*

	through the implementation of innovative strategies, such as the establishment of a Special Management Area (refer to Toolkit D11). Such strategies in particular apply where approval for rezoning or development rights are applied for.		
B2.4.5(c)	Prepare and implement a coastal setback (Coastal Zoning) policy and guideline.	DENC & DALRRD ,DM's, LM's	High
B2.4.5(d)	Implement and maintain environmental education, awareness and voluntary activism. Fully implement the Environmental Sector Skills Plan (ESSP).	DENC	High/ On-going
B2.4.5(e)	Establish Special Management Areas to promote sustainable land-use over a group of land units in terms of the following principles: a) Both public and private land can be declared a Special Management Area, and both natural, cultivated (i.e. farmland) and inhabited land can be included into a Special Management Area. b) The establishment of a Special Management Area can be required as a condition of approval where new or additional land-use rights or subdivision have been granted. c) The Special Management Area is to be managed in accordance with an Environmental Management System (EMS) or an Environmental Management Plan (EMP) that conforms to international standards for environmental management (e.g. ISO[37]14001). d) The owner of the Special Management Area must establish a trust fund, which will ensure that the necessary financial resources are available for effective long-term management of the Special Management Area.	DENC	High/ On-going
B2.4.5(f)	Initiate cultivation of natural medicinal plants to combat illegal harvesting.	DENC	High

2.5 SPATIAL PLAN FOR SPC A AND SPC B: CORE AND BUFFER NATURE AREAS

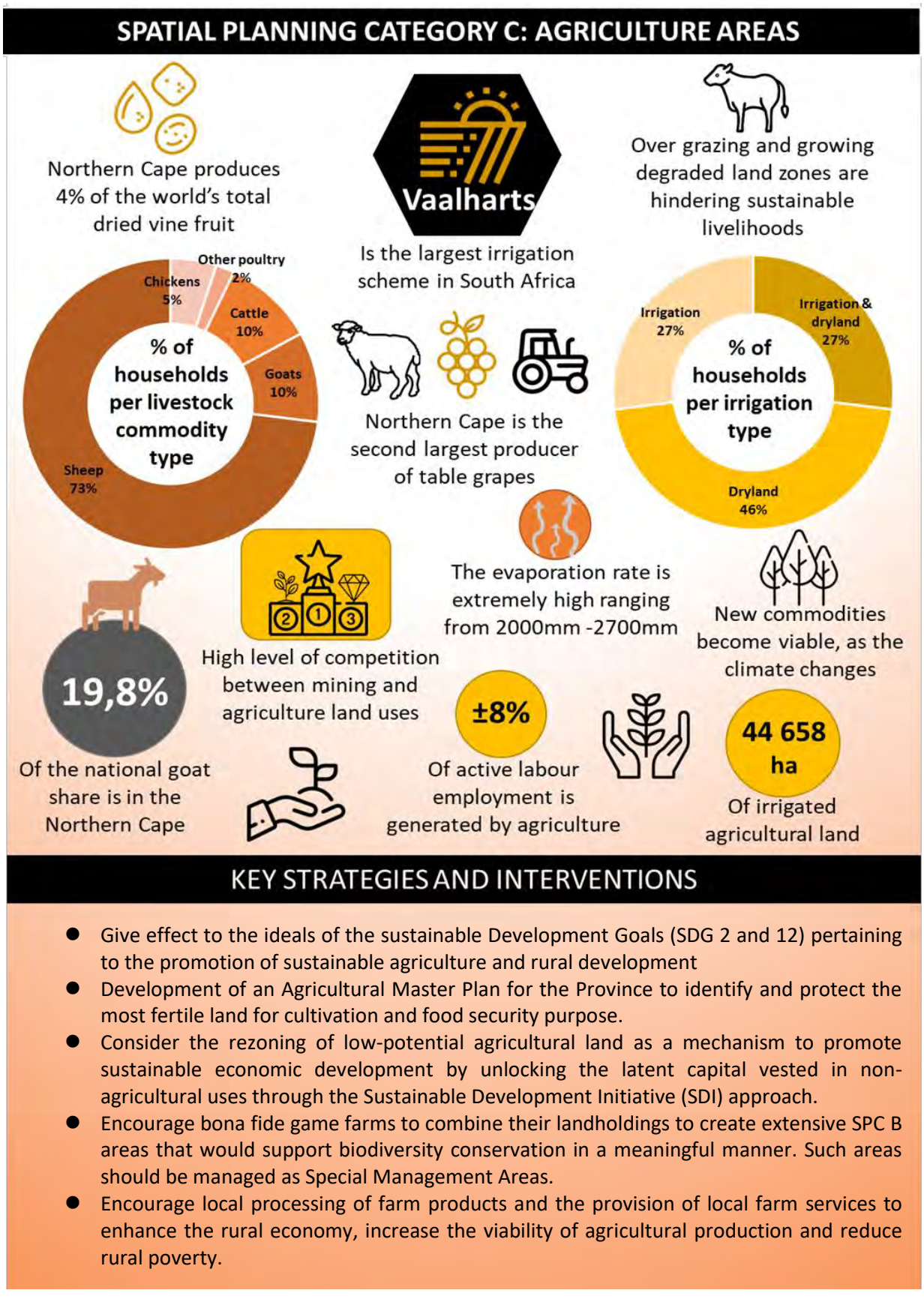
Map 22 serves as the spatial plan and vision for both SPC A and SPC B areas as addressed below. The first indicator or informant to be consulted when considering a change in land use that has the potential to affect the integrity of the environment. The plan would also inform any EIA that may be required in terms of the NEMA.

[37] *ISO (the International Organisation for Standardisation) is a world-wide federation of national standard bodies (ISO member bodies).*



Map 23: Spatial plan for SPC A and B: Core and Buffer nature areas

3 AGRICULTURAL DEVELOPMENT



Infographic 2: Spatial Planning Category C (Agricultural Areas)

3.1 BACKGROUND

The protection and appropriate use of high potential agricultural land (in particular the areas along the Orange River, Vaal River and Harts River and those falling within the existing irrigation scheme areas) is of critical importance for sustainable economic growth and food security. High potential agricultural land in close proximity to settlements are 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.

3.2 POLICY ALIGNMENT

Table 73: Policy alignment for Spatial Planning Category C

POLICY / PLAN	DISCRIPTION	
 **Sustainable Development Goals (SDG's)** – *Zero hunger*	• Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility; • By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment; • By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries; • By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality; and • Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.	
SPLUMA Principles *Key considerations and guidelines to be included are:*	**Spatial Sustainability:** Special consideration to the Protection of prime agricultural land.	**Spatial Justice** Land Use Schemes: Incorporate provision that enable redress in access to land by disadvantaged Communities; and Improved Access & use of land.
PGDP *paths to prosperity*	**Key considerations of the PGDP that needs to be accommodated in the PSDF include:** • Agro Processing Strategy from DAFF that was developed to create strategic direction for domestic agro-processing; • Operation Phakisa was launched by the South African Government to fast track and implement priority programmes through all sectors including the agricultural	

POLICY / PLAN	DISCRIPTION
	sector. Operation Phakisa seeks to further strengthen the plans of Revitalization of the Agriculture and Agro-Processing Value Chain. The analysis and plans generated through the proposed Operation Phakisa will be completed in the context of achieving more inclusive rural economies, food security, increase employment to 1 million jobs, improve the GDP to 6 %, and plant 1 million hectares; • The Agri-Park Programme was launched in 2015 by the Government, the purpose of the programme is to increase employment in small towns and rural areas and to increase food security in South Africa; • The Northern Cape Agriculture and Agro-Processing Sector Development Strategy, which main purpose is to promote development of Agriculture throughout the Province; • One Household One Hectare Policy that is implemented by Department Rural Development and Land Reform. The main aim of this project is to rekindle the class of black economic farmers, and so to improve food security in rural communities; • Climate Smart Agriculture activities and policies should be implemented to reduce the dependency of depleted water resources; • Expansion of existing agricultural value chains throughout the Province; • Fishing and Mari-culture Sector Development Strategy; and • Implementation of the Rural Development Plans developed per District.

3.3 SPATIAL DEVELOPMENT CATEGORY C: AGRICULTURAL AREAS

3.3.1 PURPOSE

Table 74: Purpose and description of Spatial Planning Category C

C AGRICULTURAL AREAS

SUB-CATEGORY		DESCRIPTION	CHAMPIONS
C.a	**Extensive agricultural areas**	Agricultural areas covered with natural vegetation, used for extensive agricultural enterprises, e.g. indigenous plant harvesting, extensive stock-farming, game-farming, eco-tourism.	DRDLR DALRRD
C.a.1	Bona-fide Game Farms		DALRRD
C.a.2	Extensive Stock Farms		DALRRD
C.b	**Intensive agricultural areas**	Agricultural areas used for intensive agricultural practices, e.g. crop cultivation, citrus, lucern, dates, vineyards, intensive stock farming on pastures.	DRDLR DALRRD
C.b.1	Cultivated Areas		DALRRD
C.b.2	Plantations and Woodlots. Plantations i.e. group of trees cultivated for exploitation of the wood, bark, leaves or essential oils in the trees; forest produce, i.e. anything which appears or grows in such plantation including any living organisms and any product of it.		DALRRD
C.c	**Other agricultural areas**	Agricultural areas used for intensive agricultural practices that are water based, e.g. abalone, finfish, crayfish and freshwater fishing.	DRDLR DALRRD
C.c.1	Aquaculture		DALRRD
C.c.2	Mariculture[38]		DALRRD

[38] *Marine aquaculture, or 'mari- culture', is the term given to the agricultural activity of cultivating any plant or animal in salt water. It is a broad term incorporating the full spectrum of farming activities from 'extensive' to 'intensive' and 'capture based' to 're-seeding'.*

C AGRICULTURAL AREAS		
C.c.3	Urban Agriculture[39]	DALRRD DRDLR LM's

3.3.2 OBJECTIVES

- Develop the Northern Cape agricultural sector into a national and international asset;
- Develop and utilise the comparative economic advantages vested in agriculture;
- Protect high potential agricultural land from non-agricultural development;
- Utilise agricultural land in terms of the principles of sustainable agriculture;
- Utilise natural agricultural resources for the benefit of all (e.g. through partnerships);
- Beneficiation of local communities through the development of Agricultural Value Chains;
- Strengthen agricultural research, knowledge and skills;
- To promote climate smart agricultural development;
- To promote a legislative framework for Aqua and Mari-culture agriculture practices; and
- Promote the coordination of aquaculture research and development as well as aquaculture as a farming activity.

3.3.3 POLICY GUIDELINES

Table 75: Policy guidelines applicable for Spatial Planning Category C

C AGRICULTURAL AREAS	
GUIDELINES	
CRITERIA	**DISCRIPTION**
General	• Agricultural activities must be monitored and regulated in terms of the Conservation of Agricultural Resources Act 43 of 1983. In particular, restoration and reclamation of eroded land, control of the number of stock kept and the control of weeds and invader plants must be monitored. • Any enhanced development rights on SPC C areas must be subject to the establishment of a Special Management Area where the ethos of sustainable agriculture is served in practice • Any non-agricultural development on a SPC C area is subject to an appropriate environmental off-set or quid pro quo. Such off-set could be in the form of designated SPC B land being formally designated as SPC A, or mitigation banking (i.e. putting an appropriate amount of monetary capital into a trust to fund conservation or social development initiatives where required) in accordance with the SDI approach (refer to Toolkit D10).
High potential agricultural land	High potential agricultural land must be excluded from non-agricultural development and must be appropriately utilised in accordance with sustainable agriculture[40] principles.
Subdivision of Agricultural land	Subdivision of agricultural land or changes in land use must not lead to The creation of uneconomical or sub-economical agricultural units.
Land degradation	Land-users causing unacceptable degradation of the natural environment are responsible for rehabilitation of mismanaged natural agricultural resources.
Agricultural programs	Develop and support agriculture by means of the CAADP, CRDP (Comprehensive Rural Development Programme) and CASP (Comprehensive Agricultural Support Programme).

[39] *Urban agriculture refers to the cultivation of crops and animals in an urban environment.*
[40] *Agriculture that is socially just, humane, economically viable, and environmentally sound. Sustainable agriculture integrates three main goals, namely environmental stewardship, farm profitability and prosperous farming communities.*

C AGRICULTURAL AREAS

GUIDELINES

CRITERIA	DISCRIPTION
Mariculture and Aquaculture	• Develop and support Aquaculture and Mariculture practices through the development of a Marine Spatial Planning Framework[41] as set out in the Draft Marine Spatial Planning Bill, 2016. Key objectives of the bill are to: o To develop and implement a shared marine spatial planning system to manage a changing environment that can be accessed by all sectors and users of the ocean; o promote sustainable economic opportunities which contribute to the development of the South African ocean economy through coordinated and integrated planning; o facilitate good ocean governance; o provide for the documentation, mapping and understanding of the physical, chemical and biological ocean processes and opportunities in, and threats to, the ocean; and o to give effect to South Africa's international obligations in South African waters. • Mariculture activities offer some alternatives to satisfy the growing demand placed on wild fisheries. The global Mariculture industry is young, innovative, and has a growing awareness of its environmental responsibilities. Many of South Africa's fishery resources are at an all-time low while our human population grows. Improved conservation measures and better resource management have the potential to improve the situation.

3.3.4 STRATEGIES

Table 76: Strategies applicable to Spatial Planning Category C

C AGRICULTURAL AREAS

STRATEGIES

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
C3.3.4(a)	Acknowledge and institute an Aquaculture (which includes Mariculture) by the development of a Northern Cape Aquaculture development strategy.	DALRRD	High
C3.3.4(b)	Development of an Agricultural Master Plan for the Province to identify and protect the most fertile land for cultivation and food security purpose.	DALRRD	High
C3.3.4(c)	Give effect to the ideals of the sustainable Development Goals (SDG 2 and 12) pertaining to the promotion of sustainable agriculture and rural development.	DALRRD	High/ On-going

[41] *Marine spatial planning is an iterative planning system. The process begins with the development of a Marine Spatial Plan Framework, which sets out the broad objectives and processes of marine spatial planning. The Minister must also develop a knowledge and information base which will contain all relevant data and* information from core sector departments. This information will assist in the development of marine area plans. Since the ocean is so vast, planning will be divided into bio-geographic marine areas and plans for these areas will be developed by analysing and allocating the spatial and temporal distribution of human activities in the South Africa's ocean space. The marine spatial planning must be considered when developing these plans.

C AGRICULTURAL AREAS

STRATEGIES

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
C3.3.4(d)	Consider the rezoning of low-potential agricultural land as a mechanism to promote sustainable economic development by unlocking the latent capital vested in non-agricultural uses through the Sustainable Development Initiative (SDI) approach (refer to Toolkit D10). The outcomes of such SDIs could include: • Providing landowners with opportunities to establish on-farm tourism-related facilities and amenities and other enterprises supportive of IDP objectives. • Cross-subsidising lower-income housing and amenities in Category D.d and D.f areas • Facilitating the establishment and management of SPC A and B areas (i.e. core conservation areas, buffer areas, ecological corridors and rehabilitation areas).	DALRRD LM's	High/ On-going
C3.3.4(e)	Encourage local processing of farm products and the provision of local farm services to enhance the rural economy, increase the viability of agricultural production and reduce rural poverty.	DALRRD	High/ On-going
C3.3.4(f)	Encourage bona fide game farms to combine their landholdings to create extensive SPC B areas that would support biodiversity conservation in a meaningful manner. Such areas should be managed as Special Management Areas.	DALRRD	High/ On-going
C3.3.4(g)	Undertake detailed farm planning in accordance with the standard SPC designation facilitating inter alia appropriate placement of infrastructure, protection of ecological corridors, and appropriate use of the various sections of the farm.	DRDLR DALRRD DENC	Medium / On-going

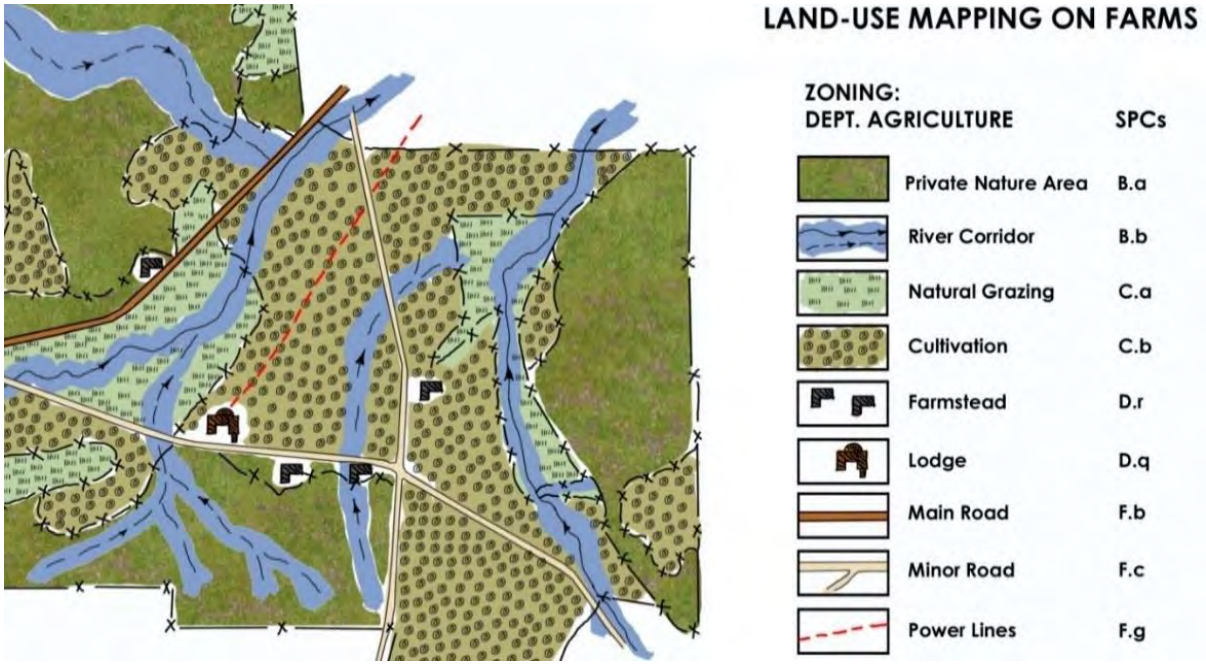


Figure 41: Detailed farm planning

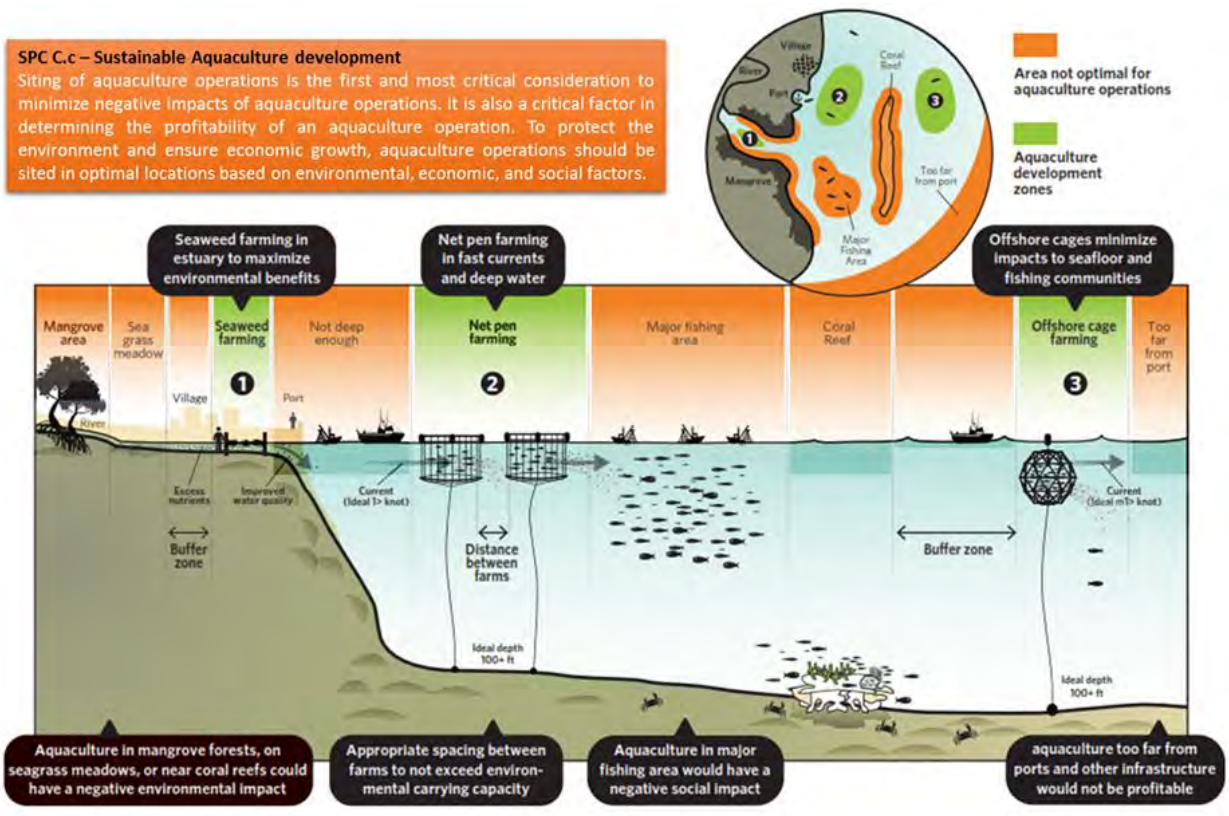
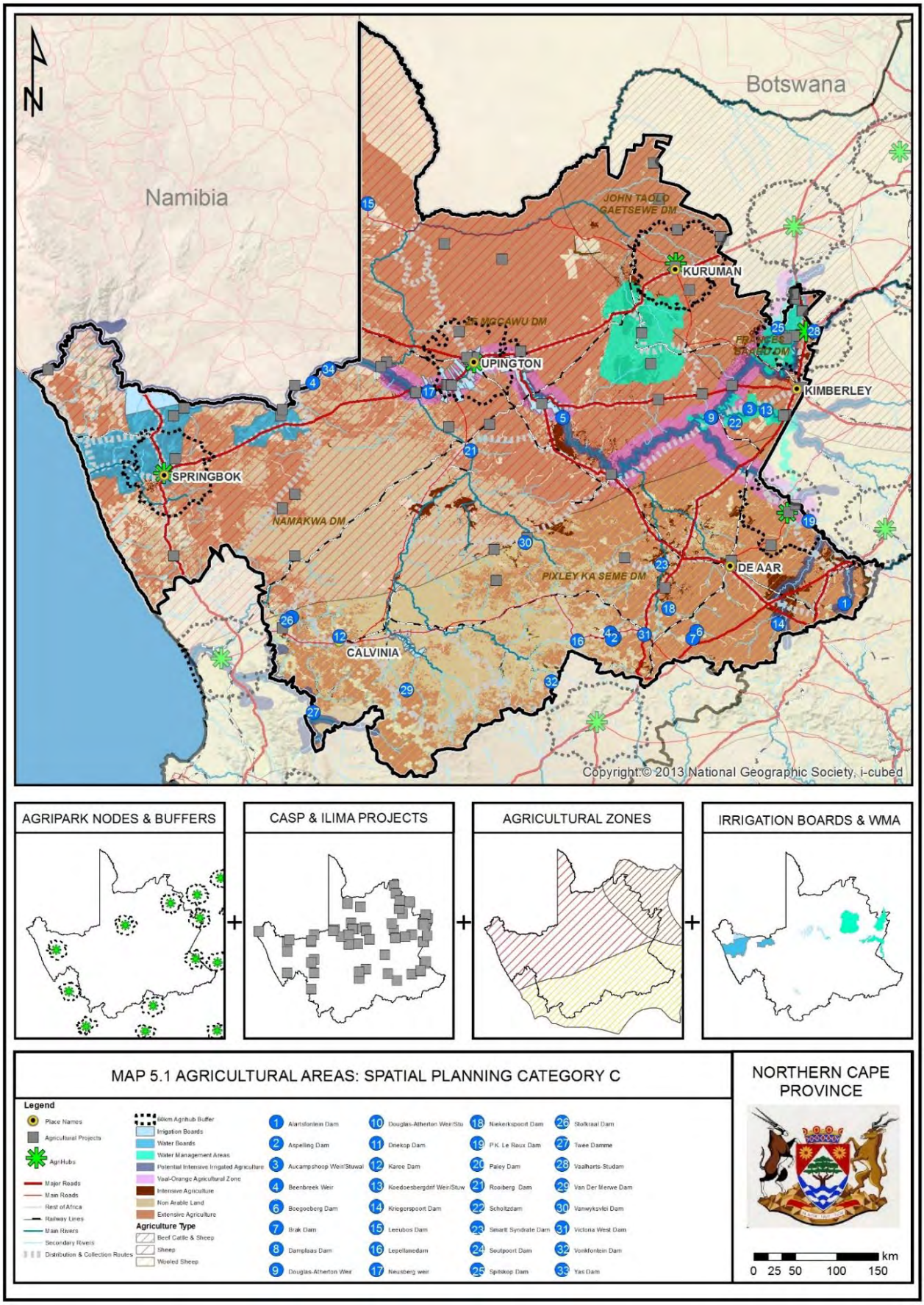


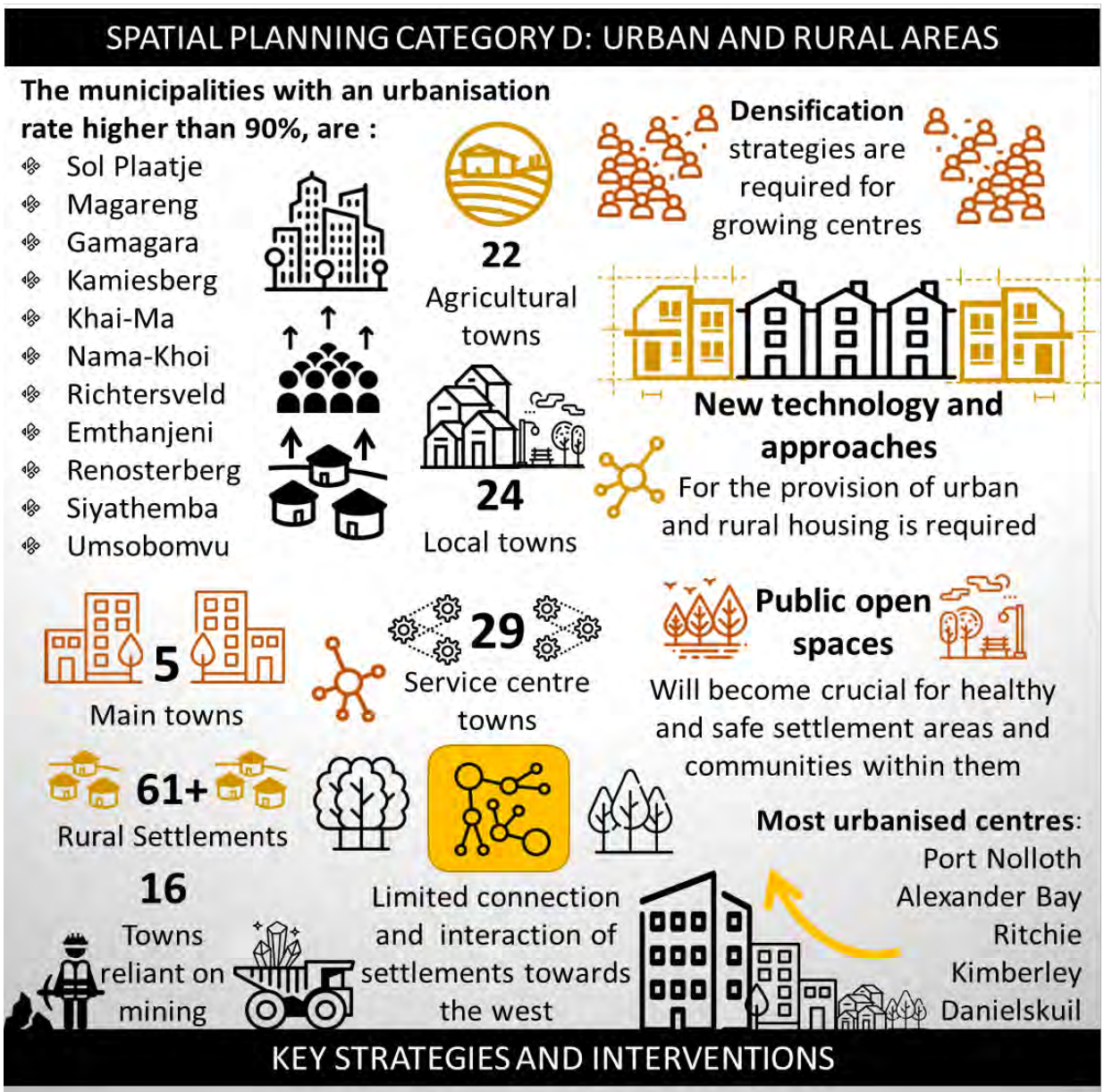
Figure 42: Sustainable aquaculture operations

3.4 SPATIAL PLAN FOR SPC C: AGRICULTURAL AREAS



Map 24: Spatial plan for SPC C: Agricultural areas

4 URBAN AND RURAL DEVELOPMENT



- All spheres of government, especially municipalities, must provide quality spatial data and interpretation to land managers to assist decision-making and adaptive management, and make regional natural resource information and knowledge widely available or accessible (i.e. the SPISYS).
- Accelerate and streamline township establishment processes and procedures to ensure sustainable development.
- Prioritise government spending and private sector investment in urban and rural development in accordance with a settlement category determined by the socio-economic potential of towns and the needs of their inhabitants.
- Improve the quality of subsidised housing settlements through innovative urban planning and design and cross-subsidising.
- Ensure that development scale and design are determined by the carrying capacity of the environment.

Infographic 3: Spatial Planning Category D (Urban and Rural Areas)

4.1 BACKGROUND

The human-made (cultural) place is defined as the environment that has been created or modified by humans to the extent that its primary ecosystem functions and natural aesthetic appeal are lost or diminished (Schmithusen, 1964). Human-made places symbolise people's understanding of their environment and 'gather' a number of meanings (Norberg-Schulz, 1993). Human-made places generally fall into two broad categories, namely:

- The farm and agricultural village that are related to the land and, as such, form part of a particular environment, which has an influence on their structure; and
- Urban dwellings within which the relationship to the natural environment has been weakened or has been lost.

It is often overlooked that the inhabited landscapes are the works of humankind and that a general understanding of what constitutes qualitative inhabited landscapes, and what to do to maintain such landscapes, are of decisive importance for long-term sustainable development. Furthermore, inhabited landscapes are contained by natural landscapes and the relationship between the inhabited and natural landscapes is a fragile one.

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 rehabilitation of existing settlements and to ensure that any future developments are sustainable (i.e. supportive of environmental integrity, human well-being and economic efficiency). Standard town planning criteria applicable in the evaluation and assessment of development applications, building plan approval, change of land-use, etc. are still relevant and will not be replaced by this policy. These criteria relate to inter alia taking due cognisance of natural and/or unique resources and land and coastal elements, prevention of urban sprawl, preference for strengthening and densification of existing nodes, and taking into consideration the cumulative impact of development.

The settlement system in the Northern Cape is characterised by small and often isolated urban and quasi-urban settlements scattered across the vast area of the province. Many of these settlements find it hard to provide basic services and sufficient income generating-opportunities to their inhabitants. Sustainable rural development is closely bound to a vibrant and functional urban settlement system. Villages, settlements and cities are the 'engine rooms' that drive regional development and economic growth. Unfortunately, not all urban settlements have the same growth potential. Growth trends fluctuate over time due to many influencing factors. In a large province such

as the Northern Cape such 'engine rooms' make a special contribution towards meeting the general needs in both the settlements and the surrounding rural hinterland. Such 'engine rooms' also affect global links, the national spatial economy and sustainable regional development in the province.

It is generally accepted that public funds should be applied for the improvement of a small town's structure and functioning (e.g. investment in market support, provision of water and electricity, development of housing and new industrial areas) only if the basic rural development conditions are suitable (Hinderink and Titus, 2002). The basic driving force behind a town's growth is provided by its specific economic activities, which generate job opportunities, capital, buildings and infrastructure (Badcock 2002: 66). An economic, social and environmental interdependence exists between urban and rural areas and the 'rural-urban linkage development perspective' is increasingly becoming the accepted approach in developing countries. Rural-urban linkage generally refers to the flow of monetary capital, people, goods and information between urban and rural areas. Infrastructure related to transportation, communications, energy and basic services, form the backbone of the urban-rural development linkage approach.

4.2 POLICY ALIGNMENT

Table 77: Policy alignment towards Spatial Planning Category C

POLICY / PLAN	DISCRIPTION
 **Sustainable Development Goals (SDG's)** – *Sustainable Cities and Communities*	• By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums; • By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons; • By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries; • Strengthen efforts to protect and safeguard the areas cultural and natural heritage; • By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management; • By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities; • Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning; • By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels; and • Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.
SPLUMA Principles *Key considerations and guidelines to be included are:*	
Spatial Justice: • Past spatial and other development imbalances must be redressed through improved access to and use of land;	

POLICY / PLAN	DISCRIPTION
	• Spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded; and • Spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land.
	Spatial Sustainability • Promote land development that is within the fiscal, institutional and administrative means of the Republic; • Promote and stimulate the effective and equitable functioning of land markets; • Consider all current and future costs to all parties for the provision of infrastructure and social services in land developments; • Promote land development in locations that are sustainable and limit urban sprawl; and • Result in communities that are viable.
	Spatial Efficiency: • Land development optimises the use of existing resources and infrastructure; • Decision-making procedures are designed to minimise negative financial, social, economic or environmental impacts; and Development application procedures are efficient and streamlined and timeframes are adhered to by all parties.
	Spatial Resilience: • Flexibility in spatial plan, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.
	Good Administration: • All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act; • The requirements of any law relating to land development and land use are met timeously; and • The preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them.
PGDP *paths to prosperity*	**Key considerations of the PGDP that needs to be accommodated in the PSDF include:** • Northern Cape Coastal and Marine Tourism Strategy - To promote the Diamond Coast as a unique, wilderness, competitive and tranquil destination through the development of existing marine and coastal potential, the improvement of infrastructure and accessibility, skills development, improved marketing, institutional arrangements and SMME development to attract international, domestic and potential tourists to the area while improving and sustaining the livelihoods of the community; • Upington Cargo Hub; • Trancraa and Traditional Area protection; • Science and Technology strategy; and • Comprehensive Rural Development Programme which empowers rural communities to take control of their own destiny, with the support of Government.

4.3 SPATIAL DEVELOPMENT CATEGORY D: URBAN AND RURAL AREAS

4.3.1 DESCRIPTION AND DEVELOPMENT PARTNERS

Table 78: Purpose and description of spatial Planning Category D

	D URBAN RELATED		
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
D.a	Main Town	Towns accommodating Category A Municipalities (i.e. metropolitan areas) and	SALGA COGHSTA DM

	D URBAN RELATED		
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
		the seat (capital town) of Category C Municipalities (District Municipalities).	LM
D.b	Local Town	Towns accommodating the seat (capital town) of Category B Municipalities (Local Municipalities).	COGHSTA DM LM
D.c	Rural Settlements	Smaller towns and rural settlements that fall under the jurisdiction of Category B Municipalities (i.e. towns and rural settlements forming part of a Local Municipality).	COGHSTA DM LM
D.d	Tribal Authority Settlements	Formal and informal residential areas under the ownership of tribal authorities[42] , e.g. Kamden, Ga-Sehunelo Ward 1, Gamorona, Heuningvlei, Kleineira, Segwaneng, Cassel, Deurward, etc.	COGHSTA DM LM
D.e	Communal Settlements	Settlements that have been planned, classified and subdivided in terms of the former Rural Areas Act 9 of 1987 and which, in terms of the Transformation of Certain Rural Areas Act 94 of 1998, can be transferred to a legal entity of the community's choice, e.g. Pella, Concordia, Richtersveld, Steinkopf and Leliefontein.	COGHSTA DM LM
D.f	Institutional Areas	Areas designated for schools, colleges, churches and mosques and other institutional purposes.	COGHSTA DM LM
D.f.1	Place of Instruction		LM
D.f.2	Place of Worship		LM
D.f.3	Institution		LM
D.g	Authority Areas	Areas designated for governmental purposes and other official uses, e.g. municipal offices, offices of parastatals (Telkom, Eskom) (areas zoned for authority purposes).	COGHSTA DM LM
D.g.1	Government Uses		COGHSTA DM LM
D.g.2	Municipal Uses		LM
D.h	Residential Areas	Areas designated for residential purposes, e.g. single title erven, group housing, estates, 'GAP housing' and residential smallholdings.	LM
D.h.1	Single Residential House		LM

[42] The following Tribal Authorities are present in the Northern Cape Province:

- Kgosi Phetlhu – Ba Ga Phetlhu
- Kgosi Leburu – Ba Ga-Sehunelo
- Kgosi Toto – Ba Ga Motlhaware
- Kgosi Dioka – Ba Ga Phadima
- Kgosi Bareki – Ba Ga Lotlware
- Kgosi Jantjie – Ba Ga Phuduhutswana
- Kgosi Motswarakgole – Ba Bothithong
- Kgosi Thaganyana – Ba Ga Phuduhutswana
- Kgosi Mahura – Ba Ga Mahura

SUB-CATEGORY		DESCRIPTION	CHAMPIONS
D.h.2	Group Housing		LM
D.h.3	Guest House		LM
D.h.4	Flats/Residential Building		COGHSTA LM
D.h.5	Mixed Density Residential Area		COGHSTA LM
D.h.6	GAP Housing		COGHSTA LM
D.h.7	Subsidised Housing		COGHSTA LM
D.h.8	Informal Housing		COGHSTA LM
D.h.9	Small Holdings		LM
D.h.10	Residential Estate		LM
D.i	Business Areas		LM
D.i.1	Business Premise		LM
D.i.2	Shop		LM
D.j	Service-Related Business	Areas designated for other business activities associated with service trade industries, e.g. launderettes and light manufacturing industries; and industries associated with motor vehicle sales and repairs.	LM
D.j.1	Service Trade Industry		LM
D.j.2	Service Station		LM
D.k	Special Business	Areas designated for special business activities associated with casinos and gambling houses and areas identified for adult entertainment.	LM
D.k.1	Casino		LM
D.k.2	Adult Entertainment		LM
D.l	SMME Incubators	Areas designated for Small Medium and Micro Enterprises (SMME's) and associated infrastructure and services focused on community-based service trade and retail.	LM
D.m	Mixed-Use Development Areas	Areas designated for innovative combinations of land-use, e.g. residential/light business; light industry/light business (in terms of various municipal zonings).	LM
D.n	Cemeteries	Cemeteries and formal burial parks, excluding crematoriums.	LM
D.o	Sports fields & Infrastructure	Dedicated sports fields together with the associated infrastructure, parking areas, and services.	LM
D.p	Airport and Infrastructure	Area designated as airport together with the infrastructure and services associated with the airport and its activities.	LM ACSA
D.q	Resorts & Tourism Related Areas	Resorts and tourism-related nodes and amenities that form part of a designated Hospitality Corridor.	LM DENC DEDaT

D URBAN RELATED			
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
D.r	Farmsteads & Outbuildings	Main farmsteads, including on-farm infrastructure required for farm logistics, e.g. houses, sheds, packing facilities, etc.	LM

4.3.2 OBJECTIVES

- Develop sustainable settlements that would promote the well-being of the people of the Northern Cape, i.e. where they can live with dignity and pride;
- End the apartheid structure of urban settlements;
- Prohibit further outward expansion of urban settlements that entrenches the current spatial apartheid pattern and results in urban sprawl;
- Ensure that public funds are not spent in perpetuating segregated and unsustainable settlement patterns;
- Use socio-economic gradients based on walking distance to create a higher level of integration than currently exists while remaining sensitive to community social norms and levels of living;
- Use publicly-owned land and premises to spatially integrate urban areas and to give access for second economy operators into first economy spaces;
- Promote sustainable urban activities and public and non-motorised transport;
- Use walking distance as the primary measure of accessibility;
- Develop pedestrian and cycling routes;
- Densify urban settlements, especially along main transport routes, at nodal interchanges etc.
- Identify areas of highest accessibility that can be designed to maximise safe social and economic activity, especially for participants in the second economy;
- Restructure road networks to promote economic activity in appropriate locations; and
- Cluster community facilities together with commercial, transport, informal sector and other activities to maximise their convenience, safety and social economic potential.

4.3.3 POLICY GUIDELINES

Table 79: Policy guidelines applicable to Spatial Planning Category D

D URBAN RELATED	
GUIDELINES	
CRITERIA	**DISCRIPTION**
Densification	• Densification of urban settlements must occur with due regard for ecological and heritage concerns as identified in EIAs/HIAs. Ecological concerns include impacts on biodiversity, flora/fauna in general, soil, and water quality and quantity, and heritage concerns include cultural landscapes, historic buildings and precincts, and artefacts of memory; • As a general guideline, the average gross density in settlements must be increased before further extensions to the urban edge are considered. The term 'average' implies that densities may be as low as 3-6 units per hectare on the urban periphery and that it could increase to 20-30 units per hectare at or near the centre of the urban area; • Densification should occur in strategic parts of urban settlements such as along major routes, around open spaces, on well-located land or in underdeveloped areas with good location that warrant increased development; and • Heritage resources should be considered in the planning and design of higher density areas. SDF's of municipalities should indicate how and where infill development should be undertaken to increase the average density. This is to

D URBAN RELATED

GUIDELINES	
CRITERIA	**DISCRIPTION**
	ensure that civil infrastructure and public transport services are developed and used cost-efficiently, that public facilities are well supported and that SMMEs and informal trades have viable thresholds.
Infrastructure	• Transport interchanges are to be integrated into a series of mixed-use nodal points strategically located on corridors of highest intensity in the larger towns (to be identified in the SDF's); • Where appropriate, the geometric design of gateway intersections on by-passes around small towns should be reprioritised to encourage suitable through-traffic to pass through rather than around the town; • The scale of urban development must be within the carrying capacity of water reserves, capacity for waste absorption, use of recreational amenities, etc; and • All future buildings, roads and infrastructure (including power lines) must be sited and designed according to the relevant SPC's and guidelines and are subject to heritage, environmental and visual impact analyses.
Institutions	• Institutional buildings that accommodate community activities, educational and health services, and entrepreneurial development and skills training, should be located at points of highest access in urban settlements.
Open spaces	• Development within natural areas must blend in or harmonise with the biophysical characteristics of the environment. This implies the following: o Developmental components must be discretely sited within the environment; o Development must blend in with the natural surroundings in terms of colour, use of locally occurring natural building materials and architectural style; o Development must conform to the local vernacular in terms of scale and design, of that particular area or bioregion; and o Where necessary existing unsightly development must be screened through effective landscaping. • Landscaping must be undertaken simultaneously with construction. Such landscaping could include the following: o Indigenous vegetation could be used to break the harsh, straight lines of buildings, i.e. for screening, water-saving measures, etc; o As much of the indigenous flora on the site must be retained as possible, especially in areas prone to wind-blown sand; o As far as possible, only indigenous plants are to be used in the landscaping of the property; and o Earthworks, such as earth berms and mounds, to add topographical interest, provide wind-shelter and screen structures, must be encouraged in the landscaping of the development.
Resorts	To ensure that buildings of resort developments are in harmony with the surrounding landscape and local vernacular, thus maintaining the character and aesthetic quality of the area, the planning and design process must address, inter alia, the following: • Architectural vernacular; • Architectural design (cast shadows, break bulk of buildings); • Urban design to maintain space; • Materials to be used (natural stone, thatch, wood); • Fencing (if any); • Height and coverage of units; • Landscaping proposals for the site; and • Extent of units and erven.

D URBAN RELATED	
GUIDELINES	
CRITERIA	**DISCRIPTION**
Environment	• The proponent of a large-scale development must submit financial assurances for long-term environmental management and rehabilitation of the development site and the surrounding environment; and • One way of providing assurance is to establish a trust fund for the development. This could be required as a condition of approval. The trust fund could be funded by depositing into it a percentage of the sale of each portion of the property.
Spatial planning	• Municipalities must apply appropriate Spatial Structuring Elements in the development of new urban areas or the restructuring of existing urban areas. This includes defining and delineating, as part of their SDFs, the outer limit of urban expansion (i.e. an urban edge) to contain lateral growth of urban areas; and • Municipal SDFs must make provision for appropriate Restructuring Zones in terms of the Social Housing Act 16 of 2008.
Urban design guidelines	• Municipal urban plans must make provision for non-motorised transport, bicycles and pedestrians along major routes as a start; • Planning, design and development guidelines must reflect an understanding of places and the values, norms and principles that provide meaning and identity for the communities of such places and society at large; • The aesthetic qualities of an area must be a determinant of the scale and format of development in that area; • Place-specific design guidelines must be drafted for each town as part of the municipal SDF. An aesthetics committee must be established for each town to review building and planning applications in collaboration with the relevant authority and in accordance with the principles of critical regionalism (i.e. giving effect to a sense of place, a sense of history, a sense of nature, a sense of craft and a sense of limits) (refer to Toolkit D12); • Procedures for monitoring design quality (e.g. aesthetics committee) need to involve the full range of design consumers, such as planners, architects, councillors and amenity representatives; and • In terms of the concept of critical regionalism, all development should reflect a sense of limits. There is a need for physical and temporal boundaries to frame and limit human places and activities. Limits need to be considered over the full spectrum of environmental management practices and issues, including the following: o Scale of urban expansion; o Scale of natural resource utilization; and o Architectural styles, scale and visual impacts of surface infrastructure and roads.
Urban Edge	As a general rule, non-agricultural development may not be permitted outside the urban edge except for bona-fide holiday/tourism accommodation; bona fide agri-industry development; agri-settlements, and social facilities and infrastructure necessary for rural development.
Settlement planning	• Settlement development will be undertaken in accordance with the policy document entitled 'Breaking New Ground': Comprehensive Plan for the Development of Sustainable Human Settlements (Department of Sustainable Settlements); and • Urban settlements are to be restructured so as to break down the spatial barriers created by apartheid and make them more convenient and pleasant to live in while creating economic opportunities close (within walking distance) to where people live. The SDFs of local municipalities must provide guidance in this regard.

4.3.4 STRATEGIES

Table 80: Strategies applicable to Spatial Planning Category D

D URBAN RELATED	

STRATEGIES

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
D4.3.4(a)	Ensure that development scale and design are determined by the carrying capacity of the environment, including the following: • Biophysical characteristics (i.e. the *intrinsic* value of the site); • Sensitivity and/or irreplaceability of natural habitats that may be affected by the proposed development (i.e. the *systemic* value of the site); • Aesthetic qualities of the proposed development site; • Availability of natural resources such as water; • Potential aesthetic impact of the proposed development. • Potential of the site for sustainable agriculture or other productive land-use (i.e. the *instrumental* value of the site); • Density and scale required in order to establish an appropriate sense of place within the proposed development; and • Extent of the property.	LM, DM	High/ On-going
D4.3.4(b)	All spheres of government, especially municipalities, must provide quality spatial data and interpretation to land managers to assist decision-making and adaptive management, and make regional natural resource information and knowledge widely available or accessible (i.e. the SPISYS or othewr realtime spatialy enabled data repository systems).	All three spheres of government	High/ On-going
D4.3.4(c)	**Address the following in the municipal SDF's:** • The availability and extent of vacant land that could be utilized to address the various needs of the relevant settlement and its inhabitants; • Environmental constraints that impact upon the future use of any such vacant land; • Potential opportunities on vacant land for development or any other appropriate forms of land-use that address the needs of the relevant settlement and its inhabitants; • Appropriate land-use classification of the relevant settlement with the objective to ensure the sustainability of such land-uses and the compliance thereof with the vision, goals, and objectives set for the area; • Spatial structuring elements to be imposed to ensure that any future urban renewal and restructuring, development projects, and associated land-uses to be undertaken in the relevant settlement comply with the criteria and principles of 'good place-making'. These spatial structuring elements include (refer to Toolkit D13):	LM	High

D URBAN RELATED	

STRATEGIES

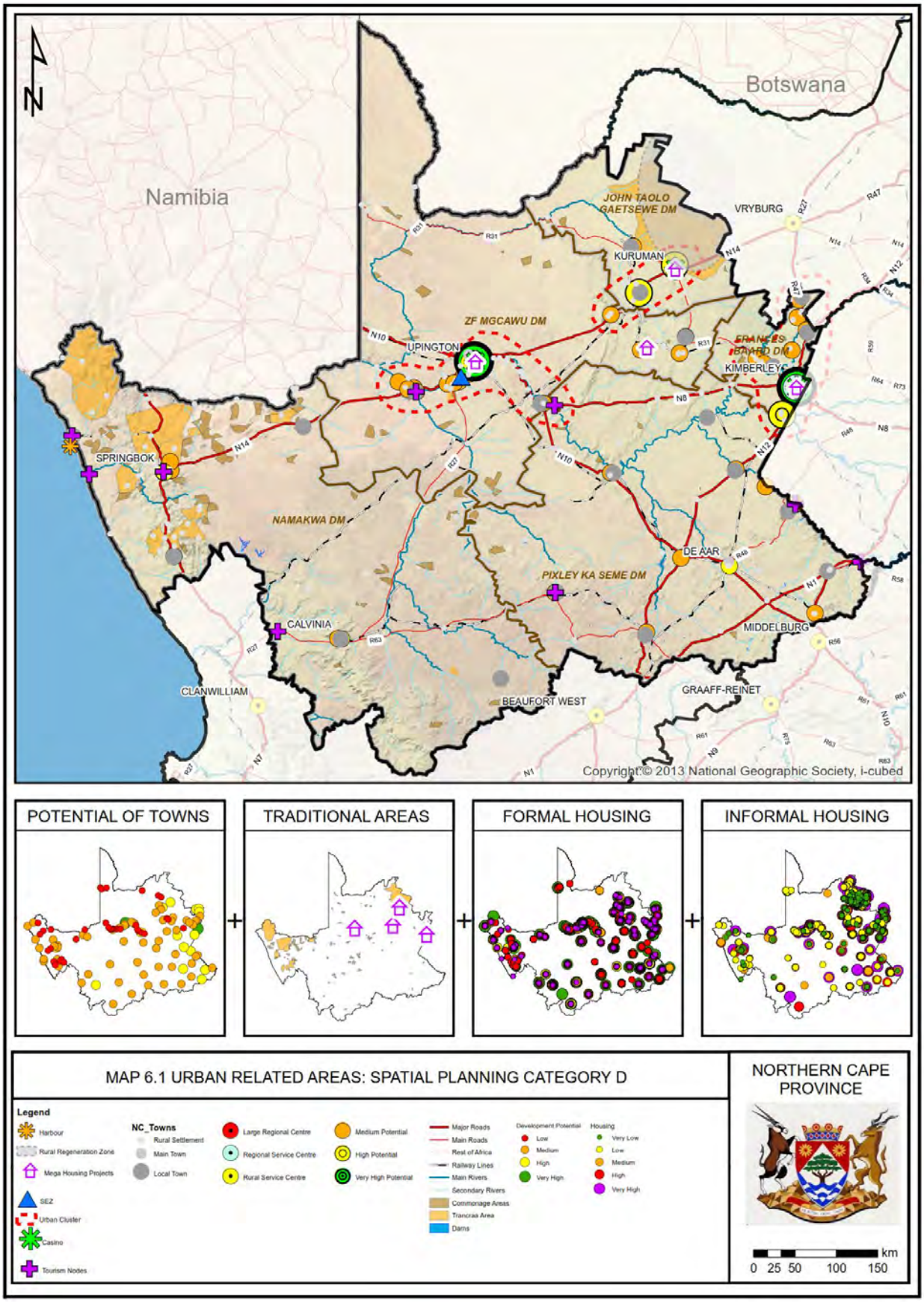
NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
	(i) Appropriate outer limits for outward spread of the relevant town under the present growth rate and in terms of the current and predicted availability of resources; (ii) Activity corridors that abut primary transport routes and provide opportunities for mixed-use development; and (iii) Activity Streets that provide viable opportunities for local business and community facilities. (iv) Nodes that occur at intersections of activity corridors and streets and which are designated for concentrations of a particular use. (v) Precincts, or special use areas, dominated by primary community-based activities and land-uses that influence the settlement pattern and growth. • A Municipal Open Space System (MOSS) which consists of a contiguous network of natural corridors and public open spaces focused on promotion of the well-being of the people of the area and the integrity of the environment as a totality.		
D4.3.4(d)	Include in the SDF's guidelines pertaining to the following: • Tree planting projects, including appropriate indigenous, ornamental and fruit trees, urban greening (landscaping) and food gardens along streets and in open spaces as part of urban restructuring programmes. Successful tree planting programmes are recognised as having a huge aesthetic impact (refer, for example, to Aggenys). • Develop and institute, as part of the municipal SDFs, innovative restoration and rehabilitation plans for unattractive and inappropriate urban areas, in terms of the principles of critical regionalism (refer to Toolkit D12).	LM	High
D4.3.4(e)	Improve the quality of subsidised housing settlements through innovative urban planning and design and cross-subsidising (refer to the SDI approach in Toolkit D10).	LM	High
D4.3.4(f)	Provide basic services to all settlements in accordance with their composite resources index provided as described in **ANNEXURE B.**	COGHSTA, DM, LM	High/ On-going
D4.3.4(g)	Prioritise government spending and private sector investment in urban and rural development in accordance with a settlement category determined by the socio-economic potential of towns and the needs of their inhabitants.	All three spheres of government	
D4.3.4(h)	• Accelerate and streamline township establishment processes and procedures to ensure sustainable development. • Improve the quality of SDFs to include, master planning in areas of interest, town planning schemes, availability of services.	COGHSTA DM's LM's	High/ On-going

D URBAN RELATED	

STRATEGIES

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
	• Establish private-public sector planning structures and processes to improve the quality of planning services and community communication. • Identify and acquire land parcels for integrated inclusive settlement development in close proximity to employment opportunities. • Release surplus government land for human settlements • Ensure law enforcement in the planning and property environment. • Manage illegal land invasion		

4.4 SPATIAL PLAN FOR SPC D: URBAN AND RURAL RELATED AREAS



Map 23: Spatial plan for SPC D: Urban and Rural Related areas

5 INDUSTRIAL DEVELOPMENT

- Develop the required industrial amenities and infrastructure in the defined development corridors which respond to the availability of Environmental Capital (e.g. water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g. roads, electricity, bulk engineering services, etc.).
- Develop and adopt strategies for efficient water use and increase water conservation at mine sites.
- Continuous rehabilitation of mined land for agricultural and other rural development projects.
- Adjusting existing risk-identification processes to incorporate additional heat related health risks for industrial activities, such as underground mining.
- Prepare a provincial industrial development strategy.
- Prepare a Provincial Disaster Risk Reduction and Adaptation Plan.

Infographic 4: Spatial Planning Category E (Industrial Areas)

5.1 BACKGROUND

A key challenge is to broaden and unlock the opportunities presented by the availability of natural resources. Industrial activities, whether large- or small-scale, have the potential to stimulate economic diversification and development in the province.

The overall economic impact of industrial projects is highly dependent on the fullness and depth of the 'cluster' of activities that form and agglomerate around it. Clustering or linking development generally results as a direct and indirect consequence of the construction and successful operation resource-based projects. Direct impacts include upstream, side-stream and downstream activities. Indirect impacts refer to the broader economic linkages and beneficiation that are induced in the local economy as a consequence of each of these direct impacts. These include the linkages that arise between the various resource-based projects themselves as well as different sectors in the immediate vicinity of the project and further afield. The scale and depth of clustering that arises as a consequence of indirect impacts is likely to be much more extensive and the employment multipliers much greater than those arising from direct spin-offs. It is the degree of direct linkage development, therefore, which ultimately determines the long-term maturity and success of clustering around a project and in the local economy. Each direct spin-off from the initial industry provides the impetus for further employment spin-offs either in supporting industries and enterprises or the service sector. These indirect spin-offs, in turn, facilitate the diversification of the economy through the development of additional industrial and service activities as employee demands for different products begins to increase.

While immediate industrial development opportunities related to mining in the Northern Cape lie in brown-fields expansions and various types of downstream value-added activities (art, jewellery, souvenirs etc.) there are a number of other possibilities in side-stream and indirect activities. 'Side-stream' activities refer to the service network, vendors and key contracting firms directly affiliated with a particular mineral project's operations. Not only is this sector significant in terms of contributing to broadening the local and provincial employment base and enhancing the potential for further employment spin-offs, but it is of critical importance to the functioning of all departments within a particular mineral-based operation. The 'side-stream' sector associated with each mine or processing plant usually comprises vendors of various sizes, providing either hard or soft services. Hard services are usually production-related activities and plant specific and include hard engineering companies, engineering suppliers, construction and manufacturing firms, and heavy equipment, industrial and electrical suppliers. While most of these activities are technical in nature and require skills, which are largely absent in the area and sourced from Gauteng (the 'hub' of mining supply and services companies), there are, nevertheless, a number of areas where SMME's can be developed as preferred suppliers and establish workshops and facilities in the immediate vicinity of such plants. Such opportunities include the localisation of spares (conveyors, mechanical power equipment, motors and generators, bearings, pumps, fasteners, springs etc.), maintenance facilities, and supply of consumables required in the daily operation of the project (chemicals, reagents etc). Soft (non-production) services include things such as security, industrial cleaning and plant hygiene, garden/landscaping and interior plant management, consumables, catering, personal protective equipment, legal/logistic activities, consultants (IT, environmental & industrial), waste management,

painting services, etc. Such functions offer numerous possibilities for SMME development and economic diversification. Industrial development can also be enhanced by recognising and targeting the indirect activities that are often associated with mineral-based operations. Various types of indirect impacts generally arise as a consequence of the operation of a resource-based plant (and its downstream operations) at different levels. First, at the local level, suppliers contracted directly to the resource-based plant will foster additional linkages through interaction with other suppliers of goods and service firms located in the area. Second, indirect impacts and multiplier effects are enhanced and fostered due to an increase in disposable income – a direct impact of employment at the plants and in the supplier network. As the wages and security of livelihoods increases, demand patterns change, a more diversified mix of enterprises providing a range of products and services will emerge. Such activities include, inter alia, entertainment, retail, education, care/medical, residential and transport facilities. Clustering and diversification arise from inter-project linkages, i.e. utilisation of inputs, outputs and by-products produced by each mine and processing plant.

Another indirect possibility is in encouraging the indirect impacts related to inter-sectoral linkages, i.e. linkages arising between the mining sector and other industrial and economic sectors in the province. Other sectors that should benefit from these mineral-based projects include transport, construction, manufacturing, tourism, biodiversity conservation, etc. Close collaboration and interaction between the private and public sector are critical to capitalise on these indirect opportunities.

The development of the energy sector holds huge benefit for the Northern Cape which would have significant multipliers in the local economy. It is important that innovative planning be undertaken to provide the necessary infrastructure and associated amenities to accommodate the industry in an efficient manner. Therefore, to ensure the sustainability of the current and future economic sectors and to maximise synergies, it is imperative that industrial development be undertaken in a manner that promotes the principles of environmental integrity, human well-being and economic efficiency.

5.2 POLICY ALIGNMENT

Table 81: Policy alignment applicable towards Spatial Planning Category E

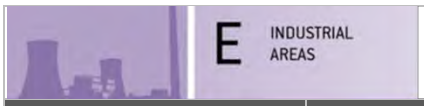
POLICY / PLAN	DISCRIPTION
 **Sustainable Development Goals (SDG's)** – *Industry, Innovation and infrastructure*	• Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries; • Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets; • By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities; • Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending; • By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse; and • By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

POLICY / PLAN	DISCRIPTION		
SPLUMA Principles *Key considerations and guidelines to be included are:*	**Spatial Justice:** • Spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land; and • Sustainable use and development of land.	**Spatial Sustainability** • Promote land development that is within the fiscal, institutional and administrative means of the Republic; and • Promote land development in locations that are sustainable and limit urban sprawl.	**Spatial Efficiency:** • Decision-making procedures are designed to minimise negative financial, social, economic or environmental impact.
PGDP *paths to prosperity*	**Key considerations of the PGDP that needs to be accommodated in the PSDF include:** • Mining rights and permits issued by Department Minerals and Energy cover a significant number of hectares, and needs to be balanced out with other land uses through strategies and policies; • Northern Cape Manufacturing Strategy; and • Potential SEZ Developments in the Northern Cape.		

5.3 SPATIAL DEVELOPMENT CATEGORY E: INDUSTRIAL AREAS

5.3.1 PURPOSE

Table 82: Purpose and description of Spatial Planning Category E



MAIN CATEGORY		PURPOSE	PARTNERS
E. Industrial Areas		Areas designated in terms of land use schemes, regional economic development zones, as well as special economic zones for industrial land uses/, varying from light industries, associated with services industries, to extractive industries such as mining.	DENC DEDaT Dept. of Mineral Resources Nat. Dept. of DTI Dept. Transport Mining chambers DMs LMs
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
E.a	Agricultural industry	Agriculture-related industrial development, e.g. silos, wine cellars, packing facilities, excluding abattoirs.	Dept. Agriculture, rural development and land reform DM LM
E.b	Industrial Developme nt Zone	Dedicated industrial estate ideally linked to an international, or national, port that leverages fixed direct investments in value-added and export-orientated manufacturing industries.	DEDaT DTI DM LM
E.c	Light industry	Areas designated for light industrial activities associated with the service industry (e.g. repair of motor vehicles) including warehouses and service stations.	DM LM

E INDUSTRIAL AREAS

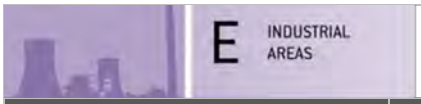
MAIN CATEGORY		PURPOSE	PARTNERS
E.d	Heavy industry	Areas designated for robust industrial activities, e.g. chemical works, brewery, processing of hides, abattoirs, stone crushing, and crematoriums.	Dept. of Mineral Resources Dept. Agriculture, rural development and land reform DENC LM's DM's
E.e	Extractive industry	Settlements and infrastructure associated with multiple consumptive resource extraction, e.g. mining/fracking.	Dept. of Mineral Resources DEDaT DENC Nat. Dept. of Environmental Affairs LM's DM's
E.f	Urban agriculture	Repurpose of industrial structures within settlement areas for urban agriculture uses.	LM's DM's

5.3.2 OBJECTIVES

- Align to the objectives and strategies of the Industrial Policy Action Plan (2018/2019 – 2020/2021) as well as the National Industrial Policy Framework;
- Establish the industrial areas and infrastructure required for the harvesting, processing and beneficiation of the resources of the province;
- Ensure that the larger economic sector (mining, in particular) contributes to an appropriate off-set or quid pro quo for the detrimental impacts associated therewith;
- Ensure that the planning, design and construction of industrial areas comply with the principles of sustainability with specific reference to climate-neutrality;
- Develop industrial areas in a manner that supports the Second Economy;
- Promote, to the extent possible, a bioregional economy, which inter alia requires that the province and its component districts (bioregions) be self-sufficient as it relates to the production of essential commodities and that resources be processed and beneficiated locally;
- Explore alternative and emerging technologies to improve quality and quantity within the manufacturing sector;
- Ensure the sustainable use and protection of the environmental capital;
- Offset direct detrimental impacts of resource use;
- Provide measures to cater for indirect impacts or impacts that may in the long-term emerge as a result of resource use; and
- Unlock the latent benefit and synergies vested in the resource use in order to create a positive socio-economic legacy once the initial resource use has reached its productive life cycle.

5.3.3 POLICY GUIDELINES

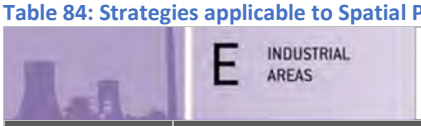
Table 83: Policy guidelines applicable towards Spatial Planning Category E



CRITERIA	DISCRIPTION
Industry support and regulation	• Codes and standards for energy efficient buildings in the government, commercial, industrial, residential and community sectors are to be set according to the following guidelines: o Green House Gas emissions reduced by 10% over 20 years as kickstarted in 2012; and o Electricity consumption reduced by 20% from what it would have been if the current trend continued unabated for the next 20 years. • Renewable energy sources (e.g. wind, solar thermal, biomass, and domestic hydro-electricity generation) are to comprise 25% of the province's energy generation capacity by 2030; and • Solar thermal water heating and photo-voltaic energy generation are to be compulsory, linked to main electricity sources as backup, on all new residential, commercial, industrial and community buildings, and should be progressively phased in as appropriate.
Environmental Management	• In order to protect the unique natural characteristics of the province, the objective is to ensure that all industrial development is sustainable. In this regard, the following needs to be instituted: o Constant assessment of the environmental impact of industrial activities; o Development of system packages for industrial clients; o Implementation of 'low, or no waste, technologies; and o Modification of the industrial system itself, with the view to optimise resource use and minimise waste and ecological damage. • Industrial mechanisms are to be designed to prevent the generation of pollution throughout the production process. The growing levels of industrial effluents and increasing industrial activity are calling for the relevant authority to assess the environmental impact of the manufacturing sector.
Locality	• Industrial development must be clustered in close proximity to the product source, within the defined development corridors, in close proximity to major transport linkages, and bulk infrastructure; • Where industrial development is proposed in remote areas that do not comply with the requirements set in above, the proponent must provide conclusive evidence regarding the desirability and sustainability of the proposed development and must fund the provision of the required access and services; and • Industrial development in settlements is subject to the defined guidelines to be provided in the municipal SDF's.

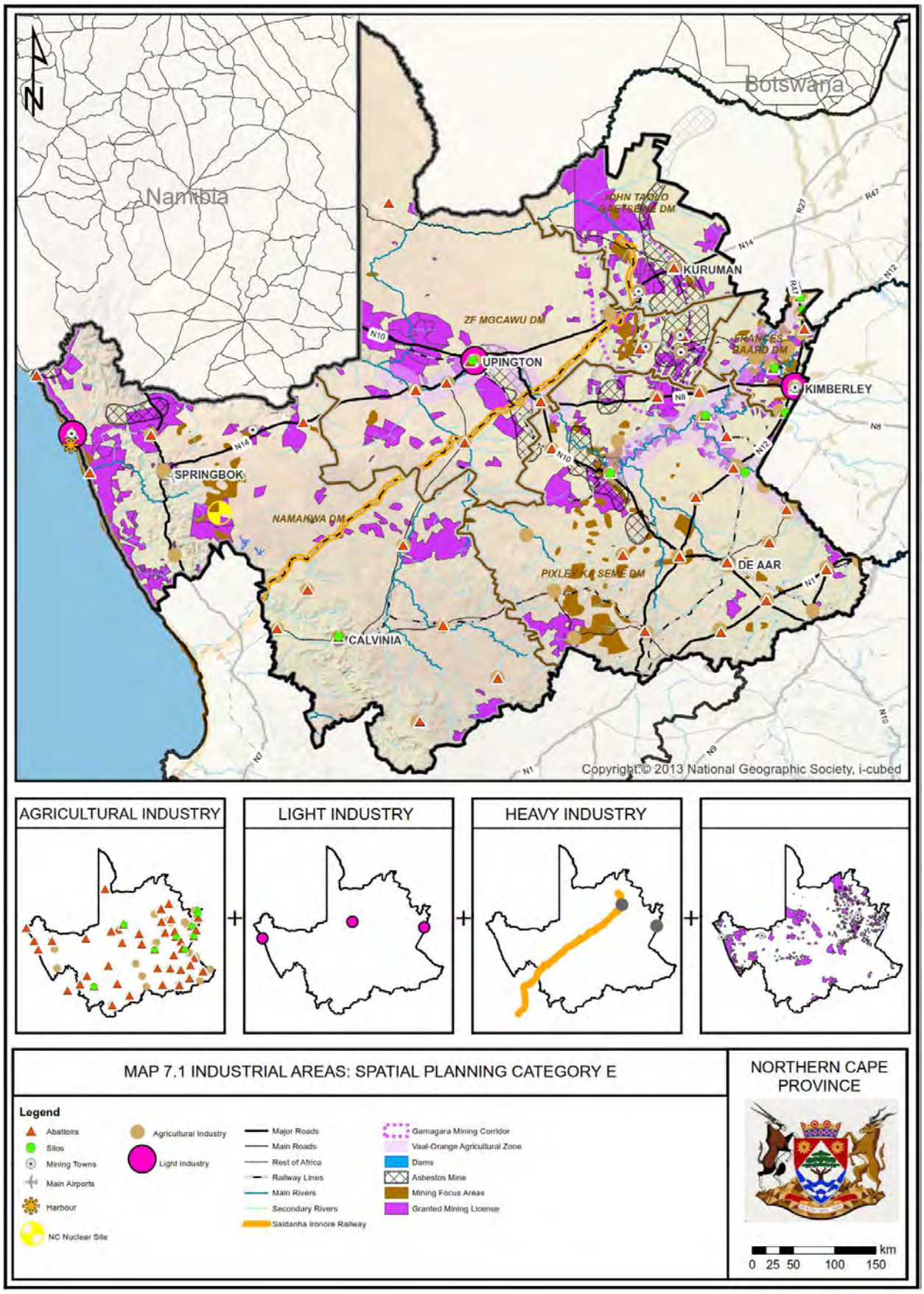
5.3.4 STRATEGIES

Table 84: Strategies applicable to Spatial Planning Category E



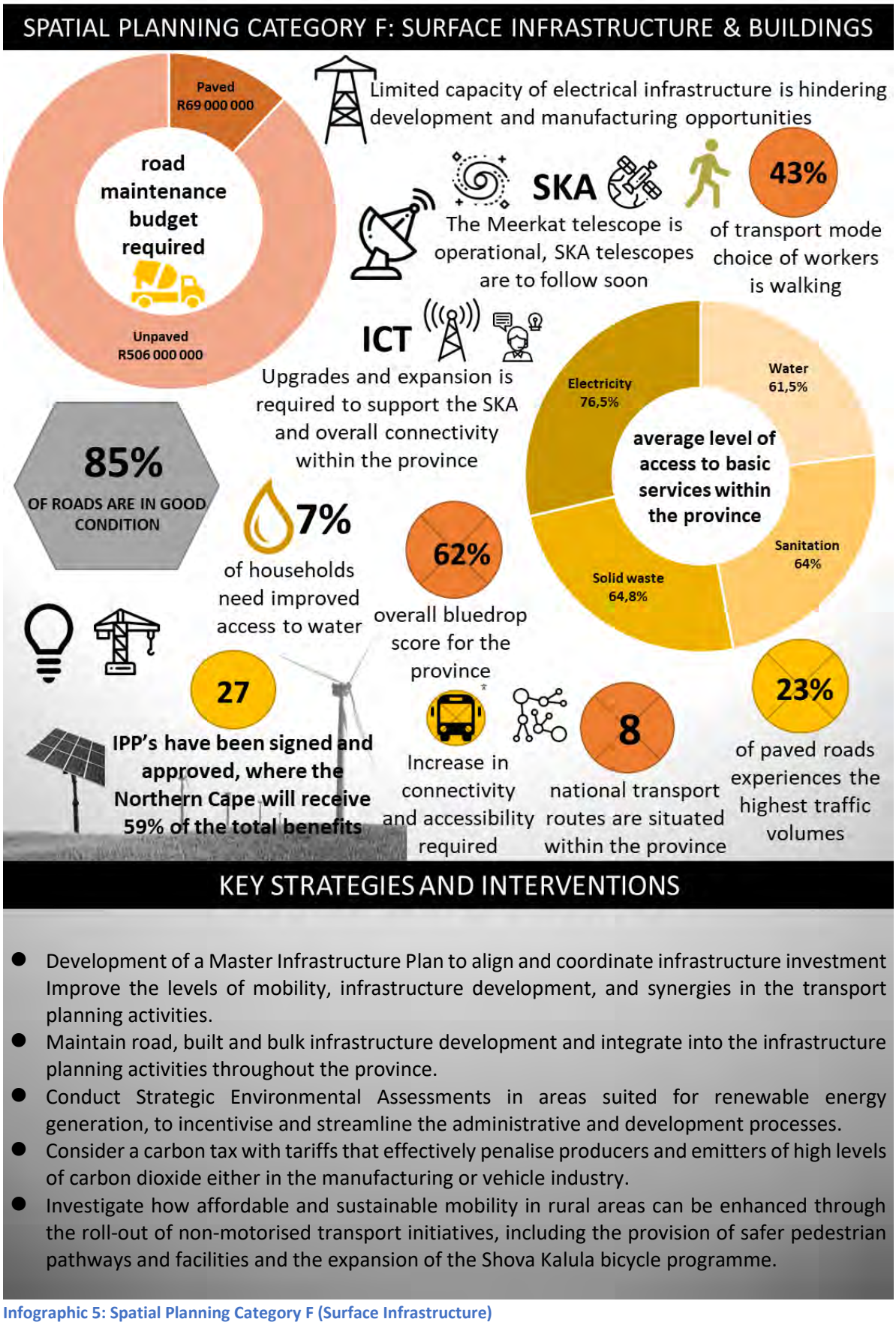
NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
E5.3.4(a)	Review Climate Change adaptation response strategy to include a climate-neutrality strategy that would be mandatory on all industrial development (refer to Toolkit D5).	DENC and DEDaT	Medium
E5.3.4(b)	Prepare, as part of the municipal SDF's, a detailed climate change adaptation strategy to include climate-neutrality strategies for each municipality (refer to Toolkit D5).	DMs and LMs	Medium
E5.3.4(c)	Prepare as a mandatory requirement, a detailed climate-neutrality strategy for large-scale industries.	DEDaT, (Industrial developers)	High
E5.3.4(d)	Develop the required industrial amenities and infrastructure in the defined development corridors which respond to the availability of Environmental Capital (e.g. water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g. roads, electricity, bulk engineering services, etc.).	DEDaT	High
E5.3.4(e)	Develop and adopt strategies for efficient water use and increase water conservation at mine sites.	DENC DEDaT	Medium
E5.3.4(f)	Continuous rehabilitation of mined land for agricultural and other rural development projects	Mining houses	Medium
E5.3.4(g)	Skill development and re-skilling of employees in the mining sector to improve the resilience of communities whose livelihood is dependent on mining.	Dept. Social Development, Dept. Higher education, SETA	Medium
E5.3.4(h)	Adjusting existing risk-identification processes to incorporate additional heat related health risks for industrial activities, such as underground mining.	Mining houses, Dept. Labour, DENC, Dept. of Transport & Safety Liaison	Medium
E5.3.4(i)	Provincial Disaster Risk Management Strategy to be developed, in order to mitigate potential negative impacts of processing, handling and transporting hazardous materials associated with industrial activities.	DENC COGHSTA	Medium

5.4 SPATIAL PLAN FOR SPC E: INDUSTRIAL AREAS



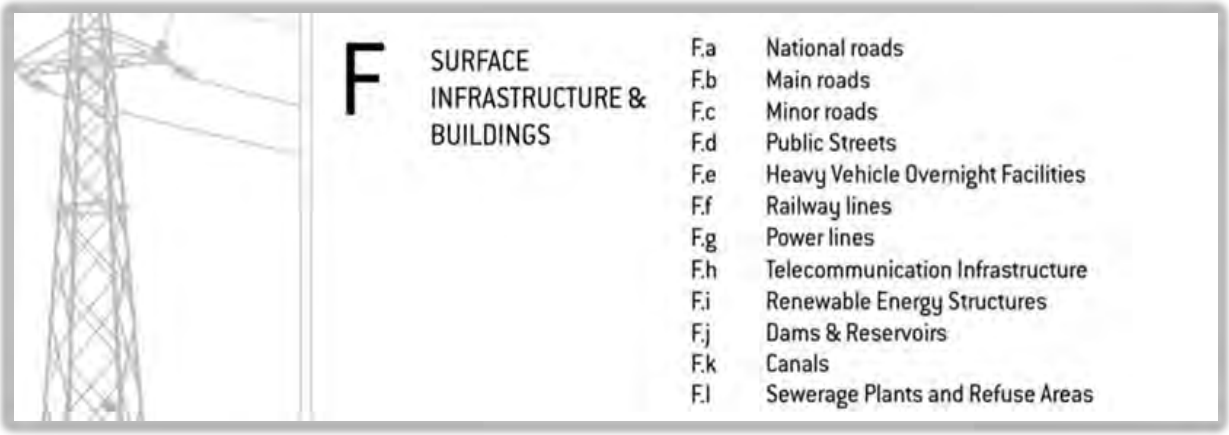
Map 25: Spatial plan for SPC D: Industrial areas

6 INFRASTRUCTURE



Infographic 5: Spatial Planning Category F (Surface Infrastructure)

6.1 BACKGROUND



An effective, competitive and responsive infrastructure network is imperative for ongoing economic development of the province. Much of the province's primary agricultural and mineral production is produced in localities distant from markets and from points of export. The province's ability to convey goods effectively and efficiently is a key aspect to be addressed. The relevant sectoral departments therefore have a vitally important task in providing the infrastructure and bulk services required by the various economic sectors, the human settlements of the province, and the rural hinterland. Key challenges are a lack of basic infrastructure in rural areas and the proliferation of informal settlements in urban areas. Both these challenges are beyond the sole institutional and fiscal capabilities of the relevant municipalities. It is therefore important that the relevant funding mechanisms and institutions function efficiently and equitably.

6.2 POLICY ALIGNMENT

Table 85: Policy alignment towards Spatial Planning Category F

POLICY / PLAN	DISCRIPTION
 **Sustainable Development Goals (SDG's)** – *Industry, Innovation and infrastructure; clean water and sanitation;*	• By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations; • By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, in accordance with their respective programmes of support; • By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology; • By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons; • By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally; and • Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

POLICY / PLAN	DISCRIPTION		
and affordable and clean energy			
SPLUMA Principles *Key considerations and guidelines to be included are:*	**Spatial Justice:** • Spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land; and • Sustainable use and development of land.	**Spatial Sustainability** • Consider all current and future costs to all parties for the provision of infrastructure and social services in land developments.	**Spatial Efficiency:** • Land development optimises the use of existing resources and infrastructure; and • Decision-making procedures are designed to minimise negative financial, social, economic or environmental impacts.
PGDP *paths to prosperity*	**Key considerations of the PGDP that needs to be accommodated in the PSDF include:** • Promote and spearhead renewable energy which will provide the basis for the rapid and sustained deployment of renewable energy technologies until 2030; • Renewable Energy Development Zones and corridors; • Transport infrastructure – Master transport strategy; • Freight routes through NATMAP; • National Infrastructure Plan – Strategic Infrastructure Projects (SIP's); • SIP 5: Saldanha-Northern Cape development corridor; • SIP 6: Integrated municipal infrastructure project; • SIP 8: Green energy in support of the South African economy; • SIP 10: Electricity transmission and distribution for all; • SIP 11: Agri-logistics and rural infrastructure; • SIP 14: Higher education infrastructure; • SIP 15: Expanding access to communication technology; • SIP 16: SARAO & Meerkat; • SIP 17: Regional integration for African cooperation and development; and • Bulk Water Infrastructure to provide new opportunities for intensive agriculture and storage of water.		

6.3 SPATIAL DEVELOPMENT CATEGORY F: SURFACE INFRASTRUCTURE AND BUILDINGS

6.3.1 PURPOSE

Table 86: Purpose and description of Spatial Planning Category F

MAIN CATEGORY		PURPOSE	PARTNERS
SURFACE INFRASTRUCTURE & BUILDINGS		Areas or structures designated in terms of various legislation bodies as infrastructure, which requires varying levels of access with regards to maintenance and operations.	Dept. Roads and Public Works, Dept. Transport and safety liaison, Nat. Department of Transport Transnet, PRASA, SANRAL, Ports Regulator, Cross Border road transport agency
SUB-CATEGORY		**DESCRIPTION**	**CHAMPIONS**
F.a	**National roads**	National roads proclaimed in terms of the National Roads Act 7 of 1998.	Dept. Agriculture, rural development and land reform DM, LM
F.b	**Main roads**	Provincial and regional roads proclaimed in terms of the Roads Ordinance 19 of 1976.	DEDaT DTI DM, LM
F.c	**Minor roads**	Regional and local roads proclaimed in terms of the Roads Ordinance 19 of 1976.	DM LM
F.d	**Public Streets**	Public streets and parking areas within main town and rural settlements.	Dept. of Minerals Dept. Agriculture, rural development and land reform DENC LM's, DM's
F.e	**Heavy Vehicle Overnight Facilities**	Areas designated for heavy vehicle parking and overnight facilities.	Dept. of Minerals DEDaT DENC Nat. Dept of Environmental Affairs LM's, DM's
F.f	**Railway lines**	Railway lines and associated infrastructure.	Transnet Dept. of Transport and Safety
F.g	**Power lines**	Power lines and associated sub-stations and infrastructure. Transmission Development Plan 2018 - 2027	Eskom
F.h	**Tele-communication infrastructure**	Any part of the infrastructure of a telecommunication network for radio/wireless communication including, voice, data and video telecommunications, which may include antennae, any support structure, equipment room, radio equipment and optical communications equipment provided by cellular network operators, or any other	Telkom Communication service providers LM's

MAIN CATEGORY		PURPOSE	PARTNERS
		telecommunication providers, and all ancillary structures needed for the operation of telecommunication infrastructure. Electronic Communications Act 36 of 2005	
F.i	**Renewable energy structures**	Any wind turbine or solar voltaic apparatus, or grouping thereof, which captures and converts wind or solar radiation into energy for commercial gain irrespective of whether it feeds onto an electricity grid or not. It includes any appurtenant structure or any test facility which may lead to the generation of energy on a commercial basis. National Energy Act 34 Of 2008 Energy Efficiency Strategy of The Republic Of South Africa	Eskom IPP's DEDaT DENC
F.j	**Dams & Reservoirs**	Major dams and reservoirs. National Water Act (Act 36 of 1998)	Dept. Of Water and Sanitation
F.k	**Canals**	Constructed permanent waterways, e.g. irrigation canals and stormwater trenches. National Water Act (Act 36 of 1998)	Dept. Of Water and Sanitation
F.l	**Sewerage Plants and Refuse Areas**	Areas designated as municipa l and private sewerage treatment plants and refuse areas. National Environmental Management: Waste Act, 2008 (Act 59 of 2008) National Environmental Management: Waste Amendment Act, 2014 (Act 26 of 2014)	Dept. Of Water and Sanitation LM's DENC
F.m	**Science and Technology Structures**	Any areas associated with the science and technology sector, with specific reference to the SARAO and the designated astronomy reserve. These areas are regulated by the Astronomy Geographic Advantage Act of 2007.	SARAO Dept. Of Science and Technology South African Space Agency LM's DM's

6.3.2 OBJECTIVES

Table 87: Objectives applicable to Spatial Planning Category F

CRITERIA	DISCRIPTION
Transport	• Provide and maintain an adequate road and railway transport system throughout the province and, in particular, in the defined development corridors, the main agricultural development nodes, and the primary settlement areas. • To promote and prioritise road to railway freight transport in the Province. • Revitalise and optimise the use of the: o De Aar junction (possibly as a freight intermodal terminal). o Sishen-Saldanha railway line. o Upington/Namibia railway line. • Upgrade the Port Nolloth harbour and the Hondeklipbaai harbour to accommodate a viable fishing industry.

Water	• Increase water storage capacity for water security and availability for socio-economic development. • Provide water resources infrastructure to communities that have lagged behind in terms of the CRDP. • Institute a strategy to curb unlawful water use. • Ensure a reliable supply of water from bulk water resources infrastructure within acceptable risk parameters to meet the sustainable demand for the province. Solicit and source funding to implement, operate and maintain bulk raw water resources infrastructure in an efficient manner by strategically managing risks and assets. • Facilitate water conservation and water demand management in the province. • Accelerate provision of communities' access to water infrastructure. • Ensure the development, implementation, monitoring and review of regulations across the water value chain in accordance with the provisions of the National Water Act 38 of 1998 and the Water Services Act 108 of 1997, and the National Water and Sanitation Master Plan of 2018. • Promotion of the re-use of water, rather than exploring untapped water resources. • Protection of critical water resources (e.g Water balancing and management thorough projects such as the planned Vioolsdrift Dam)
Energy	• Promote the development of renewable energy supply schemes. Large-scale renewable energy supply schemes are strategically important for increasing the diversity of domestic energy supplies and avoiding energy imports while minimizing detrimental environmental impacts[43]. • Enhance the efficiency of Eskom's power station at the Vanderkloof power station. • In order to reinforce the existing transmission network and to ensure a reliable electricity supply in the Northern Cape, construct a 400kV transmission power line from Ferrum Substation (near Kathu/Sishen) to Garona Substation (near Groblershoop). There is a national electricity supply shortage and the country is now in a position where it needs to commission additional plants urgently. Consequently, renewable energy projects are a high priority. • Develop and institute innovative new energy technologies to improve access to reliable, sustainable and affordable energy services with the objective to realize sustainable economic growth and development. The goals of securing supply, providing energy services, tackling climate change, avoiding air pollution and reaching sustainable development in the province offer both opportunities and synergies which require joint planning between local and provincial government as well as the private sector. • Develop and institute energy supply schemes with the aim to contribute to the achievement of the targets set by the White Paper on Renewable Energy (2003). This target relates to the delivery of 10 000 GWh of energy from renewable energy sources (mainly biomass, wind, solar, and small-scale hydro) by 2013.
Telecommunication	• Ensure the ongoing development of international best-practice telecommunication systems for the province as a whole. • Accelerate the deployment of telecommunication infrastructure to enhance effective development in rural communities.

[43] Refer to Toolkit No 16, See Annexure B

	• Increase infrastructure deployment in the province by exploring cheaper and affordable broadband technologies which will enhance the accessing of information and knowledge. • Extend signal coverage of radio and television over the entire province. • Develop a provincial e-skills development programme to ensure a coordinated approach to addressing telecommunication skills shortages. • Develop and implement an e-awareness programme targeting under-serviced rural communities. • Enhance rural telecommunication enterprise development in order to foster local economic development and improving rural livelihoods. • Deploy incubational hubs in rural areas to support the sustainability of local enterprises and promote innovation. • Broaden the telecommunication market access scope for rural-based small enterprises. • Ensure Internet connectivity to all people in the province. • Investigate and promote the establishment of tele-centres and digital hub service points in the province. This could provide access to telecommunication networks in the rural areas that are located far away from larger settlements.
Household Services	• Ensure the ongoing development of bulk services required to promote the well-being of all the people of the Northern Cape. • Implement household services in accordance with constitutional imperatives and basic human rights and in terms of the CRDP. • Provide household services in accordance with the guidelines put forward in Chapter 6.

6.3.3 POLICY GUIDELINES

Table 88: Policy guidelines applicable to Spatial Planning Category F

CRITERIA	DISCRIPTION
Transport Policy	• Provincial, district and local transport plans must take cognisance of the potential demand for transport infrastructure to facilitate the development of new mineral operations; • A provincial transport forum involving both users and service providers is to be established to liaise and co-ordinate regarding the transport requirements of the mining industry; • Transport infrastructure will be constructed, operated and maintained in terms of the principles of sustainability provided in the PSDF and, in particular, in accordance with the spatial plans and guidelines; • Labour intensity of government-funded infrastructure projects is to be increased; • The transport network must be economically efficient, competitive and equitable; • Each economic sector must prepare and annually review a clear freight strategy that will ensure that goods are efficiently transported to the various markets. This strategy will be incorporated into the provincial transport plans, proposed master infrastructure plan and into the PSDF and municipal SDFs; • Safe and convenient public transport must be provided; • More attention needs to be given to rural public transport; • The availability and quality of public transport in rural areas is deficient; • Development and implementation of Rural Integrated Public Transport Networks (RIPTN's);

	• Provision and maintenance of transport infrastructure is subject to the prioritisation directives put forward in Chapter 6;
Water Policy	• Water is the most vital natural form of capital (resource) of the Northern Cape and must be invested in the most efficient and equitable manner; • To prioritise the maintence of existing water infrastructure where its evident that natural and human disasters can occur (e.g raw sewer spillage into natural water streams) • The basic water needs of all people in the province must be met; • Pollution and degradation of the water resources must be prevented; • The ecological integrity of the natural systems in the province which form part of the catchment of the Orange River and the other prominent community-supporting systems must be restored and protected.; • Water quality and water quantity are interdependent and shall be managed in an integrated manner consistent with other broader environmental management approaches; • A Water Demand Management Plan must be included into municipal SDF's; and • The private sector must fulfil an ongoing function as the de facto custodians of the water resources of the province through the relevant legal mechanisms, including Water Use Associations, Irrigation Boards, Agri-Northern Cape and Agricultural Associations.
Energy Policy	• The construction of telecommunication infrastructure must be strictly regulated in terms of the spatial plans and guidelines put forward in the PSDF. They must be carefully placed to avoid visual impacts on landscapes of significant symbolic, aesthetic, cultural or historic value and should blend in with the surrounding environment to the extent possible; • EIA's undertaken for such construction must assess the impacts of such activities against the directives listed in above; • Renewable energy sources such as wind, solar thermal, biomass and domestic hydro-electricity are to constitute 25% of the province's energy generation capacity by 2030; • The following key policy principles for renewable energy apply: • Full cost accounting: Pricing policies will be based on an assessment of the full economic, social and environmental costs and benefits of energy production and utilisation; • Equity: There should be equitable access to basic services to meet human needs and ensure human well-being. Each generation has a duty to avoid impairing the ability of future generations to ensure their own well-being; • Global and international cooperation and responsibilities: Government recognises its shared responsibility for global and regional issues and act with due regard to the principles contained in relevant policies and applicable regional and international agreements; and • Allocation of functions: Government will allocate functions within the framework of the Constitution to competent institutions and spheres of government that can most effectively achieve the objectives of the energy policy. • The implementation of sustainable renewable energy is to be promoted through appropriate financial and fiscal instruments' • An effective legislative system to promote the implementation of renewable energy is to be developed, implemented, and continuously improved' • Public awareness of the benefits and opportunities of renewable energy must be promoted'

	• The development of renewable energy systems is to be harnessed as a mechanism for economic development throughout the province in accordance with the Sustainable Development Initiative (SDI) approach (refer to Toolkit D10) or any comparable approach; and • Renewable energy must, first, and foremost, be used to address the needs of the province before being exported.
Telecommunication Policy	• The construction of telecommunication infrastructure must be strictly regulated in terms of the spatial plans and guidelines put forward in the PSDF. They must be carefully placed to avoid visual impacts on landscapes of significant symbolic, aesthetic, cultural or historic value and should blend in with the surrounding environment as far as possible; • EIAs undertaken for such construction must assess the impacts of such activities against the directives listed above; • Internet access into strategic locations such as schools in marginalised parts of the urban settlements and rural areas is to be accelerated subject to the guidelines in Chapter 5.
Household Services Policy	• The provision of household services to marginalised urban settlements and rural areas is to be prioritised in accordance with the guidelines in Chapter 5; • All municipalities must follow an integrated hierarchical approach to waste management consisting of avoidance/reduction, reuse, recycling, composting, treatment and final disposal. The waste management system shall consist of a collection service from the source, (e.g. domestic, office or factory) transfer stations and waste disposal sites; • Recycling of waste is a priority with material recovery facilities to be established at all transfer stations. Recycling waste on a financially sustainable basis requires effective demand for recycled products; • Every urban settlement is to have a transfer station within a maximum of 5 km from the settlement inside the urban edge. These transfer stations must be managed according to best practice so as to minimise detrimental impacts on surrounding neighbourhoods. They should be opened after hours and on the weekends and their location should be well known so as to ensure that they are used by the community. Charges should not be levied on loads brought to transfer stations. Micro-enterprises wanting to process waste and trade second hand materials should be encouraged; and • Every municipality must have a waste disposal facility site located and operated to the DWA's minimum requirements that will service the transfer stations in the urban settlements in each municipality. These sites may or may not be located within the urban edge of urban settlements. The main criteria for their location are to meet satisfactory environmental and transport requirements; • Waste management plans addressing separation, recycling, collection, disposal, publicity and incentives are to be drawn up by the municipalities. An Integrated Waste Management Plan must be developed by all municipalities and implemented. These plans need to be revised every five years together with the municipal IDP's and SDF's; • Sewerage plants and refuse areas must comply with NEMA regulations that inter alia state under Section (2)(4)(a) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied. The waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;

	• Existing waste water treatment works must be progressively improved by means of regulatory measures and thereafter maintained so that the water quality of the rivers and water bodies with which they are associated would be of minimum potable, contact and phosphate, nitrate and E.coli standards; • Alternative forms of sewage disposal and treatment for new developments are to be investigated with a view to minimising the source of waste water and minimising the pollution of surface water and groundwater; • All wetland ecosystems must be protected in such a manner that their inherent ecological and stormwater purification function is maintained. Water abstraction from and effluent discharge into wetlands are prohibited; • Waste separation at source is mandatory in domestic households and institutions and businesses; • Where urban development proposals exceed infrastructure capacity, such applications would-be put-on hold until provision is made for the additional needs; and • Household and basic services are to be implemented, managed and maintained in accordance with the settlement category and associated development strategy.

6.3.4 STRATEGIES

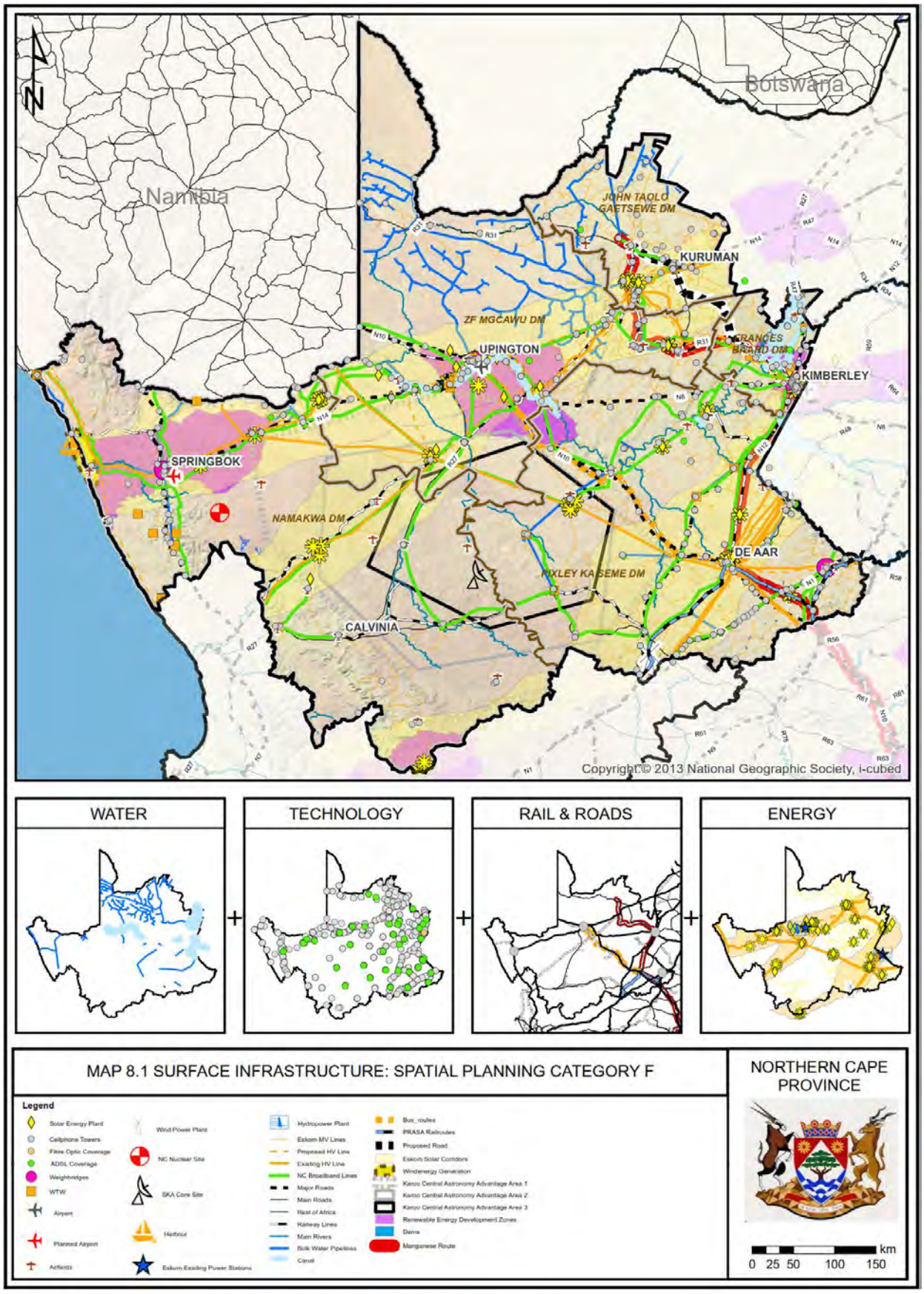
Table 89: Strategies applicable to Spatial Planning Category F

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
F6.3.4(a)	Development of a Master Infrastructure Plan in order to align and coordinate infrastructure investment	Dept. of Roads and Public Works, DEDAT, COGHSTA and Office of the Premier in collaboration with SANRAL, Eskom, Transnet	**High**
F6.3.4(b)	Ensure compliance and alignment with the Land Transport Framework, Act and NATMAP	Department of Roads and Public Works in collaboration with SANRAL	Medium/ On-going
F6.3.4(c)	Ensure the maintenance and ongoing improvement of the two major airports at Kimberley and Upington.	ACSA	Medium/ On-going
F6.3.4(d)	Maintain road, built and bulk infrastructure development and integrate into the infrastructure planning activities throughout the province.	Department of Roads and Public Works in collaboration with SANRAL	High/ On-going
F6.3.4(e)	Improve the levels of mobility, infrastructure development, and synergies in the transport planning activities.	Department of Roads and Public Works in	High/ On-going

		collaboration with SANRAL	
F6.3.4(f)	Redevelop or sell unutilised transport infrastructures, including redundant stations and sidings.	Department of Roads and Public Works in collaboration with SANRAL	Medium/ On-going
F6.3.4(g)	Investigate how affordable and sustainable mobility in rural areas can be enhanced through the roll-out of non-motorised transport initiatives, including the provision of safer pedestrian pathways and facilities and the expansion of the *Shova Kalula*[44] bicycle programme.	LMs in collaboration with Department of Roads and Public Works	High/ On-going
F6.3.4(h)	Upgrade rest stops along primary roads to cater for heavy motor vehicles, tourist and private motor vehicles.	Department of Roads and Public Works in collaboration with SANRAL	Medium/ On-going
F6.3.4(j)	Consider mandatory guidelines regarding the use of high fuel consumption vehicles. Users of high fuel consumption vehicles should be effectively penalised on a sliding scale that makes allowances for public transport users.	Department of Roads and Public Works	Medium
F6.3.4(k)	Consider a carbon tax with tariffs that effectively penalise producers and emitters of high levels of carbon dioxide either in the manufacturing or vehicle industry.	Department of Roads and Public Works	Medium
F6.3.4(l)	Conduct Strategic Environmental Assessments in areas suited for renewable energy generation, in order to incentivise and streamline the administrative and development processes	DENC.	Medium

[44] *Shova Kalula is a government sponsored initiative which provides bicycles at a lower cost to rural and peri-urban beneficiaries. Government enters into a contract with a service provider who supplies bicycles to government outlets/shops. Micro-businesses are established by provincial government, municipalities and communities to manage the bicycle shops. The objective is to promote cycling as a low-cost mobility solution to low income households, targeting mainly scholars, rural women and farm workers.*

6.4 SPATIAL PLAN FOR SPC F: SURFACE INFRASTRUCTURE



Map 26: Spatial plan for SPC F: Surface Infrastructure

DEFINITIONS

KEY DEFINITIONS

‘‘**aquaculture**’’[45] means the farming of aquatic organisms, including crocodiles, in controlled or selected aquatic environments (marine, brackish or freshwater), involving:

- a degree of human intervention in the rearing process to enhance production which may include propagation, breeding, regular stocking, feeding or protection from predators and harvesting of cultured aquatic organisms; and
- individual or corporate ownership of the stock being farmed, and includes ranching, but excludes stock enhancement;

“**bio regional planning**[46]” means land use planning and management that promotes sustainable development by recognizing the relationship between, and giving practical effect to , environmental integrity, human wellbeing and economic efficiency within a defined geographical space, the boundaries of which were determined in accordance with environmental, social and economic criteria whilst having due consideration for national, provincial and municipal boundaries and its legal implications as prescribed by law;

"buffer area[47]**"** means, unless specifically defined, an area extending 10 kilometres from the proclaimed boundary of a world heritage site or national park and 5 kilometres from the proclaimed boundary of a nature reserve, respectively, or that defined as such for a biosphere;

“Densification” means the process of increasing residential densities i.e. the number of people living in a specific area. This supports increased efficiency in the utilisation of infrastructure, services and amenities. This is measure of the number of people living in an area (e.g. ‘persons per hectare’).

“Development Corridor” refers to an Integrated linear network of infrastructure and economic activity. Corridors typically fulfil multiple, complex functions including the movement of people and freight, facilitating trade between areas, flows of information, flow of ecosystems services such as water and gas, and facilitating tourism. Supportive functions may be located in corridors, e.g. logistics. Corridors often also include a human settlement and/or economic activity component, e.g. higher density transit-oriented mixeduse development or industrial development situated along the main infrastructure network.

“Infrastructure” refers to the basic equipment, utilities, productive enterprises, installations, and services essential for the development, operation, and growth of human settlements and economic activities. Infrastructure includes items such as roads, utility lines for water, sanitation and electricity, drainage structures and communication technology. A distinction is often made between (1) engineering infrastructure, such as roads, electricity, sewerage, water; and (2) social infrastructure, such as health, education, community and cultural facilities.

“Land Reform” is a broad encompassing term that in the South African context includes (1) land restitution (redress of wrongs committed under the Apartheid government), (2) land redistribution

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[45] *Aquaculture Development Bill (As introduced in the National Assembly (proposed section 76); explanatory summary of Bill published in Government Gazette No. 41632 of 18 May 2018)*

[46] *Definitions of the Northern Cape Spatial Planning and Land Use Management Bill, 2012 draft 1.5*

[47] *National Environmental Management Act, 1998, (Act no. 107 of 1998) - Listing Notice: Environmental Impact Assessment Regulations, Listing Notice 3 of 2014, and takes effect on 08 December 2014.*

(provision of land to the poor who do not have access to land for residential and economic purposes, and (3) tenure reform (ensuring security of tenure).

"National Protected Area Expansion Strategy (NPAES)" means South Africa's national strategy for expansion of the protected area network, led by the National Department responsible for environmental affairs and developed in collaboration with national and provincial conservation authorities. The NPAES sets targets for protected area expansion, provides maps of the most important areas for protected area expansion, and makes recommendations on mechanisms for protected area expansion. Focus areas for protected area expansion are identified in the NPAES. They are large, intact, unfragmented areas of high importance for land-based protected area expansion, suitable for the creation or expansion of large protected areas;

"Nodes" are concentrations and clusters of activities of varying intensity and can be either mixed-use or mono-functional (e.g. an office node).

"Protected Area" refers to an area of special natural, ecological, architectural or historic interest, which is desirable to preserve and/or enhance. The protected areas referred to in the PSDF are those areas that are officially classified as such in terms of the National Environmental Management Act, 1998.

"Rural" refers to sparsely populated areas, not included in big cities or towns. Economic activity typically consists of agriculture, fisheries, forestry, nature conservation, tourism, mining or similar and related activities. In the Northern Cape, there are also rural areas that are more densely populated but yet are not compact or urban in nature, which is a remnant of the Apartheid era spatial planning and the creation "homelands".

"Rural Development" refers to an intervention process aimed at improving the quality of life and economic well-being of people living in rural areas.

A **"settlement**" refers to a place where people live, work, study and relax. A settlement can range in size, from a small number of dwellings grouped together, to large cities or groups/conglomerations of cities.

"Space Economy" refers to the study of the space economy looks at spatial relationships between individuals and organisations, and explores the economic reasons that underpin the formation, functioning and development of towns, cities and their hinterlands in space.

"Sprawl" The uncontrolled outward growth of urban areas, expanding into agricultural or rural areas.

"Sustainable Development" refers to development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The definition of sustainable development usually refers to social, economic and institutional components.

"Town" refers to places where people and services are geographically concentrated in a distinct and identifiable area. While towns can vary in size, they tend to have a smaller population, lower residential densities, fewer employment opportunities and fewer and/or smaller economic activities than cities.

A **"township"** refers to residential townships established during the Apartheid era for temporary occupation by Black South Africans on the outskirts of towns and cities, with only the most basic of amenities and infrastructure provision.

"Urban" refers to the constituting of a city. Urban areas are characterised by large communities living at high residential densities, a variety of employment opportunities, and high-intensity business and commercial areas. Large towns are generally also considered as 'urban'. The distinction between cities and towns varies and is usually based on a combination of population size, level of economic output and development density. Smaller towns are often regarded as being part of the rural, and not the urban landscape, e.g. a 'rural service town' that serves the surrounding rural area through the provision of schools, basic healthcare, basic retail and similar services.

"Urbanisation" refers to the process by which an increasing percentage of a province's population moves to live in large towns and cities with the intention of staying there or in similar urban area, and not returning to the countryside.

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DATA SOURCES

DATA	SOURCE
General Data	
Cadastral information	Department of Rural Development and Land Reform : SG Office
State Land Ownership	Department of Rural Development and Land Reform : SG Office
Environment	
Geoscience Data (Detailed Geology)	Geoscience
Ramsar Sites (Wetlands)	Department of Environmental Affairs (EGIS)
National Parks	SANPARKS
Nature Reserves	Department of Environmental Affairs (EGIS)
Wetlands	Department of Environmental Affairs (EGIS)
Land Cover	Department of Environmental Affairs (EGIS)
Bio-Diversity	Department of Environmental Affairs (EGIS)
Botanical Gardens	Department of Environmental Affairs (EGIS)
Protected rivers	Department of Environmental Affairs (EGIS)
World Heritage sites	Department of Environmental Affairs (EGIS)
Rainfall	Department of Water Affairs
Climate Data	Department of Water Affairs
Climate Capability Raster	Department of Environmental Affairs (EGIS)
Land Capability Raster	Department of Environmental Affairs (EGIS)
Soil Capability Raster	Department of Environmental Affairs (EGIS)
Terrain Capability Raster	Department of Environmental Affairs (EGIS)
Dept of Environment Pre-Screening data	Department of Environmental Affairs (EGIS)
Natural Resource Atlas	Department of Environmental Affairs (EGIS) / Geoscience
Vulnerability	
Fire Breaks	Department of Rural Development and Land Reform
Disaster Management Centres	Department of Rural Development and Land Reform
Droughts	Geoscience
Climate Change	Geoscience
Ground Water Vulnerability	Geoscience
Air Pollution	Geoscience
Energy	
Nuclear Waste Sites	Department of Rural Development and Land Reform
Eskom HV and MV Lines	Eskom
Renewable Energy Projects	Eskom
Solar Corridor	Eskom
Wind Power Plant	Eskom
Hydro Power Plant	Eskom

DATA	SOURCE
Eskom Substations and capacity	Eskom
Municipal Substations and capacity	Eskom
Communication	
Fibre Roll Out / Network	Telkom, Dark Fibre Africa
Wifi Areas	Department of Rural Development and Land Reform
Cell Phone Coverage areas	Cell Phone Networks
ADSL Broadband networks	Telkom, Dark Fibre Africa
SKA Boundaries	NC Office of the Premier / SAROA
Water	
Catchment Areas	Department of Water Affairs
Dams	Department of Water Affairs
Borehole	Department of Water Affairs
Average Borehole Yields	Department of Water Affairs
Canals	Department of Water Affairs
Irrigation Schemes	Department of Water Affairs
Water Schemes	Department of Water Affairs
Reticulation Networks	Department of Water Affairs
RBIG projects	Department of Water Affairs
ACIP Projects	Department of Water Affairs
WIG Projects	Department of Water Affairs
Water Feasibility Study Areas	Department of Water Affairs
Bulk water pipelines	Department of Water Affairs
Reservoirs	Department of Water Affairs
Pumpstations	Department of Water Affairs
Water Treatment Works	Department of Water Affairs
Quality of Water (Blue Drop)	Department of Water Affairs
DoRA	National Treasury
Equitable Share	National Treasury
Flood Lines	Department of Rural Development and Land Reform
All Town Studies	Department of Water Affairs
Tariffs	Department of Water Affairs
River Classification	CSIR
Sanitation	
Waste Water Treatment Works (Green Drop)	Department of Water Affairs
Sanitation Projects	Department of Water Affairs
Sanitation Bulk Pipelines	Department of Water Affairs
Sanitation Pump Stations	Department of Water Affairs

DATA	SOURCE
Transportation	
Corridors	Department of Rural Development and Land Reform
Public Transport	Department of Rural Development and Land Reform
Road Networks	SANRAL
Road classification	SANRAL
Road Traffic	SANRAL
Railway Network	Transnet
Ports	Transnet
Railway stations	Transnet
Railway network status	Transnet
Railway projects	Transnet
Roads Projects	SANRAL / Public Works
CARGO Hubs	NC Office of the Premier
NATMAP Projects / Corridors	Department of Roads and Transport
NATMAP Rail projects	Department of Roads and Transport
Gas and Fuel lines - Natmap	Department of Roads and Transport
Airports & Airfields	Department of Roads and Transport
Harbours	Department of Roads and Transport
Social	
Schools	Department of Education (EMIS)
Creche	Department of Rural Development and Land Reform / EMIS
Tertiary Institutions	Department of Education (EMIS)
FET /TVET Colleges	Department of Education (EMIS)
Literacy Levels	STATS SA
Education Levels	STATS SA
Pass rate	Department of Education (EMIS)
Clinics	Department of Health
hospitals	Department of Health
SASSA pay-out points and pay-outs per grant type	Department of Social Development
IDP needs analysis	Own
Poverty Index	STATS SA
Mining	
Mining applications	Department of Minerals and Energy
Minerals by type	Department of Minerals and Energy
Asbestos data	Department of Minerals and Energy
Mines	Department of Minerals and Energy
Fracking applications	Department of Minerals and Energy

DATA	SOURCE
Economy	
Formal Retail outlets	STATS SA
Economic Sector data	STATS SA
Growth Potential (existing economic potential of towns study)	Department of Rural Development and Land Reform
GVA Mezo-Zones	CSIR
GVA Sectors	CSIR
Income levels	STATS SA
GDP Data	STATS SA
CPI	STATS SA
PPI	STATS SA
Financing	National Treasury
Municipal Budgets	National Treasury
Tourism	
Tourism Routes	Department of Economic Development and Tourism
Tourism statistics (number, where)	STATS SA / Department of Economic Development and Tourism
Historic Sites	SAHRA / Department of Economic Development and Tourism
Places of Interest	Department of Economic Development and Tourism
Unique vegetation	Department of Economic Development and Tourism
Mountain passes	Department of Economic Development and Tourism
Museums	Department of Economic Development and Tourism
Heritage Sites	Department of Economic Development and Tourism
Geology	
Archaeological l landscapes	Geoscience
Geoscience detailed geology	Geoscience
Gully Erosion	Geoscience
Contours	Department of Rural Development and Land Reform
Agriculture	
Intensive and Extensive Agriculture	Department of Agriculture
Agricultural Facilities (processing)	Department of Agriculture
High Potential Agricultural Areas	Department of Agriculture
Irrigation schemes	Department of Water Affairs
Agri Projects	Department of Agriculture
Pivots (Field Crop Boundaries)	Department of Agriculture
Crop data (grapes, fruits etc)	Department of Agriculture
CASP	Department of Agriculture
Illima	Department of Agriculture

DATA	SOURCE
Mari Culture	Department of Agriculture
Vegetation	Department of Environmental Affairs
Soil Potential	ARC / Department of Agriculture
Soil depth	ARC / Department of Agriculture
Field crop Boundaries	IVIS / BFAB
Grazing Capacities	Department of Agriculture
Silos	Department of Agriculture
Agriparks	Department of Rural Development and Land Reform
Produce Markets	Department of Agriculture
Poultry Farms	Department of Agriculture
Red Meat Farms	Department of Agriculture
Cultivation type analysis - Geoterra Image	Geoterra Image
Urban Development	
Settlement Functions	Department of Rural Development and Land Reform (DRDLR)
Formal Housing	Geoterra Image
Informal settlements	Geoterra Image
Land Use classifications	Department of Rural Development and Land Reform
Spatial Development Frameworks	Department of Rural Development and Land Reform
Access to Housing	STATSA / COGHSTA
Housing Backlogs	Department of Water Affairs / COGHSTA
Nodes	Department of Rural Development and Land Reform
Special Economic Development Zones	NC Office of the Premier / DRDLR
Property Ownership by Type - Valuation Rolls	Local Government
Housing topology and projects	COGHSTA
IUDF Projects and sites	COGTA
Insurance Risk Properties	Lightstone
Detailed residential analyses	Geoterra Image
Rural Development	
Agripark data	Department of Rural Development and Land Reform
Corridors	Department of Rural Development and Land Reform
Land Restitution	Department of Rural Development and Land Reform
Land Reform	Department of Rural Development and Land Reform
LRAD	Department of Rural Development and Land Reform
PLAS	Department of Rural Development and Land Reform
SLAG	Department of Rural Development and Land Reform
TRANCRAA	Department of Rural Development and Land Reform
Traditional Authority areas	Department of Rural Development and Land Reform
Collection Routes	Department of Rural Development and Land Reform
FPSU's	Department of Rural Development and Land Reform
Safety and Security	

DATA	SOURCE
Police Districts	Department of Police, Roads and Transport
Crime Statistics per Police District	Department of Police, Roads and Transport
Police Stations	Department of Police, Roads and Transport
Border Post / control	Department of Police, Roads and Transport
Correctional Services	Department of Police, Roads and Transport
	STATS SA
Demographic Data	
Population Household per Town/LM	STATS SA (2011 Census Data)
Population Growth	STATS SA (2011 Census Data)
Population Group Composition	STATS SA (2011 Census Data)
Labour Force Participation Rate	STATS SA (2011 Census Data)
Employment Skill Levels	STATS SA (2011 Census Data)
Unemployment Rate	STATS SA (2011 Census Data)
Economic Active Population	STATS SA (2011 Census Data)
Employment Status	STATS SA (2011 Census Data)
Employment Sector	STATS SA (2011 Census Data)
Primary Sector	STATS SA (2011 Census Data)
Secondary Sector	STATS SA (2011 Census Data)
Tertiary Sector	STATS SA (2011 Census Data)
Household Income	STATS SA (2011 Census Data)
Market Income	STATS SA (2011 Census Data)
Gini Coefficient	STATS SA (2011 Census Data)
Disposable Household Income	STATS SA (2011 Census Data)
Current Economic Growth (GVA 2006-2016)	STATS SA (2011 Census Data)
Level of Education	STATS SA (2011 Census Data)
Learner Teacher Ratio	STATS SA (2011 Census Data)
Access to Household Goods	STATS SA (2011 Census Data)
Access to Electricity	STATS SA (2011 Census Data)
Access to Piped Water	STATS SA (2011 Census Data)
Access to Refuse Removal	STATS SA (2011 Census Data)
Age Structure	STATS SA (2011 Census Data)
Income Inequality	STATS SA (2011 Census Data)
Household Size	STATS SA (2011 Census Data)
Individual Monthly Income	STATS SA (2011 Census Data)
Health and functioning	STATS SA (2011 Census Data)
Access to Toilet Facilities	STATS SA (2011 Census Data)
Access to Internet	STATS SA (2011 Census Data)
Access to Cell Phone	STATS SA (2011 Census Data)
Access to Computer	STATS SA (2011 Census Data)
Access to DVD Player	STATS SA (2011 Census Data)
Access to Landline	STATS SA (2011 Census Data)

DATA	SOURCE
Access to Mail delivery at residence	STATS SA (2011 Census Data)
Access to Mail Post box or bag	STATS SA (2011 Census Data)
Access to Motorcar	STATS SA (2011 Census Data)
Access to Radio	STATS SA (2011 Census Data)
Access to Refrigerator	STATS SA (2011 Census Data)
Access to Satellite Television	STATS SA (2011 Census Data)
Access to Television	STATS SA (2011 Census Data)
Access to Vacuum Cleaner	STATS SA (2011 Census Data)
Access to Washing Machine	STATS SA (2011 Census Data)
Household Services - Energy or fuel for Cooking	STATS SA (2011 Census Data)
Household Services - Energy or fuel for heating	STATS SA (2011 Census Data)
Household Services - Energy or fuel for lighting	STATS SA (2011 Census Data)
Gender	STATS SA (2011 Census Data)
Language	STATS SA (2011 Census Data)
Types of Dwelling	STATS SA (2011 Census Data)
Water Sources	STATS SA (2011 Census Data)
Disability (Various)	STATS SA (2011 Census Data)
Enumerator Area Type	STATS SA (2011 Census Data)
Marital Status	STATS SA (2011 Census Data)
Population Relation to Head of household	STATS SA (2011 Census Data)
Migration - Citizenship	STATS SA (2011 Census Data)
Migration - Province of Birth	STATS SA (2011 Census Data)
Migration - Province of previous residence	STATS SA (2011 Census Data)
Migration - Province of usual residence	STATS SA (2011 Census Data)
Migration - Region of birth	STATS SA (2011 Census Data)

ANNEXURES

STATUS QUO ANALYSIS

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IMPLEMENTATION PLAN

SOCIO-ECONOMIC POTENTIAL OF TOWNS STUDY REVIEW

C:\Users\Casper\Desktop\Final_Draft_SOEPT Report_June 2018.docx

STRATEGIC SPATIAL DEVELOPMENT TOOLKITS

STAKEHOLDER ENGAGEMENT REPORT

PSDF_Stakeholder Plan_30 June 2018.docx

PSDF GAZETTE NOTICE

14 No. 2173 PROVINCIAL GAZETTE, 26 MARCH 2018

NOTICE 27 OF 2018

OFFICE OF THE PREMIER- NORTHERN CAPE

Review and development of the Northern Cape Provincial Spatial Development Framework (PSDF)

Notice is hereby given, of the intention of the Office of the Premier, to compile a Provincial Spatial Development Framework for the Northern Cape Province, in terms of the Spatial Planning and Land Use Management Act (Act 16 of 2013 - SPLUMA). The PSDF will be compiled in conjunction with the Provincial Growth and Development Plan (PGDP).

The Provincial Spatial Development Framework is a strategic document that sets out provincial objectives and strategies, reflecting the desired spatial landscape of the Province in order to create an enabling environment for sustainable development, as prescribed by Section 16(a-f) of SPLUMA.

Further details and a comprehensive list of documentation will be made available to the general public for inputs and comments throughout the process on the following website: www.spisys.co.za. Maswana Joint Venture has been appointed by the Office of the Premier (OTP), to develop the PGDP and to revise the PSDF.

All stakeholders are invited to register as interested and affected parties, for the above-mentioned public participation process by visiting www.spisys.co.za and follow the link to the PGDP/PSDF project icon. You are kindly requested to register and complete the mandatory questionnaire. Users who complete the questionnaire would thereby be able to provide inputs towards the review process and would subsequently receive further communication regarding the project.

Your participation in the development of this critical document would be greatly appreciated and would contribute to the growth and development planning of the Northern Cape Province.

Further details regarding the process may be obtained from either of the following people:

OFFICE OF THE PREMIER	MASWANA JOINT VENTURE
Ms Jakoba Meyer 053 838 2541/ 2619 Monday to Friday 07:30 – 16:30	Ms Gisela Altona 081 042 0654 Monday to Friday 08:00 – 17:00

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JW Sauer Building
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Local Newspaper: March 18
Provincial Gazette: March 18