edtea

Department :
Economic Development, Tourism and Environmental Affairs
PROVINCE OF KWAZULU-NATAL

HARRY GWALA DISTRICT MUNICIPALITY

ENVIRONMENTAL MANAGEMENT FRAMEWORK

STRATEGIC ENVIRONMENTAL MANAGEMENT PLAN

FINAL

April 2019

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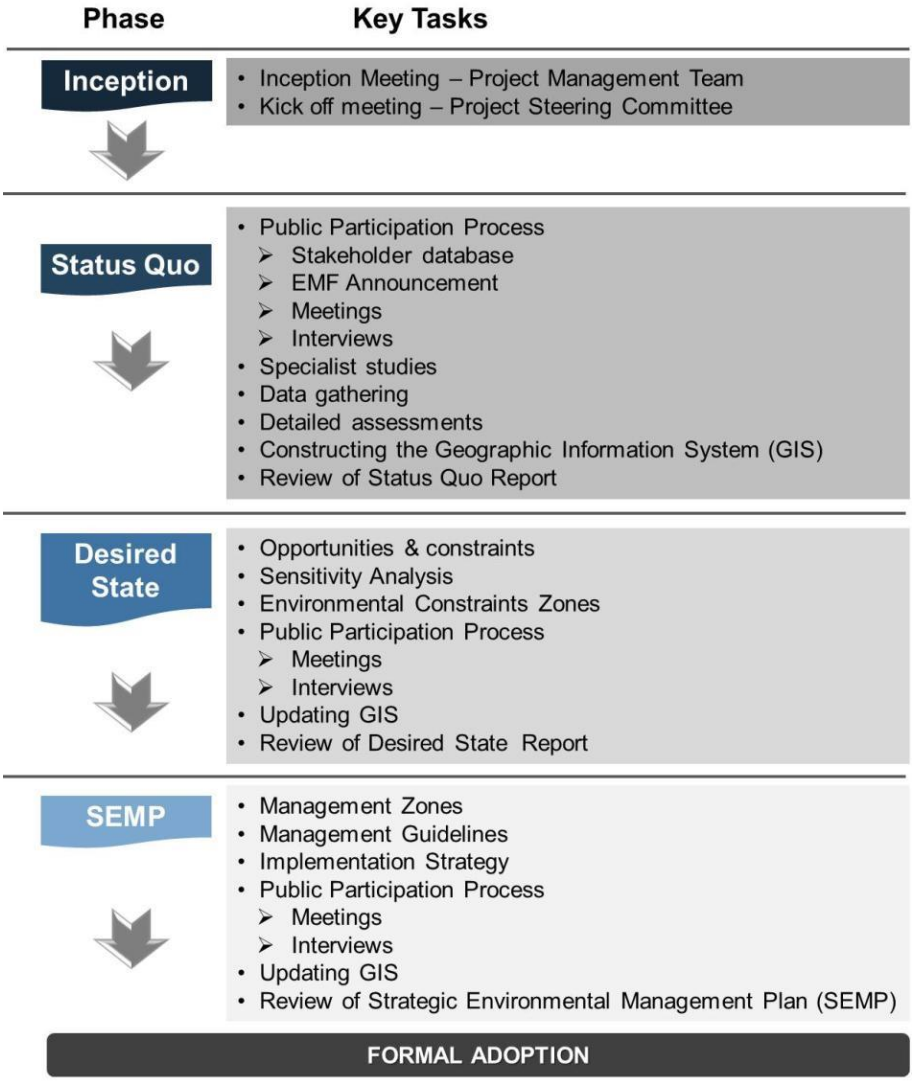
EXECUTIVE SUMMARY

The Harry Gwala District Municipality (HGDM), in partnership with the KwaZulu-Natal (KZN) Department of Economic Development, Tourism and Environmental Affairs (EDTEA), embarked on a process to develop an Environmental Management Framework (EMF) for the District. An EMF is a study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific activities may best be practiced and to offer performance standards for maintaining appropriate use of such land. In its formal context, the EMF that is adopted by the Minister or MEC will be taken into consideration when reviewing applications for environmental authorisation in or affecting the areas to which the EMF applies. In addition, the EMF informs decision-making regarding land use applications.

The EMF development approach, which is outlined in the figure to follow, is consistent with the requirements stipulated in the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the EMF Regulations (Government Notice No. R547 of 18 June 2010).



Outline of EMF Development Process

This report represents the Strategic Environmental Management Plan (SEMP) of the EMF process and serves to plot the way forward for attaining the desired state. The SEMP bridges the divide between the current state of the environment in HGDM and the desired state. It aims to achieve this by managing the sustainable utilisation of land through Management Guidelines and by controlling the activities that may impact on environmental attributes in specific geographical areas.

The Desired State phase of the EMF was concluded with the delineation of Environmental Management Zones (EMZs). Each of these zones represents a specific demarcated area that requires active control to ensure that its potential is realised. The EMZs depict the assimilated sensitivity maps that were integrated with the development pressures and trends, opportunities, constraints and public aspirations. The following EMZs were identified for HGDM:

- **Formally Protected Areas**;
- **Conservation Buffers**;
- **Terrestrial Biodiversity**;
- **Aquatic Biodiversity**;
- **Agriculture**;
- **Heritage**;
- **Urban Areas**; and
- **Traditional Authorities**.

To facilitate the attainment of the desired state for these EMZs, guidelines are required that stipulate compatible activities that support the vision for these zones and specific management requirements and objectives that need to be adhered to when development is proposed in a zone. The SEMP also attempts to manage activities in the EMZs linked to the listing notices (Government Notice No. R983, R984 and R985 of 4 December 2014, as amended) of the Environmental Impact Assessment (EIA) Regulations of 2014, in accordance with Section 24 of NEMA.

The SEMP culminates in a strategy for the implementation of the EMF, which consists of the following:

- A pragmatic approach to the implementation of the HGDM EMF based on the commonly adopted management system of a Plan-Do-Check-Act cycle;
- Linkages with other Planning and Policy Instruments;
- Striving towards the Desired State;
- Giving Effect to the EMF –
  - EMF Enabling Institutional Arrangements;
  - EMF Implementation Duties;
  - EMF Functionality;

- EMF Review;
- Cooperative Governance;

❖ Environmental management of land under Traditional Authorities; and

❖ Monitoring and Evaluation Framework.

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BSP	Biodiversity Sector Plan
CARA	Conservation of Agricultural Resources Act (Act 43 of 1983)
CBA	Critical Biodiversity Area
CEA	Cumulative Effects Assessment
CITES	Convention on the Illegal Trade in Endangered Species
CMA	Catchment Management Agency
COGTA	Co-operative Governance and Traditional Affairs
DAFF	Department of Agriculture, Forestry and Fisheries
DARD	Department of Agriculture and Rural Development
DEA	Department of Environmental Affairs
DM	District Municipality
DMR	Department of Mineral Resources
DPSIR	Driving Force - Pressure - State - Impact - Response
DRDLR	Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EDTEA	Economic Development, Tourism and Environmental Affairs
ESA	Ecological Support Area
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo KZN Wildlife
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
EMS	Environmental Management Systems
EMZ	Environmental Management Zone
FEPA	Freshwater Ecosystem Priority Areas
GIS	Geographical Information System
GN	Government Notice
GPS	Global Positioning System
HGDM	Harry Gwala District Municipality
ICOMOS	International Council on Monuments and Sites
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
IMP	Integrated Management Plan
ITB	Ingonyama Trust Board
IUCN	International Union for Conservation of Nature
KZN	KwaZulu-Natal
LCA	Life Cycle Assessment
LM	Local Municipality

LUMS	Land Use Management System
MEC	Member of the Executive Council
MP	Management Plan
MPRDA	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)
MSA	Municipal Systems Act (Act No. 32 of 2000)
NBF	National Biodiversity Framework
NBSAP	National Biodiversity Strategy and Action Plan
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Act (Act No. 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEM:PAA	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
NEM:WA	National Environmental Management: Waste Act (Act No. 59 of 2008)
NFA	National Forests Act (Act No. 84 of 1998)
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NSDP	National Spatial Development Perspective
NSSD1	National Strategy for Sustainable Development and Action Plan
NWA	National Water Act (Act No. 36 of 1998)
PSC	Project Steering Committee
SADC	South African Development Community
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SEMAs	Specific Environmental Management Acts
SEMP	Strategic Environmental Management Plan
SMME	Small, Medium & Micro-sized Enterprises
SOE	State of the Environment
SPLUMA	Spatial Planning and Land Use Management Act (Act No. 16 of 2013)
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHS	World Heritage Site
WWTW	Wastewater Treatment Works

1 INTRODUCTION

1.1 Background

The Harry Gwala District Municipality (HGDM), in partnership with the KwaZulu-Natal (KZN) Department of Economic Development, Tourism and Environmental Affairs (EDTEA), embarked on a process to develop an Environmental Management Framework (EMF) for the District. Nemai Consulting was appointed to prepare the EMF for the HGDM.

According to the EMF Regulations (Government Notice No. R547 of 18 June 2010), *an EMF is a study of the biophysical and socio-cultural systems of a geographically defined area to reveal where specific activities may best be practiced and to offer performance standards for maintaining appropriate use of such land*. An EMF includes a framework of spatially represented information connected to significant environmental (i.e. ecological, social and economic) parameters.

Prior to commencing with the HGDM EMF, the requisite administrative and institutional matters were set in place, which included the concurrence between the relevant spheres of government, namely the National Department of Environmental Affairs (DEA), KZN EDTEA and HGDM.

As shown in **Figure 1**, the two major components of the HGDM EMF entail Public Participation and Technical Development. Once the EMF is finalised, it will undergo promulgation and gazetting in order to render it as a formal decision-making tool in the environmental and planning arenas.

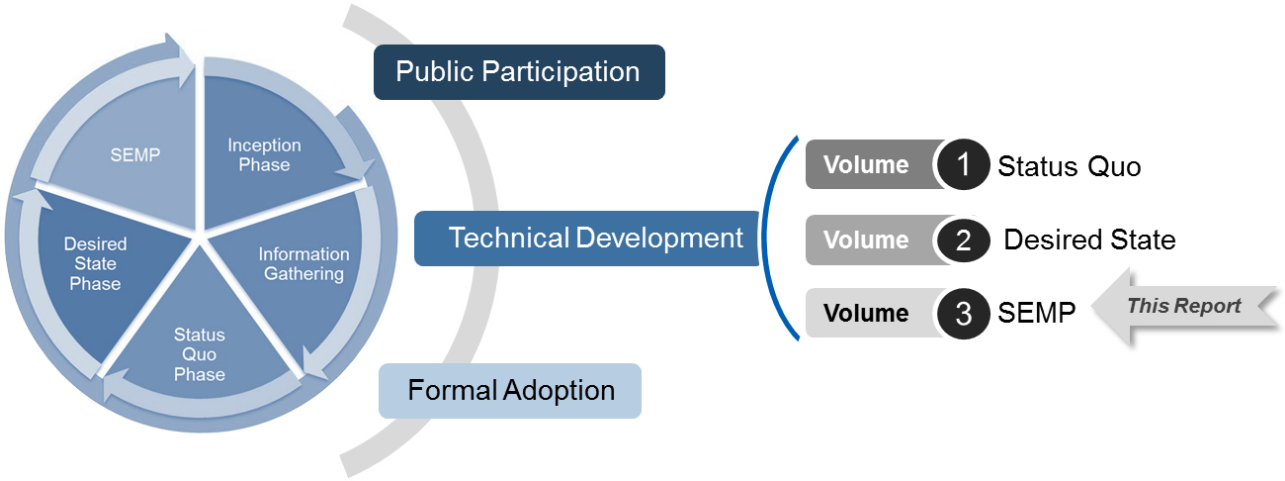


Figure 1: EMF Building Blocks

The HGDM EMF consists of the following deliverables: Status Quo Report, Desired State Report and Strategic Environmental Management Plan (SEMP) (see **Figure 1**). This report

represents the SEMP (Volume 3) of the HGDM EMF process and serves to plot the way forward for attaining the desired state for the environment within the District.

1.2 EMF Study Area

HGDM, formerly known as the Sisonke District Municipality (DM), is a Category C Municipality situated in the south of KZN. The District covers an area of 10 547km². The District borders with Umgungundlovu DM to the north-east, Alfred Nzo DM to the south and south-west, Ugu DM to the south-east and Lesotho to the north-west. The District also includes the southernmost part of the Maloti Drakensberg World Heritage Site (WHS). Refer to **Figures 2** and **3**.

HGDM encompasses the following local municipalities:

- **Dr Nkosazana Dlamini Zuma Local Municipality** (LM) (KZN436) –
  This Municipality was established by the amalgamation of Ingwe LM and Kwasani LM. The area of this LM is 3 602km^2. It is the largest LM in the District, accounting for just over a third of its geographical area. The Municipality fulfils the role of being the administrative and commercial centre for the District. The rest of the municipal area consists of tribal lands, which dominate the area. Towns in the Municipality include Creighton, Himeville and Underberg.

- **uMzimkhulu LM** (KZN435) –
  The area of this LM is 2 435km^2. It is the most populated of the municipalities. uMzimkhulu Town (and adjoining Clydesdale peri-urban area) is regarded as the primary node, both administrative and economic, in the municipal area. Rietvlei, Riversdale and Ibisi are regarded as secondary nodes, fulfilling the role of rural service centres. Other settlements such as Mountain Home, Glengarry, Ntsikeni and Ncambele (Gowan Lea) can be regarded as minor service centres.

- **Greater Kokstad LM** (KZN433) –
  The area of this LM is 2 680km^2. Kokstad serves as the service centre and commercial hub for most of East Griqualand and nearby parts of the Eastern Cape, with which it shares borders.

- **Ubuhlebezwe LM** (KZN434) –
  The area of this LM is 1 604km^2. The main administrative centre of the Municipality is the town of Ixopo, which is also the seat of the HGDM. The secondary and tertiary development nodes include Highflats, Hlutankungu (previously Stuartsville), Jolivet, KwaBhidla, Emgodi and Hlokozi.

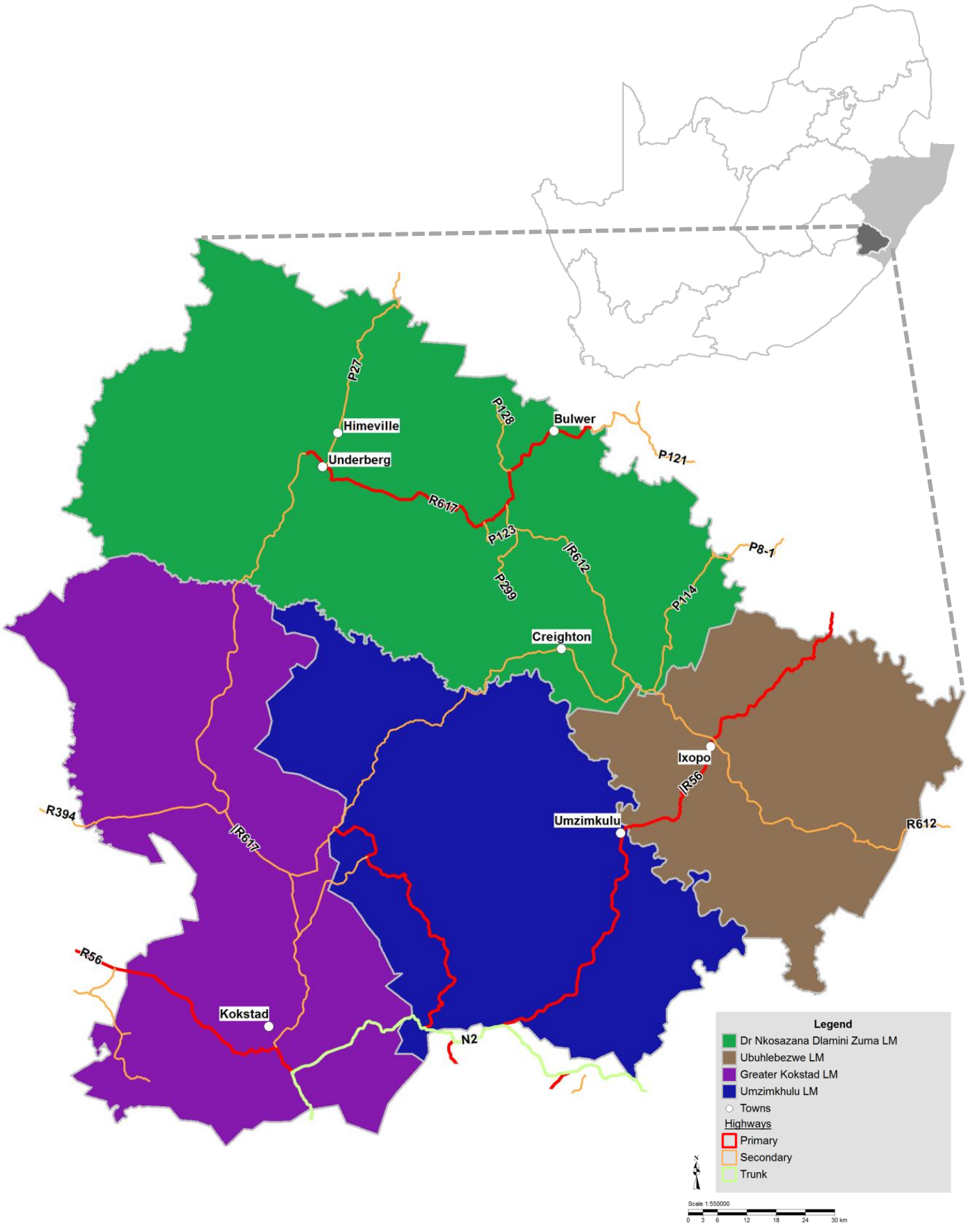


Figure 2: **HGDM National and Provincial Geographical Context**

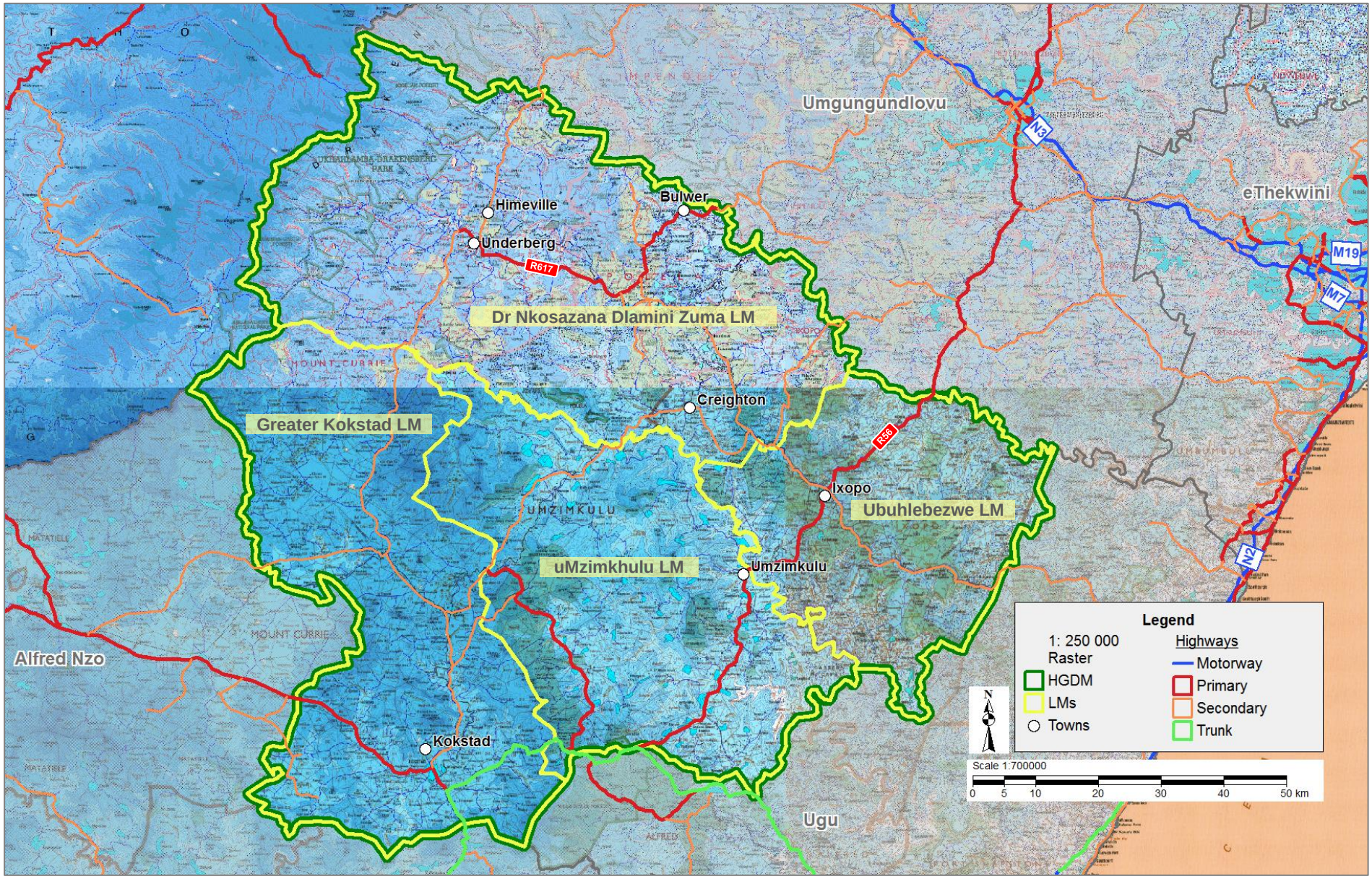


Figure 3: **Locality Map**

1.3 EMF Objectives

In order to address the triggers for sustainable development in the HGDM and the priority environmental opportunities and constraints, the specific objectives of the EMF will include the following:

1. To consolidate environmental information for the District;
2. To identify geographical areas in terms of Section 24 of the National Environmental Management Act (NEMA) (Act No. 107 of 1998);
3. To consider the influence of the geographical areas to the listed activities under the Environmental Impact Assessment Regulations (EIA) of 2014, as amended;
4. To develop a decision support system for development in the area to ensure that environmental attributes, issues and priorities are taken into account;
5. To inform development planning in the District; and
6. To provide strategic guidance on environmental, economic and social issues in HGDM.

In its formal context, the EMF that is adopted by the Minister or MEC will be taken into consideration when reviewing applications for environmental authorisation in or affecting the areas to which the EMF applies. In addition, the EMF informs decision-making regarding land use applications.

1.4 EMF Development Principles

In accordance with DEA (2010), the following principles have been applied in the development of the HGDM EMF:

- The EMF is customised to the context of Harry Gwala;
- The EMF is undertaken with reference to environmental goals and priorities;
- The EMF strives to encourage sustainable development;
- The scope of the EMF is comprehensive enough to provide assistance to environmental and planning decision-making in HGDM;
- The EMF places specific focus on the issues and information that matter in decision-making in HGDM;
- Bio-physical, social, economic, and other aspects that are relevant in the District are reflected in the EMF (based on the availability of information);
- The EMF aims to be clear and easy to understand;
- The process of developing the EMF included an appropriate level of public participation;
- The process of developing the HGDM EMF was conducted impartially; and
- The EMF takes into consideration the legal and policy requirements as well as guidelines that are applicable to Harry Gwala.

1.5 EMF Development Approach

The EMF development approach is consistent with the requirements stipulated in the following primary legislation that governs the process:

- NEMA, in particular Sections 2, 23 and 24; and
- The EMF Regulations (Government Notice No. R547 of 18 June 2010), which make provision for the development, content and adoption of EMFs as a proactive environmental management decision support tool.

In addition, the HGDM EMF will also conform to the Guideline on Environmental Management Frameworks in terms of the EMF Regulations of 2010, Integrated Environmental Management Guideline Series 6 (DEA, 2010).

An overview of the methodology to develop the EMF is broadly presented in **Figure 4**.

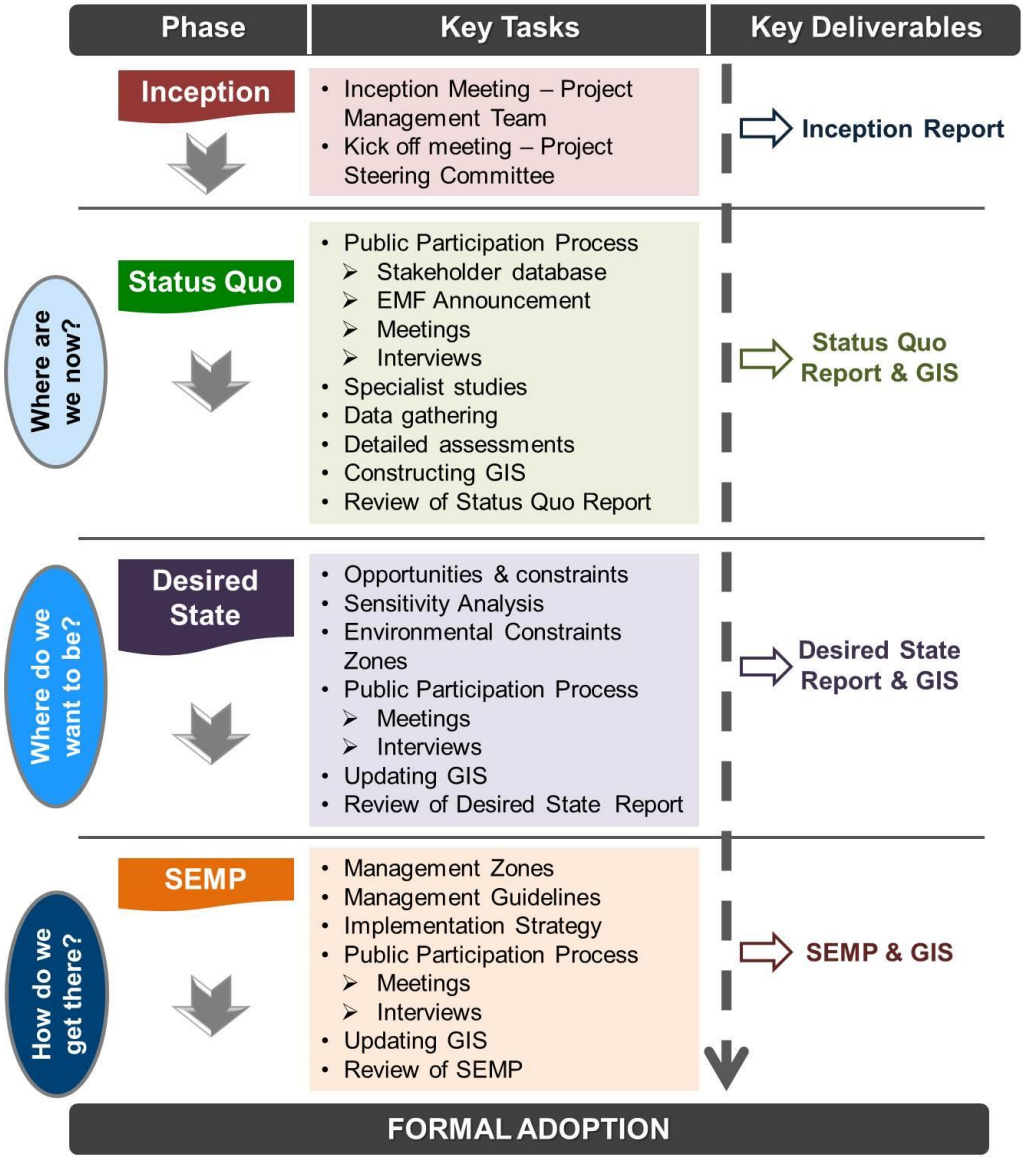
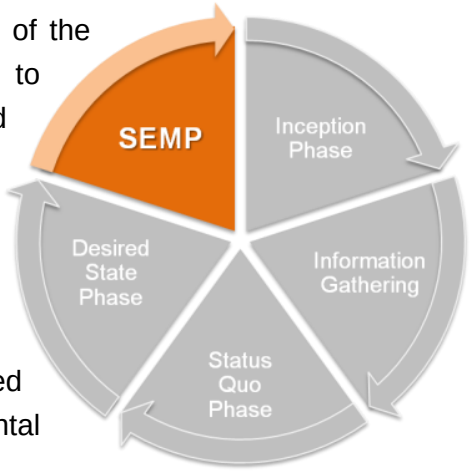


Figure 4: **Broad overview of EMF Development Process**

1.6 Culmination of the EMF Development Process



The SEMP bridges the divide between the current state of the environment in HGDM and the desired state. It aims to achieve this by managing the sustainable utilisation of land through Management Guidelines and by controlling the activities that may impact on environmental attributes in specific geographical areas.

The Desired State phase of the EMF (refer to HGDM EMF Volume 2: Desired State Report, 2018) was concluded with the delineation of the following Environmental Management Zones (EMZs):

- **Formally Protected Areas**;
- **Conservation Buffers**;
- **Terrestrial Biodiversity**;
- **Aquatic Biodiversity**;
- **Agriculture**;
- **Heritage**;
- **Urban Areas**; and
- **Traditional Authorities**.

Each of the EMZs represents a specific demarcated area that requires active control to ensure that its potential is realised. The EMZs depict the assimilated sensitivity maps that were integrated with the development pressures and trends, opportunities, constraints and public aspirations.

To facilitate the attainment of the desired state for the EMZs, guidelines are required that stipulate compatible activities that support the vision for these zones and specific management requirements and objectives that need to be adhered to when development is proposed in a zone. These Management Guidelines are contained in **Section 2**.

The SEMP also attempts to manage activities in the EMZs linked to the listing notices (GN No. R983, R984 and R985 of 4 December 2014, as amended) of the EIA Regulations of 2014, in accordance with Section 24 of NEMA. This is captured in a separate deliverable, entitled HGDM EMF: Environmental Impact Assessment Listing Notices (2019).

1.7 Gaps, Assumptions and Limitations

It is expected that the EMF and each of the Environmental Sensitivity Maps and EMZs will undergo rigorous review and scrutiny by the relevant parties that will be involved with the

application of the outcomes of the EMF, the implementation of its Management Guidelines or are potentially affected by the framework. Following the requisite amendments and incorporation of comments, this decision-making tool should be regarded as a concept EMF until the requirements of DEA and KZN EDTEA can be satisfied and the gazetting process has been completed.

Environmental Sensitivity Maps and EMZs were demarcated using the best available information at the time when this report was compiled and the accompanying Geographical Information System (GIS) was developed. It is accepted that more accurate and supplementary information may become available subsequent to the finalisation of the EMF. A plan-do-check-act approach is thus advocated, where the framework will undergo a cycle of planning and implementation which needs to be followed by revisions and updating by its custodians. Ground-truthing is also crucial, especially for significant environmental attributes, which needs to feed into the evolving EMF.

The following information gaps and limitations accompany the SEMP:

- The Environmental Sensitivity Maps and resultant EMZs were delineated and rated based on pre-determined (and available) criteria that were fed into a spatial model. Through further data refinement and the inclusion of new spatial information, the precision of the EMZs can be enhanced. Input from stakeholders could also lead to the re-adjustment of weightings, which could fine-tune the sensitivity rating system.
- Areas where conflict between development pressures and environmental sensitivity were identified were dealt with in the demarcation of the EMZs through a conservative and risk-averse approach. Nonetheless, opinions may vary as to the acceptable manner in which development pressures influenced the delineation of the EMZs. Despite efforts, limited information was sourced with regard to sector-related developments earmarked for the District, and the EMF may thus not holistically consider all the development pressures in HGDM.
- Further consultation is recommended with the Traditional Leaders to convey the implications of the framework for future development in the District in order to garner the necessary support in this regard. This should be facilitated through the KZN Department of Co-operative Governance and Traditional Affairs (COGTA).
- Through the Project Steering Committee and direct consultation, the project team endeavoured to obtain existing policies, strategies, plans and programmes, as well as information regarding earmarked developments that are relevant to HGDM. However, it is anticipated that not all of the spatial data and accompanying information was successfully sourced. These gaps may be identified during the review of the EMF.

2 MANAGEMENT GUIDELINES

2.1 Introduction

Management Guidelines include statutory provisions as well as objectives, measures and best practices that need to be taken into consideration when contemplating development within the HGDM's EMZs, in order to facilitate the realisation of the desired state. The Management Guidelines are primarily based on the following:

- Environmental management priorities in the District;
- Existing statutory and regulatory provisions;
- Provisions within existing policies, strategies, plans and programmes of various government departments;
- Outcomes of the Status Quo and Desired State phases, including findings of specialist studies and outcomes of public participation;
- Outcomes of the Sensitivity Analysis; and
- Environmental best practices.

As stated in the EMF Guidelines (DEA, 2010), the Management Guidelines are not prescriptive regarding land use and do not indicate which land uses must occur in which areas. Rather, the guidelines indicate specific minimum environmental requirements and performance criteria, which need to be abided by and satisfied before approval of a development application should be considered. The Management Guidelines for each EMZ are provided in the sub-sections to follow according to the format displayed in **Table 1**.

Table 1: Management Guidelines Outline

MANAGEMENT ZONE: _____	
Environmental Features	*Environmental features and attributes included and considered in the delineation of the specific Management Zone.*
Governance Framework	*Relevant statutory framework pertaining to environmental features and types of activities/developments commonly associated with the Management Zone in question. List of statutes may not be exhaustive. Includes list of authorities with jurisdiction over environmental features and attributes within zone.*
Implementation Mechanisms	*Protocols, procedures and other means of ensuring compliance with governance framework*
Management Guidelines	*Based on the environmental status, issues, constraints and opportunities. Linked to desirable state of the particular EMZ. Includes specific management measures, objectives and requirements related to environmental attributes within the EMZ.*
Compatible Activities	**Incompatible Activities**
Activities that promote and are supportive of the desired state and management objectives, and that need to be encouraged.	*Activities that are in conflict with the desired state and management objectives of the management zone, that need to be discouraged.*
Performance Management	*Measures indicating progress towards desired state. Means of measuring / checking achievement of targets (where relevant).*

2.2 Formally Protected Terrestrial Areas EMZ

2.2.1 Mapped EMZ

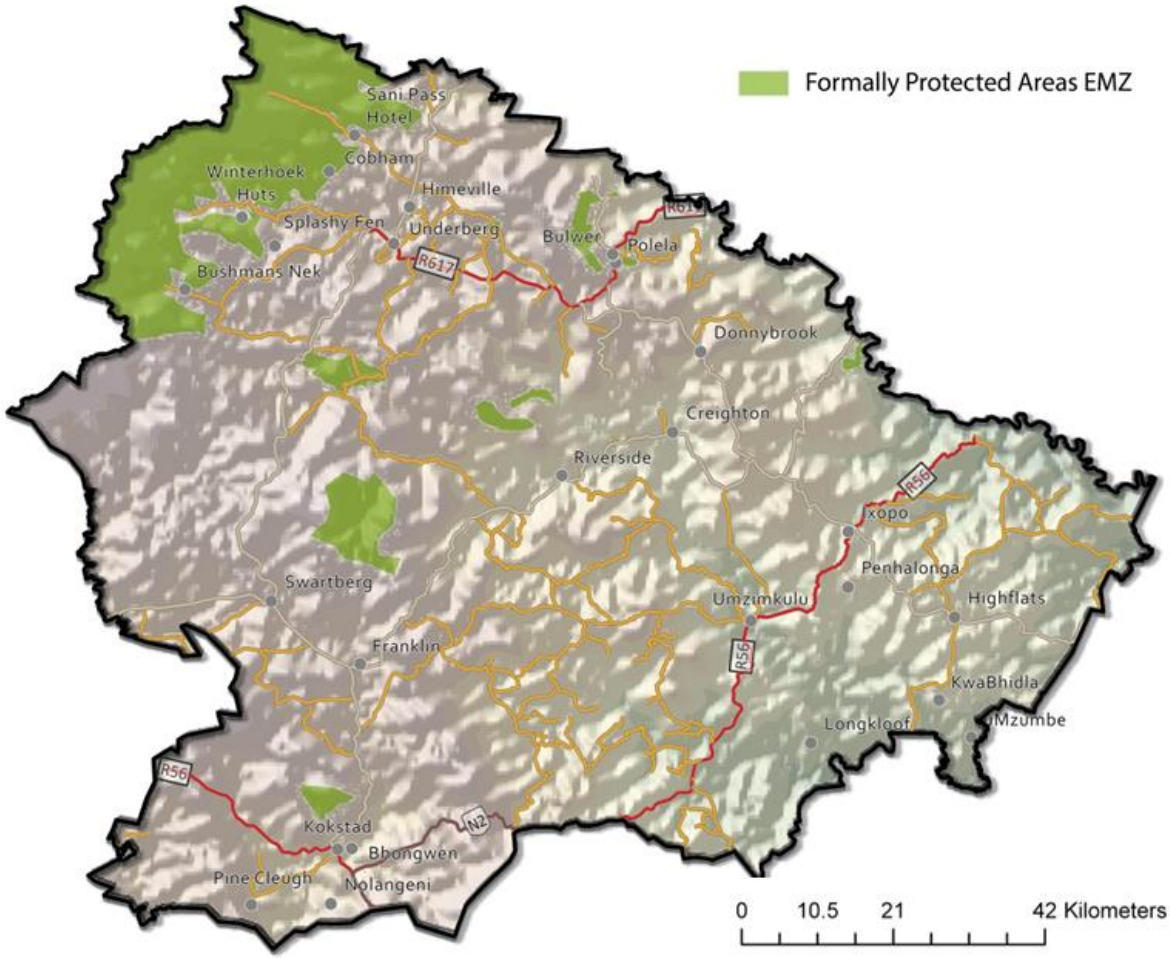


Figure 5: **Formally Protected Terrestrial Areas EMZ**

2.2.2 Expression of Desired State

- Sustainably managed and conserved natural and cultural resources within the formally/statutory protected areas of the District.

2.2.3 Environmental Features considered

- This zone includes all areas declared or formally proclaimed as protected in terms of governing legislation, including the KwaZulu-Natal Nature Conservation Management Act (No.9 of 1997) or the National Environmental Management Protected Areas Act (Act 57 of 2003) (NEM:PAA).
- Terrestrial areas that are formally protected by law and managed for the purpose of biodiversity conservation.
- This EMZ includes the following:
  - Maloti Drakensberg Park WHS;
  - EKZNW Managed Protected Area Boundary (areas recently acquired but not currently proclaimed, 2017) – Constantia;

- DAFF Managed Forest Wilderness Area Boundary (DEA Protected Area Database Extract, 2016) - Ngele Nature Reserve;
- EKZNW KZN Proclaimed Stewardship Sites: Clairmont Nature Reserve, Excelsior Protected Environment, Beaumont Nature Reserve & Umgano; and
- EKZNW Proclaimed Protected Area boundary: Impendle Nature Reserve, Ingelabantwana Nature Reserve, The Swamp Nature Reserve, Himeville Nature Reserve, Xotsheyake Nature Reserve, Marutswa Nature Reserve, Indhloveni Nature Reserve, Marwaqa Nature Reserve, Soada Forest Nature Reserve, Kwa Yili Nature Reserve, iGxalingenwa Nature Reserve, Ntsikeni Nature Reserve & Mount Currie Nature Reserve.

2.2.4 Governance Framework

Laws & Policies	Plans & Programmes	Authorities
▪ World Heritage Convention Act (Act No. 49 of 1999) ▪ NEM:PAA ▪ NEM:PAA: Norms and standards for the management of protected areas in South Africa (GN No. 528, 7 July 2014) ▪ KZN Nature Conservation Management Act (Act No. 09 of 1997) ▪ National Forests Act (Act 84 of 1998) (NFA) ▪ Natal Nature Conservation Ordinance (15 of 1974) ▪ Regulations for the Proper Administration of Nature Reserves, 2012	▪ Management Plans (MPs) of Protected Areas (where relevant) ▪ HGDM Biodiversity Sector Plan (BSP), 2014	▪ Ezemvelo KZN Wildlife (EKZNW) ▪ DEA ▪ Department of Agriculture, Forestry and Fisheries (DAFF) ▪ South African National Biodiversity Institute (SANBI) ▪ HGDM & LMs ▪ UNESCO World Heritage Committee
▪ *Refer to the Governance Framework associated with Terrestrial and Aquatic Biodiversity EMZs (where relevant to statutory protected areas).*		

Implementation Mechanisms	▪ Refer to the Implementation Mechanisms associated with Terrestrial and Aquatic Biodiversity EMZs (where relevant to statutory protected areas). ▪ Implementation of MPs for protected areas (where relevant), including operational management actions (e.g. conservation management). ▪ Development permits issued in terms of NEM:PAA. ▪ EKZNW may impose conditions in addition to (but consistent with) conditions set by other authorities and legislation. ▪ Rules for protected areas. ▪ Adherence to Operational Guidelines published by the UNESCO World Heritage Committee. ▪ EIAs to satisfy the requirements or guidelines of UNESCO and other agencies. These include World Heritage Environmental Assessment Advice Note published by the IUCN in November 2013 and the ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties.

2.2.5 Management Guidelines for achieving the Desired State

Refer to the Management Guidelines associated with Terrestrial and Aquatic Biodiversity (where relevant to statutory protected areas).

Description	Responsible Parties
Planning Priorities	
▪ Reserves that are not yet proclaimed must become formally protected. ▪ Biodiversity stewardship programmes between EKZNW and private organizations/institutions should be encouraged for those biodiversity priority areas identified that do not currently fall within the protected areas network. ▪ Priority should be given to sites with high biodiversity values but which are also threatened by anthropogenic activities.	▪ DEA ▪ EKZNW
▪ Strategic planning processes to be informed by EKZNW's CBAs and HGDM's BSP (2014), including compliance with Land Use Management Objectives for the Terrestrial and Aquatic Conservation Categories, as well as Land Use Management Practices, Controls and Guidelines.	HGDM & LMs
Development Guidelines	
▪ Implement development in line with the MPs of the protected areas (where relevant).	EKZNW
Managing & Conserving Biodiversity	
▪ MPs of protected areas serve as the framework within which these areas need to be managed, and these plans thus need to be adhered to. ▪ Prevent loss of biodiversity.	EKZNW
▪ Maintain working relationships between the various spheres of government to ensure a collaborative effort to conserve HGDM's protected areas and their adjoining buffer zones.	▪ EKZNW ▪ DEA ▪ EDTEA ▪ Department of Mineral Resources (DMR) ▪ Department of Water and Sanitation (DWS) ▪ COGTA ▪ HGDM & LMs
▪ Dedicated catchment management for watercourses that feed into the protected areas.	DWS
Decision-making	
▪ Ensure that edge effects of proposed activities do not compromise the integrity of the Protected Area or adversely impact on its ability to maintain a functioning system.	Mandated authorities
Specialist Studies	
▪ Specialist disciplines required (where relevant) – Terrestrial Ecology (and associated sub-disciplines), Aquatic Ecology, Visual, Socio-economic, Social, Heritage, Geotechnical (note: list not exhaustive).	Developers/ Project Proponents

2.2.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Adhere to Zoning Plans of MPs (where relevant). ▪ Comply with Land Use Management Guidelines contained in the HGDM's BSP (2014). ▪ In accordance with the EKZNW Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018), compatible land uses and activities include conservation management, research, interpretation and tourism infrastructure and associated facilities.	▪ Activities that compromise the integrity of the Protected Area, or are in conflict with the MPs' Zoning Plans. ▪ No un-authorised developent in protected areas.

2.2.7 Performance Management

- To be aligned with target and indicators in respective MP's for protected areas (where relevant).
- Current coverage of protected areas.
- Percentage of biodiversity network under formal conservation.
- Ecosystem health and condition.
- Occurrence of invasive alien species.
- Loss of protected species.

2.3 Conservation Buffers EMZ

2.3.1 Mapped EMZ

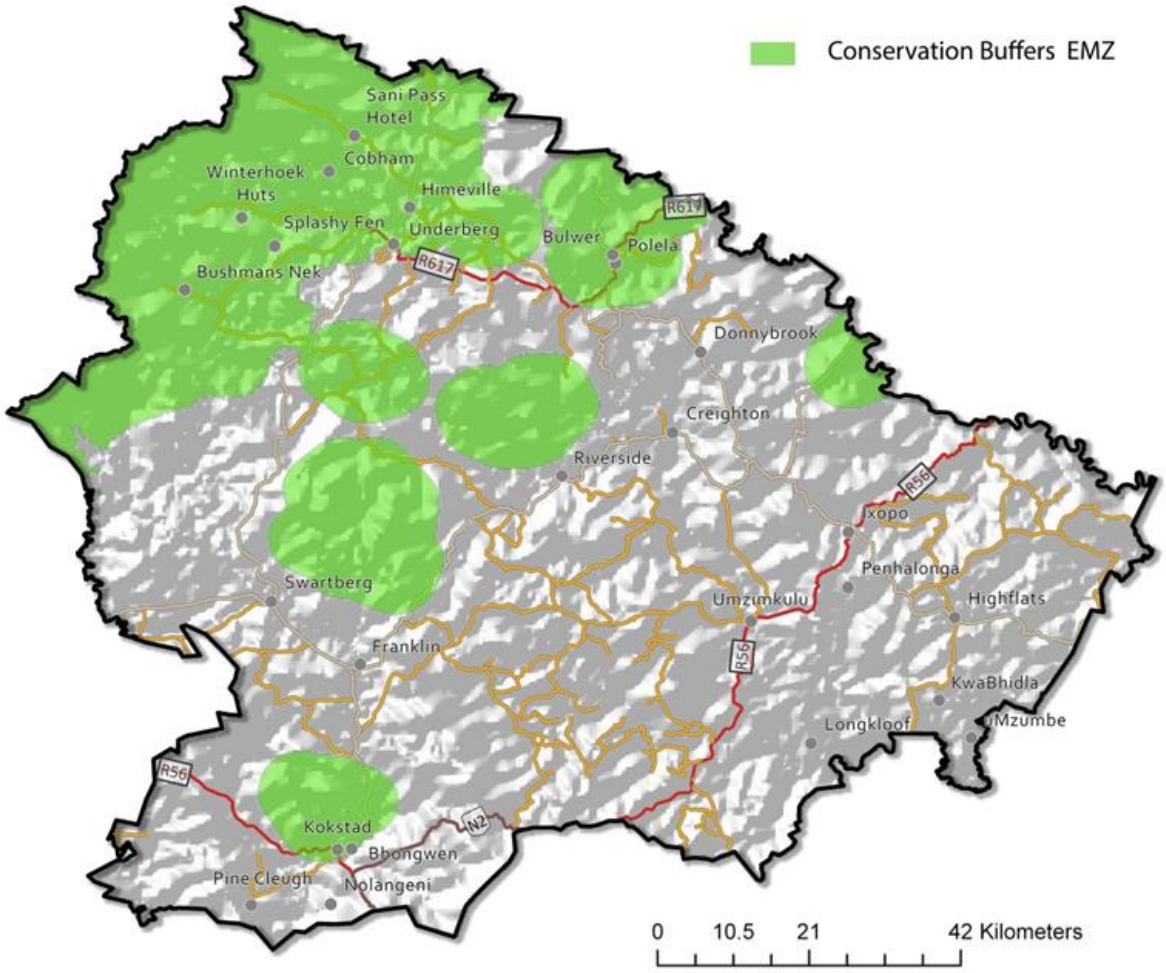


Figure 6: **Conservation Buffers EMZ**

2.3.2 Expression of Desired State

- Managing activities in buffers zones in order to:
  - Protect the purpose of the protected areas;
  - Maintain or enhance the values of the protected areas; and
  - Promote sustainable benefits to communities within the buffer zones.

2.3.3 Environmental Features considered

- This zone includes the following:
  - Categories of the WHS buffer zone (Layer 1, Layer 2, Reciprocal Viewshed and Approaches Viewshed), with accompanying Land Use Management Objectives.
  - 5km radius of protected areas.

2.3.4 Governance Framework

Laws & Policies	Plans & Programmes	Authorities
▪ WHS Buffer Zone Policy ▪ GN No. R. 985 of 4 December 2014 (Listing Notice 3), as amended	▪ HGDM BSP, 2014 ▪ WHS Integrated Management Plan (IMP) ▪ World Heritage Environmental Assessment Advice Note (IUCN, 2013) ▪ ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties	▪ EKZNW ▪ DEA ▪ EDTEA ▪ DMR ▪ DAFF ▪ SANBI ▪ HGDM & LMs ▪ UNESCO World Heritage Committee ▪ Buffer Zone Technical Committee
▪ *Refer to the Governance Framework associated with the following (where relevant):* - *Formally Protected Terrestrial Areas EMZ; and* - *Terrestrial and Aquatic Biodiversity EMZs.*		

Implementation Mechanisms	▪ Refer to the Implementation Mechanisms associated with EMZs for Formally Protected Terrestrial Areas, Terrestrial Biodiversity and Aquatic Biodiversity (where relevant). ▪ Implementation of MPs for protected areas (where relevant), including operational management actions (e.g. buffer zone protection). ▪ Seeking environmental authorisation for activities listed in terms of Listing Notice 3, as well as the WHS Buffer Zone Policy. ▪ Satisfy the objectives stipulated in the WHS Buffer Zone Policy. ▪ Involvement of the Buffer Zone Technical Committee. ▪ Local authorities to consider suitable land use zones in their town planning schemes within the buffer zones.

2.3.5 Management Guidelines for achieving the Desired State

Refer also to the Management Guidelines associated with EMZs for Formally Protected Terrestrial Areas, Terrestrial Biodiversity and Aquatic Biodiversity (where relevant).

Description	Responsible Parties
Planning Priorities	
▪ Assess opportunities to expand protected areas into buffers zones, taking into consideration areas of high value for biodiversity, priority natural areas, catchment protection areas, viewshed protection areas as well as the social, political and economic dynamics within the buffer zone. ▪ Establish and protect buffer zones for protected areas in terms of the norms and standards for the management of protected areas in South Africa (GN No. 528, 7 July 2014). ▪ Advocate community conservation ventures and commensurate activities in buffer zones.	▪ DEA ▪ EKZNW ▪ HGDM & LMs
▪ Strategic planning processes to be informed by the following: - HGDM's BSP (2014), including compliance with Land Use Management Objectives for buffer zones of protected areas, as well as Land Use Management Practices, Controls and Guidelines; and - Land Use Management Objectives for the buffer zones of the Maloti Drakensberg	HGDM & LMs

Description	Responsible Parties
Park WHS.	
Development Guidelines	
▪ Implement development in line with the objectives stipulated in the WHS Buffer Zone Policy.	EKZNW
Managing & Conserving Biodiversity	
▪ Maintain working relationships between the various spheres of government to ensure a collaborative effort to conserve HGDM's protected areas and their adjoining buffer zones.	▪ EKZNW ▪ DEA ▪ EDTEA ▪ DMR ▪ DWS ▪ COGTA ▪ HGDM & LMs
▪ Dedicated catchment management for watercourses that feed into the buffer zones and adjoining protected areas.	DWS
Decision-making	
▪ Apart from the regulatory authority and other commentary authorities, specific requirements of EZKNW need to be met when conducting EIAs within buffer zones of protected area. Buffer zones to be regarded as 5 km from the proclaimed boundary of a reserve (as per GN No. R. 985 of 4 December 2014, as amended), or unless a specific buffer has been identified. ▪ Ensure that edge effects of proposed activities do not compromise the integrity of the Protected Area or adversely impact on its ability to maintain a functioning system.	Mandated authorities
Specialist Studies	
▪ Specialist disciplines required (where relevant) – Terrestrial Ecology (and associated sub-disciplines), Aquatic Ecology, Visual, Socio-economic, Social, Heritage, Geotechnical (note: list not exhaustive).	Developers/ Project Proponents

2.3.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Comply with Land Use Management Guidelines contained in the HGDM's BSP (2014).	▪ Activities that are not sustainable or will cause edge effects that will compromise the integrity of the adjoining protected areas. ▪ No un-authorised developent in buffer zones of protected areas.

2.3.7 Performance Management

- To be aligned with target and indicators in respective MP's for Protected Areas (where relevant to buffer zones).
- Expansion of protected areas into buffer zones.
- Measurable edge effects from developments in the buffer zones.

2.4 Terrestrial Biodiversity EMZ

2.4.1 Mapped EMZ

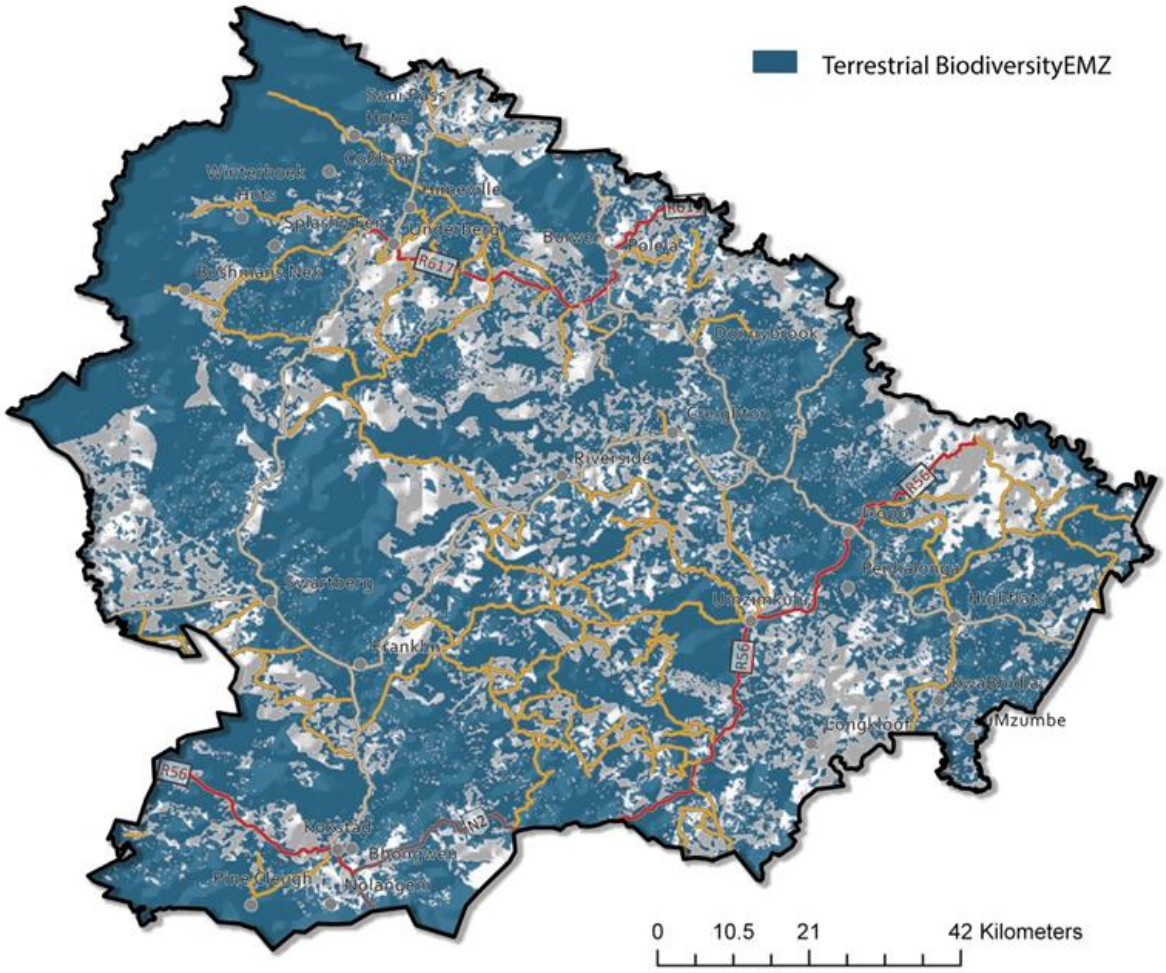


Figure 7: **Terrestrial Biodiversity EMZ**

2.4.2 Expression of Desired State

- Sustainably managed and safeguarded terrestrial biodiversity within the District.
- Protection of threatened species and species of special conservation concern and significance.

2.4.3 Environmental Features considered

- The areas that fall under this zone are located outside of formally protected areas and exhibit high biodiversity or supportive functions, except for the landscape corridors that extend into formally protected area.
- Specific features include:
  - Important Bird & Biodiversity Areas
  - Terrestrial CBAs
  - Terrestrial ESAs
  - BSP Local Corridors
  - BSP Landscape Ecological Corridors
  - Agro-biodiversity

2.4.4 Governance Framework

Laws & Policies	Strategies	Plans & Programmes	Authorities
▪ Multilateral Environmental Agreements, such as – - Rio declaration on Environment and Development, 1992 - Agenda 21, 1992 - Convention on Biological Diversity, 1992 - Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), 1979 - Convention on the Illegal Trade in Endangered Species (CITES), 1973 - Ramsar Convention on Wetlands Conservation, 1971 - United Nations Framework Convention on Climate Change, 1992 - Kyoto Protocol, 1997 - Protocol on Shared Water Courses, 2002 - African Convention on Nature and Natural Resources, 1968 - Man and Biosphere Programme, 1971 - SADC Protocol on Wildlife and Law Enforcement, 1999 - SADC Regional Biodiversity Strategy, 2006 ▪ NEMA ▪ National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEM:BA) ▪ National Water Act (Act 36 of 1998) (NWA) ▪ National Environmental Management: Air Quality Act (Act 39 of 2004) (NEM:AQA) ▪ National Environmental Management: Waste Act (Act 59 of 2008) (NEM:WA) ▪ NFA ▪ Mountain Catchments Areas Act (Act No. 63 of 1970) ▪ National Veld and Forest Fire Act (Act No. 101 of 1998) ▪ Mineral and Petroleum Resource Development Act (Act 28 of 2002) (MPRDA) ▪ Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA) and lists of declared alien invasive plants and weeds to be eradicated or controlled ▪ White Paper on Conservation and Sustainable Use of South Africa's Biological Diversity (July 1997) ▪ NEM:BA Alien and Invasive Species Regulations (GN No. 598, 1 August 2014) ▪ Listed Invasive Species (GN 864 of 29 July 2016) ▪ KZN Nature Conservation Management Act (Act No. 09 of 1997)	▪ National Protected Area Expansion Strategy 2008 ▪ South Africa's National Biodiversity Framework (NBF) ▪ South Africa's National Biodiversity Strategy and Action Plan (NBSAP) 2005 ▪ National Biodiversity Assessment 2004 (updated 2011) ▪ National Grassland Biodiversity Programme 2011 ▪ National Strategy for Sustainable Development and Action Plan ▪ Mining and Biodiversity Guidelines. Mainstreaming biodiversity into the mining sector 2013	▪ EKZNW Systematic Terrestrial Conservation Plan ▪ HGDM's BSP 2014 ▪ Stewardship programmes ▪ Municipal Strategic Environmental Assessments ▪ Threatened Ecosystems ▪ Zonation Plan ▪ WHS Buffer Zone Policy ▪ Maloti Drakensberg Transfrontier Project ▪ EKZNW Guideline for the Incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018)	▪ DEA ▪ EDTEA ▪ EKZNW ▪ DWS ▪ DMR ▪ DAFF ▪ DARD ▪ SANBI ▪ HGDM & LMs

Laws & Policies	Strategies	Plans & Programmes	Authorities
▪ Natal Nature Conservation Ordinance (15 of 1974) ▪ National Climate Change Response Policy, 2011 ▪ Municipal by-laws			

Implementation Mechanisms	▪ Species-based conservation (listed species). ▪ Area-based conservation (protected areas, protected eco-systems). ▪ Purpose-based conservation. ▪ State of Environment Reporting. ▪ Biodiversity stewardship. ▪ Permitting of activities (threatened species, alien species and listed invasive species). ▪ Terrestrial protected areas. ▪ Control measures for invasive alien plant species. ▪ Authorisations in terms of prevailing legal framework. ▪ BSP's land-use planning and decision-making guidelines for Terrestrial CBAs and ESAs. ▪ EKZNW Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018). ▪ Land management practices to prevent degradation, erosion, loss of ecosystem functionality, etc. ▪ Bioregional Plan to be developed in the future for HGDM.

2.4.5 Management Guidelines for achieving the Desired State

Refer also to the Management Guidelines associated with Aquatic Biodiversity (where relevant).

Description	Responsible Parties
Planning Priorities	
▪ Initiate a greening programme in urban and rural areas to provide shade, erosion protection, and beatification. ▪ Support and facilitate land planning and practices that safeguard and enhance the following: - Overall biodiversity values in the District; - Ecological corridors; - CBAs and ESA's; and - Economic objectives based on wildlife industries that are compatible with the District's overall biodiversity values including ecotourism developments, stewardship programmes, Community Conservation Areas and Protected Area Expansion Strategy. ▪ Strategic planning processes to be informed by EKZNW's CBAs and HGDM's BSP (2014), including compliance with Land Use Management Objectives for the Terrestrial and Aquatic Conservation Categories, as well as Land Use Management Practices, Controls and Guidelines.	HGDM & LMs
Managing & Conserving Biodiversity	
▪ Conserve long-term viable and representatives of habitats of critically endangered species or any species of conservation importance (red data, specially protected species), as well as sensitive and threatened vegetation types. ▪ Implementation of biodiversity stewardship initiatives in priority areas under private or communal ownership. ▪ Ecological linkages identified on the interface between the District and the bordering	▪ DEA ▪ EDTEA ▪ EKZNW ▪ DWS ▪ DAFF

Description	Responsible Parties
municipalities must be taken into account in conservation planning. ▪ Restore and conserve biodiversity and ecosystem patterns and processes. ▪ Development to incorporate requirements stipulated in EKZNW's Blue Swallow Management Plan, where risks are posed to related habitat and foraging areas. ▪ Support species-led programmes to protect threatened species (e.g. cranes, blue swallows and oribi). ▪ Actively encourage Working on Fire teams to assist in burning of priority grassland areas within CBA areas. ▪ Improved law enforcement, particularly in the case of illegal activities. ▪ Game farming to remain within the carrying capacity of existing veld resources. ▪ Promote investment in Ecological Infrastructure in HGDM. *See interventions - Aquatic Biodiversity EMZ.* ▪ Monitoring programmes for rare and endangered species (GPS) (especially vegetation) and follow up its existence in following years. ▪ Where land uses conflict with areas earmarked for development, ensure adequate habitat and faunal impact assessments as well as overall feasibility assessments are done and identify appropriate feasibilities and /or mitigation measures, before any activities are approved or supported. ▪ All areas steeper than 18 degrees should be excluded from development. This will not only protect slopes from erosion and landslide risk, but will ensure that ridges will function as dispersal/habitat corridors. ▪ Any irreconcilable activities in close proximity to ecologically sensitive species' habitats or initiatives / wildlife industries compatible with regions overall biodiversity objectives (e.g. conservation areas) should be discouraged or strictly controlled. ▪ Control and prevent the illegal removal of terrestrial faunal and floral species. ▪ An inventory of popular medicinal plants must be drawn up and efforts to commercially produce these species must be encouraged. ▪ Prepare and implement an Invasive Species Monitoring, Control and Eradication Plan. ▪ Rehabilitation of degraded areas: While degraded areas are not necessarily areas of highest biodiversity value, they often pose a threat to CBAs. Priorities include: - Prepare and implement an invasive plant species monitoring, control and strategic eradication plan on Municipal land. - Support and promote broader strategic alien invasive plant clearing in conjunction with local landowners and Working for Water. - Implementation of Land Care initiatives aimed at rehabilitating degraded lands to either be productive for agricultural use or enhancing their biodiversity value. - Capacity building and empowerment, particularly in rural areas where overgrazing is a concern.	▪ DARD ▪ SANBI ▪ HGDM & LMs
Stakeholder Engagement	
▪ Work closely with the traditional authorities, the Ingonyama Trust Board, COGTA and other supportive government departments to find ways to integrate biodiversity conservation into decision making (e.g. land allocation) within traditional areas. ▪ A programme to cultivate rare and endangered vegetation species should be initiated and the community should be included. Make us of indigenous knowledge. ▪ Training and education on the implications of overexploitation of medicinal plants must be conducted with the local communities. ▪ Include the local community in eradication programmes as an economic empowerment project.	▪ DEA ▪ EDTEA ▪ EKZNW ▪ DAFF ▪ DARD ▪ SANBI ▪ HGDM & LMs
Mitigation Measures	

Description	Responsible Parties
▪ Measures to safeguard protected fauna and flora species. ▪ Remove and control terrestrial alien and invasive species. ▪ The use of residual biocides and insecticides to control nuisance animals must be reduced through education and extension. ▪ Implement effective veld fire management strategies. ▪ Where development proposals will result in irreversible biodiversity loss even after on-site mitigation, biodiversity offsets should be considered to offset for the residual impacts of development. ▪ Biodiversity offsets may also be considered as a means to secure conservation of priority areas. ▪ Manage collision of birds with overhead power lines. ▪ Maintenance of open space systems in settlements. ▪ Linear-type development (e.g. pipelines, transmission lines, roads, railway lines) should be aligned along existing and proposed transport corridors rather than along point to point cross-country routes. ▪ Rehabilitation plans to be developed for natural areas, where disturbance occurs outside development footprint. ▪ Development footprint should be restricted to already disturbed areas, as far as possible. ▪ Refer to the broad development / management controls contained within EKZNW's Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018).	Developers/ Project Proponents
Decision-making	
▪ Any irreconcilable activities in close proximity to ecologically sensitive species' habitats or initiatives / wildlife industries compatible with regions overall biodiversity objectives (e.g. conservation areas) should be discouraged or strictly controlled. ▪ CBAs need to be conserved and appropriately buffered from development and land use impacts, in consultation with EKZNW, DEA and DWS. ▪ Ensure that edge effects of proposed activities do not compromise the integrity of sensitive ecosystems. ▪ Discourage any development activities on ridges with a slope of 5° or more. ▪ Apart from the regulatory authority and other commentary authorities, specific requirements of EZKNW to be met when conducting EIAs.	Mandated authorities
Specialist Studies	
▪ Specialist disciplines required (where relevant) – Ecological Assessments and associated sub-disciplines (note: list not exhaustive).	Developers/ Project Proponents

2.4.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
Comply with the following: ▪ *EKZNW's CBAs and HGDM's BSP (2014), including compliance with Land Use Management Objectives for the Terrestrial and Aquatic Conservation Categories, as well as Land Use Management Practices, Controls and Guidelines; and* ▪ *EKZNW's Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018).*	

2.4.7 Performance Management

- Current coverage of CBAs and ESAs.
- Assess CBAs and ESAs in order to track the percentage of:
  - Areas under formal protection (including new stewardship agreements);
  - Areas that have been modified/lost, wholly or in part due to development;
  - Areas where increased development rights have been granted.
- Area (hectares) and % of District under 'local protected area' status (e.g. municipal open space system, municipal park, recreational areas, etc.).
- Ecosystem health and condition.
- Proportion of land invaded by invasive alien plants.
- Areas cleared of invasive alien plants.
- Occurrence of invasive alien animal populations.
- Conservation status of natural vegetation, by type.
- Area (hectares) and threat status of vegetation types remaining within the District.
- Level of transformation (%) of each vegetation type.
- Percentage of biodiversity network under formal conservation.
- Threatened and extinct species.
- Population trends of selected species (e.g. oribi, blue swallows and cranes).

2.5 Aquatic Biodiversity EMZ

2.5.1 Mapped EMZ

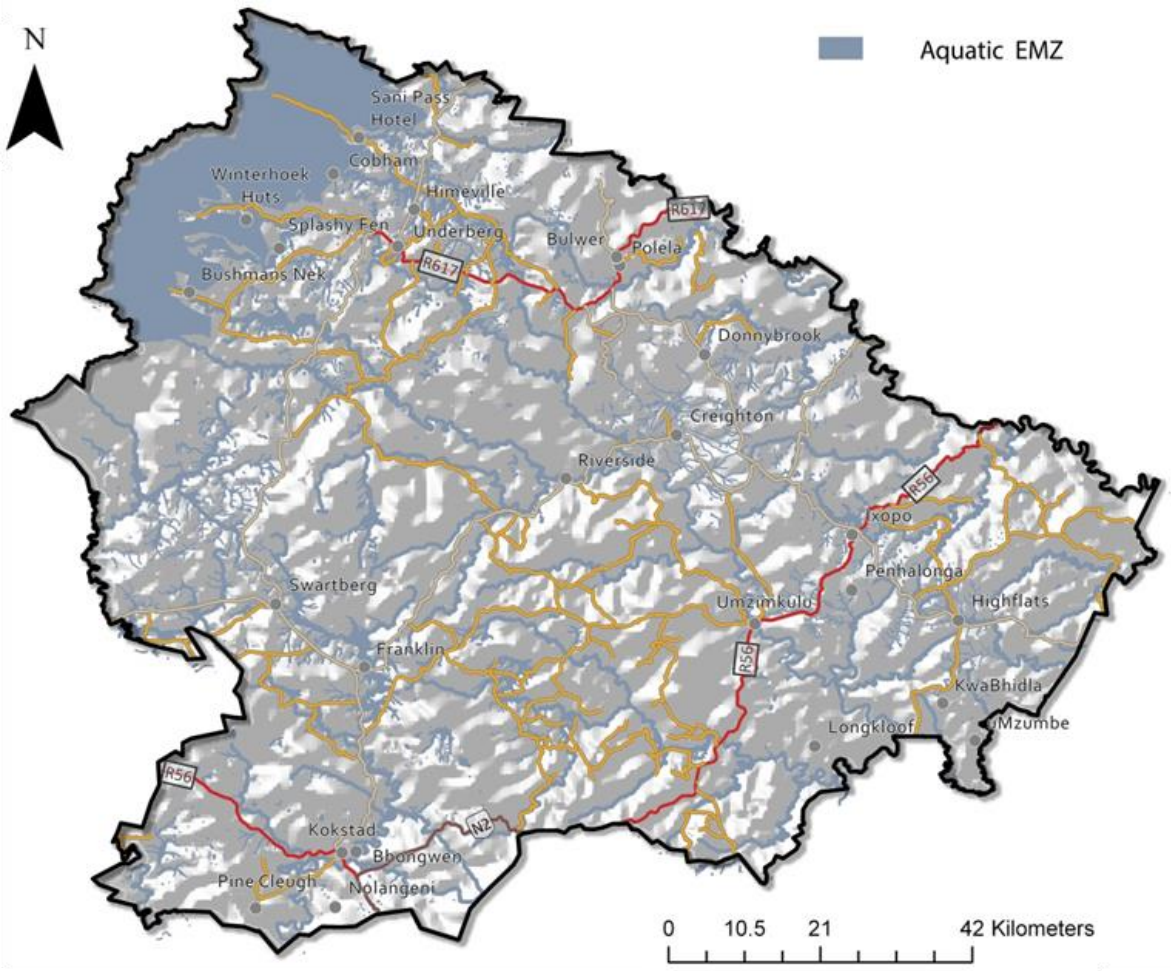


Figure 8: **Aquatic Biodiversity EMZ**

2.5.2 Expression of Desired State

- Sustainably managed and protected aquatic biodiversity and watercourses within HGDM.

2.5.3 Environmental Features considered

- This zone includes surface freshwater resources that are significant in terms of aquatic biodiversity or from a water yield perspective.
- Specific features include:
  - RAMSAR Sites
  - FEPA - Wetlands and Wetland Clusters
  - FEPA - Flagship Rivers & Priority Rivers
  - FEPA - Phase 2 Rivers
  - FEPA - Water Yield Areas
  - Perennial and non-perennial rivers & buffers

2.5.4 Governance Framework

Laws & Policies	Strategies	Plans & Programmes	Authorities
▪ Water Services Act (Act 108 of 1997) ▪ Water Services Amendment Act (Act No. 30 of 2004) ▪ Resource Directed Management of Water Quality Policy ▪ *Same as for Terrestrial Biodiversity EMZ*	▪ National Water Resource Strategy, 2013 ▪ Internal Strategic Perspective ▪ Catchment Management Strategy ▪ Water for Growth and Development Strategy (where relevant) ▪ Resource Directed Management of Water Quality Strategy ▪ *Same as for Terrestrial Biodiversity EMZ*	▪ Draft National Water and Sanitation Master Plan, 2017 ▪ Catchment Management Plan ▪ National Aquatic Ecosystem Health Monitoring Programme ▪ National Freshwater Ecosystems Priority Atlas, 2011 ▪ EKZNW Freshwater Systematic Conservation Plan ▪ Waste Discharge Charge System ▪ Working for Water and Wetlands Programmes ▪ Blue and Green Drop Classification ▪ South African Water Quality Guidelines ▪ *Same as for Terrestrial Biodiversity EMZ*	▪ Catchment Management Agency (CMA) ▪ *Same as for Terrestrial Biodiversity EMZ*
▪ *Refer to the Governance Framework associated with Terrestrial Biodiversity EMZ (where relevant).*			

Implementation Mechanisms	▪ Resource Directed Measures – clear objectives for the desired level of protection of the resource through the Reserve, Classification System, and Resource Quality Objectives. ▪ Source Directed Controls – measures to control water use, e.g. water quality standards for waste water, waste water discharges, pollution prevention, and waste minimisation technologies. ▪ National monitoring and information systems – address the monitoring, recording, assessing and dissemination of information on water resources. ▪ State of Environment Reporting. ▪ Catchment Management Forum. ▪ Authorisations in terms of prevailing legal framework. ▪ Control measures for alien and invasive plant species. ▪ Water Conservation and Demand Management. ▪ Disaster Management Plan. ▪ HGDM's BSP (2014) land-use planning and decision-making guidelines for Aquatic CBAs and ESAs.

2.5.5 Management Guidelines for achieving the Desired State

Refer also to the Management Guidelines associated with Terrestrial Biodiversity (where relevant).

Description	Responsible Parties
Planning Priorities	
▪ Catchment and river management policies and guidelines to be integrated into land use and development planning. ▪ HGDM to ensure that provision is made in the Land Use Management System (LUMS) to enforce the identification, establishment of required setbacks, protection and maintenance of wetlands and riparian zones. ▪ Flood prone areas to be managed to minimise flood risks and impacts. ▪ By-laws required for storm water management. ▪ Regulated areas and buffer zones for watercourses (based on DWS requirements) should be determined on a strategic priority basis as and when pressure for industry, mining, intensive agriculture or other development occurs. Strict regulation of	▪ HGDM & LMs ▪ DWS

Description	Responsible Parties
encroachment and incompatible land use and activities. ▪ Comply with the HGDM's BSP (2014) land-use planning and decision-making guidelines for Aquatic CBAs. ▪ Transboundary management of water resources (e.g. upstream impacts, institutional relationships). ▪ Comply with the Resource Management Plans of the dams in the District (where relevant).	
▪ Identify and map areas of Ecological Infrastructure associated with aquatic ecosystems. Identify areas for interventions such as: - Clear invasive alien plants, especially in mountain catchments and riparian areas; - Rehabilitate wetlands; - Rehabilitate eroded areas and reinstate suitable ground cover; - Maintain buffers of natural vegetation along streams and rivers; - Reinstate buffers of natural vegetation between agricultural crops and rivers or wetlands; - Improve rangeland management practices (e.g. grazing regime, fire management); and - Monitor compliance with effluent standards for agriculture and industry.	▪ EKZNW
Development Guidelines	
▪ For any proposed water use or development in proximity to a watercourse, a delineation of the wetland / riparian habitat needs to be undertaken in accordance with the prevailing DWS Guidelines. ▪ Development should be located outside 1:100 year flood line and should not interfere with storm water drainage. No urban, mining or agricultural development within regulated area of the watercourse (i.e. 1:100 year flood line or delineated riparian habitat, whichever is greatest). ▪ Adopt a 30 metres buffer area from the boundary of the regulated areas of watercourses. Strict regulation of encroachment and incompatible activities. ▪ Adopt a 500 metres buffer area from the edge of wetlands, based on risks posed to the wetland by the development (refer to Risk-Based Water Use Authorisation Guidelines for Section 21(c) and (i) Water Uses, DWA 2009). Strict regulation of encroachment and incompatible activities. ▪ All watercourses (including delineated boundary and additional 30m buffer zone) should be regarded as sensitive until proven otherwise by a suitably qualified specialist. ▪ Storm water management plans to accompany large developments, where onsite attenuation should be promoted. ▪ Watercourse crossings need to undergo an authorisation process and need to adopt best practices (e.g. perpendicular crossings, avoid sensitive habitat, accommodate floods).	▪ HGDM & LMs ▪ Developers/ Project Proponents
Interventions	
▪ Promote water conservation and demand management through regulation where appropriate. Rainwater harvesting, grey water recycling, re-use of treated effluent from wastewater treatment works (WWTW) and similar technical enhancements should be encouraged. ▪ Dedicated catchment management for important water yield areas (notably the NFEPA and priority sub-catchments). ▪ Promote the restoration of the NFEPA to deliver basic ecosystem functions to surrounding environments. ▪ Support of the implementation of the Working for Water, Adopt a River Project and the	▪ DWS ▪ HGDM & LMs

Description	Responsible Parties
National River Health Programme as well as other local and provincial conservation authority programmes related to water protection, conservation and sustainable use. ▪ Ensure that water is fit for use as imposed by the water quality standards. ▪ Provision of adequate sanitation, storm water and waste management services. ▪ Provision of basic services to informal settlements. ▪ Rehabilitation of riparian areas affected by anthropogenic activities. ▪ Develop drought management plan. ▪ Consider the potential impacts of Climate Change on long term spatial structure.	
Managing & Conserving Biodiversity	
▪ Maintaining the Ecological Reserve (Ecological Water Requirements) and watercourse classification.	DWS
▪ Wetland areas, streams and rivers to be protected, rehabilitated and managed to maintain ecological functioning. ▪ Comply with NFEPA Management Guidelines. ▪ Develop invasive species control plan in accordance with the NEM:BA Alien and Invasive Species Regulations (GN No. R. 598, 1 August 2014), with particular focus on stressed catchments. ▪ Strict protection of sensitive alluvial vegetation with significant ecosystem status.	▪ DWS ▪ EDTEA ▪ EKZNW
▪ Compile an inventory and guidelines for the protection of all wetland areas in the District. ▪ Critical wetlands need to be delineated according to DWS guidelines. ▪ Quantify the economic value of freshwater ecosystem goods and services.	▪ DWS ▪ HGDM & LMs
▪ Prevent the illegal removal of protected aquatic species. ▪ Remove and control aquatic alien and invasive species.	▪ EKZNW
Stakeholder Engagement	
▪ Encourage HGDM's participation in relevant water use fora.	▪ DWS ▪ HGDM & LMs
Mitigation Measures	
▪ Future developments should be excluded from regulated areas of watercourses and designed to minimize potential impacts to water resources through appropriate mitigation measures (e.g. establishment of suitable buffer zones). ▪ Storm water management should be integrated into existing and future development designs in order to prevent further flood risks and impacts to aquatic resources. ▪ Refer to the broad development / management controls contained within EKZNW's Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018).	Developers/ Project Proponents
Decision-making	
▪ Mining and prospecting within the alluvial flood plains (outside of the regulated area) should not be permitted without relevant approvals and detailed after-use and rehabilitation plans.	▪ DWS ▪ DMR
Monitoring	
▪ National Aquatic Ecosystem Health Monitoring Programme to be extended to cover all major rivers in District. ▪ Database to be developed of chemical, physical and bacteriological water quality data for DWS monitoring points in the municipality.	DWS
Compliance and Enforcement	
▪ Source directed controls (including compliance with licence conditions) for WWTW, industries and other sources of impacts to resource quality (i.e. flow, water quality, habitat and aquatic biota).	DWS

Description	Responsible Parties
▪ Water abstraction rights need to be formalised in order to quantify the demand and to ensure that the overall Ecological Reserve can be maintained.	
Specialist Studies	
▪ Specialist disciplines required (where relevant) – Aquatic Ecological Assessments (and associated sub-disciplines), Hydrology, Geomorphology (*note: list not exhaustive*).	Developers/ Project Proponents

2.5.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
Comply with the following: ▪ *EKZNW's CBAs and HGDM's BSP (2014), including compliance with Land Use Management Objectives for the Terrestrial and Aquatic Conservation Categories, as well as Land Use Management Practices, Controls and Guidelines; and* ▪ *EKZNW's Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018).*	

2.5.7 Performance Management

- Current coverage of CBAs and ESAs.
- Aquatic ecosystem health and condition.
- Zero loss of wetlands.
- No encroachment into regulated area of a watercourse.
- Health of rivers as determined by the National Aquatic Ecosystem Health Monitoring Programme.
- Mean annual precipitation and evaporation.
- Improvement in the Blue and Green Drop Status of all municipalities within the District.
- Creation of awareness in terms of the water shortage predictions for the District.
- Reducing the total water loss occurring in the District to less than 10%.
- *See performance management indicators under the Terrestrial Biodiversity EMZ (as relevant).*

2.6 Agriculture EMZ

2.6.1 Mapped EMZ

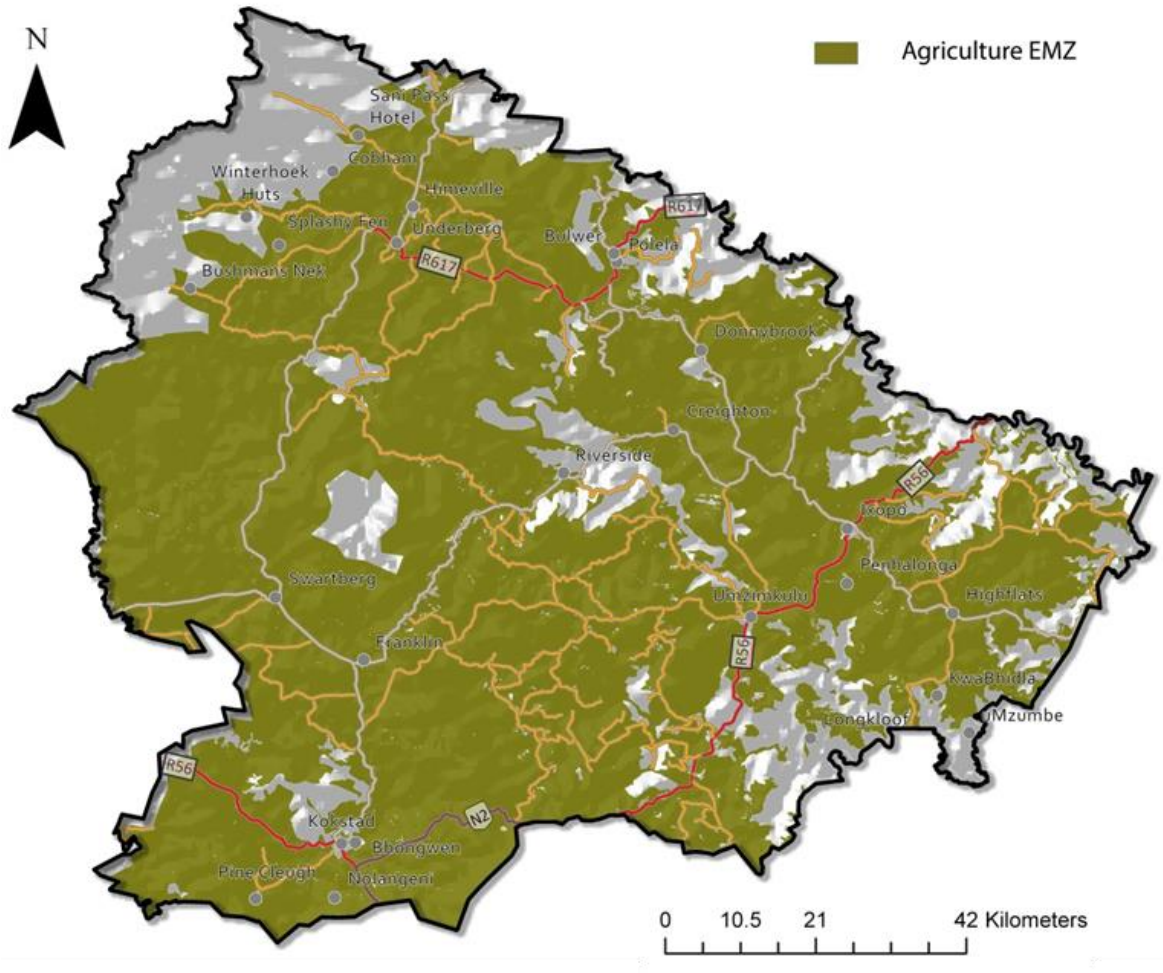


Figure 9: **Agriculture EMZ**

2.6.2 Expression of Desired State

- Sustainably managed and protected high agricultural potential land within HGDM.

2.6.3 Environmental Features considered

- The zone includes areas that are associated with high agricultural potential as well as those land parcels where Primary Agricultural Land Use is encountered.
- Specific features include:
  - KZN Agricultural Land Categories –
    - Category A: Irreplaceable
    - Category B: Threatened
    - Category C: Primary Agricultural Land Use.

2.6.4 Governance Framework

Laws & Policies	Strategies	Plans & Programmes	Authorities
▪ NEMA ▪ CARA and lists of declared alien invasive plants and weeds to be eradicated or controlled ▪ NWA ▪ Spatial Planning and Land Use Management Act (Act 16 of 2013) (SPLUMA) ▪ Agricultural Resource Conservation Regulations (R1048 of 1948) ▪ Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (36 of 1947) ▪ Agricultural Pests Act (36 of 1983) ▪ Foodstuffs, Cosmetics and Disinfectants Act (54 of 1972) ▪ Sustainable Use of Agricultural Resources Bill ▪ The Subdivision of Agricultural Land Act (Act 70 of 1970) ▪ White Paper on Agriculture ▪ Land Redistribution Policy for Agricultural Development ▪ National Climate Change Response White Paper 2011 ▪ National Spatial Development Perspective (NSDP) ▪ National Strategy for Sustainable Development and Action Plan (NSSD1) ▪ KwaZulu-Natal Policy for Agricultural Land Potential, Development Rights and Application Processes, 2015 ▪ Agricultural Landholding Policy Framework	▪ Strategic Plan for South African Agriculture, 2013 ▪ Comprehensive Rural Development Strategy, 2009 ▪ Integrated Food Security Strategy, 2002 ▪ KZN Strategy for Agrarian Transformation ▪ DAFF Agro-processing Strategy, 2012 ▪ Strategy for the Development of Small and Medium Agro-Processing Enterprises in the Republic of South Africa (2014 – 2019)	▪ Agricultural Policy Action Plan (2015-2019) ▪ Strategic Plan for DAFF (2013/14 -2017/18) ▪ Agriculture, Forestry and Fisheries: Integrated Growth and Development Plan, 2012 ▪ Comprehensive Rural Development Programme ▪ Comprehensive Agriculture Support Programme ▪ Land Care Programme, 1999 ▪ Integrated and Sustainable Rural Development Programme ▪ KZN Agricultural Land Categories Spatial Decision Support Tool ▪ Agricultural Sector Plan ▪ Working for Water	▪ Department of Agriculture ▪ DARD ▪ DAFF ▪ EDTEA ▪ DWS ▪ Department of Rural Development and Land Reform (DRDLR) ▪ HGDM & LMs

Implementation Mechanisms	▪ Authorisations in terms of prevailing legal framework. ▪ Soil conservation measures. ▪ Land capability and suitability assessment. ▪ Pollution prevention and remediation measures. ▪ Development controls for Agricultural Land Potential Categories A – E and areas with Combined Agro-biodiversity Designation.

2.6.5 Management Guidelines for achieving the Desired State

Description	Responsible Parties
Planning Priorities	
▪ High potential, unique agricultural land and land under irrigation with approved water rights should be protected and set aside for agricultural purposes. ▪ In the interests of biodiversity and water production, timber production should not be permitted on slopes in excess of 30%, particularly in the sensitive upper catchments located in the District on state, traditional and commercially owned land.	▪ DARD ▪ EDTEA ▪ HGDM & LMs

Description	Responsible Parties
▪ Land identified for commercial timber production to be defined by the DWS permitting system, which is designed to protect the water production potential of catchments.	▪ DARD ▪ DWS
Development Guidelines	
▪ Adhere to KZN Agricultural Land Categories Spatial Decision Support tool. ▪ Apply the principles of the KZN Policy for Agricultural Land Potential, Development Rights and Application Processes (2015) when considering any development application on agriculturally designated land.	▪ DARD ▪ EDTEA ▪ HGDM & LMs
▪ Comply with legal requirements for change of land use from agriculture to any other land use. ▪ Manage impacts from polluted (e.g. saline) return flows from agricultural activities. ▪ Best practices to be employed, including contour farming, organic farming, use of fertilizer and pesticides, management of return flows, water conservation, soil preservation, stocking densities. ▪ Apply water management measures in irrigation agriculture.	▪ Developers/ Project Proponents
Interventions	
▪ Harness agricultural potential in the District. ▪ Support local agro-processing and distribution. ▪ Invest in agricultural education and land care programmes. ▪ Build capacity surrounding farming methods to local subsistence farming. ▪ Maintain adequate stocking rates and veld management. Prevent overgrazing to curb erosion and soil degradation. ▪ Diversification of agricultural practices to prevent monoculture crop production and establish good farming practices. ▪ Support small producers and emerging farmers. Opportunities for mentorship should be utilized to enable emerging farmers to utilize their land optimally and sustainable. ▪ Genetically superior seeds, cultivars or breeds should be made available to farmers to maximize bio-productivity of agricultural land. ▪ Irrigation should take cognizance of the quantity of water which is sustainably available, and should incorporate mechanisms to combat soil salinisation. Water inefficient types of irrigation should be avoided. ▪ Climate change adaptation and mitigation. ▪ Action plan required to control desertification.	▪ DARD ▪ EDTEA ▪ DAFF ▪ HGDM & LMs
▪ Priority areas (e.g. regulated areas of watercourses and steep slopes) affected by historical farming activities and that are no longer under cultivation need to be rehabilitated.	▪ DARD ▪ EDTEA ▪ DWS ▪ DAFF ▪ EKZNW ▪ HGDM & LMs
Mitigation Measures	
▪ Refer to the broad development / management controls contained within EKZNW's Guideline for the incorporation of Biodiversity Areas and Features into the Municipal Land Use Schemes (2018).	Developers/ Project Proponents
Managing & Conserving Agro-biodiversity	
▪ Sustainable and environmental friendly irrigation practices. ▪ Sustainable grazing practises. ▪ Conserve agricultural genetic resources. ▪ Responsible management of diseases and pests. ▪ Enforcement of livestock carrying capacity.	▪ DARD ▪ EDTEA ▪ DWS ▪ DAFF ▪ EKZNW

Description	Responsible Parties
▪ Integrated livestock and wildlife management. ▪ Control bush encroachment. ▪ Alien invasive species should be controlled under CARA. Involve rural and affected communities.	▪ HGDM & LMs
Decision-making	
▪ Where potential competition exists between areas of high agricultural potential and other favourable land use, the relevant specialist studies will need to be conducted to allow for informed and balanced decision-making.	Mandated Authorities
Specialist Studies	
▪ The relevant specialist studies will need to be conducted to allow for informed and balanced decision-making. Specialist disciplines required (where relevant) – Agriculture and associated sub-disciplines. Note requirements in terms of KZN DARD's Natural Resources and/or Agricultural Survey Specifications.	Developers/ Project Proponents

2.6.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Comply with KZN DARD's development controls for Agricultural Land Potential Categories. ▪ Activities that support primary agricultural production (including associated infrastructure). ▪ Agricultural supplies and services, including agri-industrial facilities. ▪ Private residential use associated with farming activities. ▪ Farm worker villages. ▪ Tourism (regulated and agriculture-focused).	▪ Comply with KZN DARD's development controls for Agricultural Land Potential Categories. ▪ Any activity which poses a threat to land with high agricultural potential. ▪ Poor farming practices, especially related to water conservation, soil degradation and water pollution. ▪ Mining. ▪ Heavy industries. ▪ Dense settlements.

2.6.7 Performance Management

▪ Current coverage of high potential agricultural land. ▪ Sustainable farming units maintained. ▪ Historical and unused agricultural areas in environmentally sensitive areas rehabilitated.

2.7 Heritage EMZ

2.7.1 Mapped EMZ

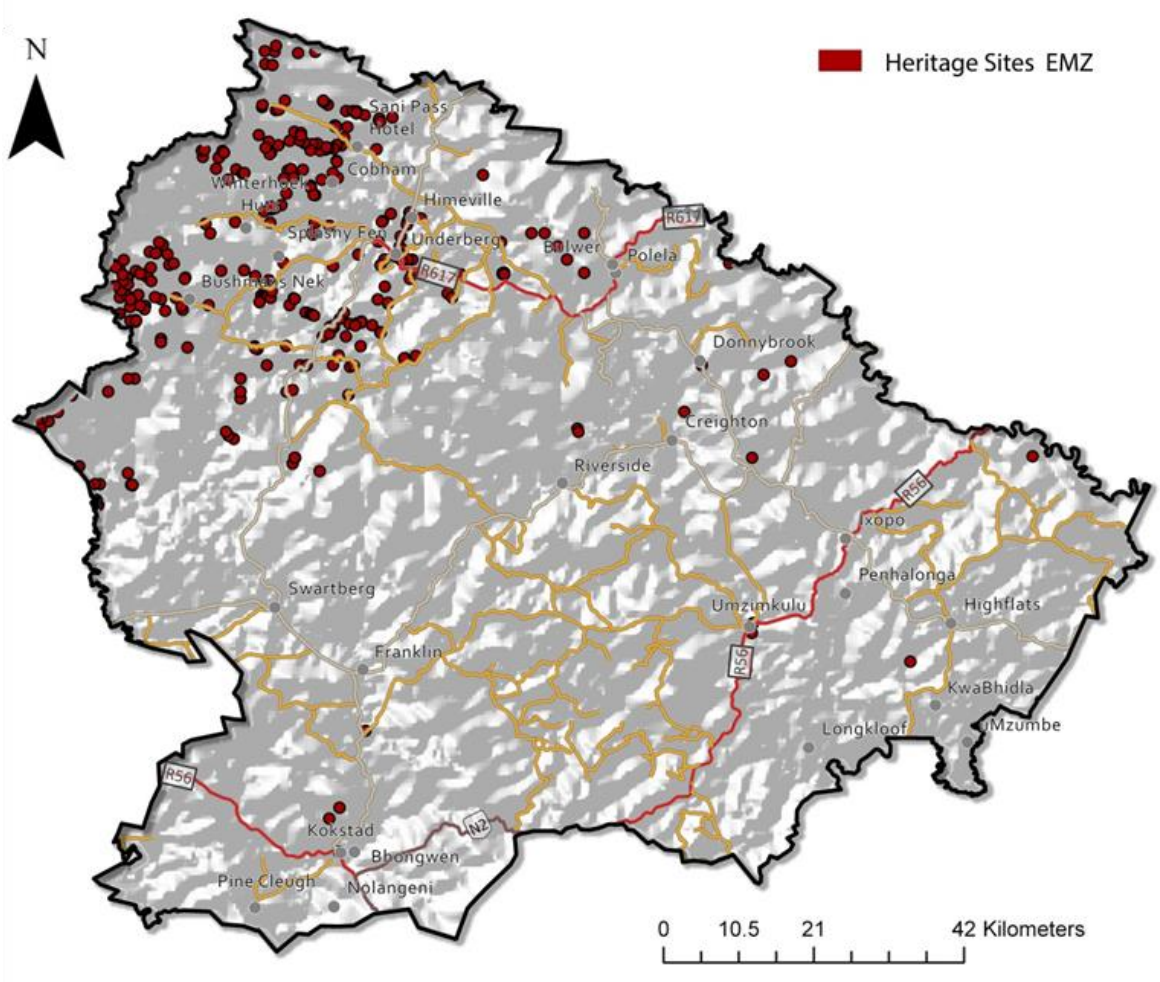


Figure 10: **Heritage EMZ**

2.7.2 Expression of Desired State

- Sustainably managed and protected heritage and cultural resources within HGDM.

2.7.3 Environmental Features considered

- All sites of significance from a heritage perspective are included in this zone. Note that no buffer area has been allocated to the heritage sites.
- Heritage sites:
  - Early Stone Age
  - Middle Stone Age
  - Late Stone Age
  - Rock Art
  - Intermediate Stone Age
  - Early Iron Age
  - Late Iron Age
  - Intermediate Iron Age
  - Historical Sites

2.7.4 Governance Framework

Laws & Policies	Plans & Programmes	Authorities
▪ World Heritage Convention Act (Act 49 of 1999) ▪ National Heritage Resources Act (Act 25 of 1999) (NHRA) ▪ KZN Heritage Act (Act No. 04 of 2008) ▪ National Heritage Council Act (Act No. 11 of 1999) ▪ National Monuments Act (Act No. 28 of 1969) ▪ Amafa Policy Guidelines for the access of rock art	▪ Management Plans (generic and site-specific)	▪ South African Heritage Resources Agency (SAHRA) ▪ Amafa aKwaZulu-Natali ▪ Department of Arts and Culture ▪ HGDM & LMs

Implementation Mechanisms	▪ Conservation, protection and administration of both the physical and the living or tangible heritage resources. ▪ Issuing of permits for protection of heritage resources, graves, archaeological and paleontological sites. ▪ Issuing of permits in terms of national heritage site status before any changes or development is contemplated. ▪ Conduct Heritage Impact Assessments in terms of Section 38 of the National Heritage Resources Act (Act No. 25 of 1999). ▪ South African Heritage Resources Information System (SAHRIS). ▪ The paleontological sensitivity map highlights the fossil sensitivity in KZN. This can be utilised for screening proposed developments

2.7.5 Management Guidelines for achieving the Desired State

Description	Responsible Parties
Development Guidelines	
▪ Preservation of HGDM's heritage resources. ▪ Sustainable utilization of heritage resources as tourism attractions. ▪ Sense of place to be maintained. ▪ Develop heritage layers for individual municipalities on request through assistance from the Amafa Database and GIS Unit. Additional information to be sourced from SAHRIS and Heritage Resources Schedule Section 37(1) of the KZN Heritage Act (Act No. 04 of 2008).	▪ SAHRA ▪ Amafa ▪ HGDM & LMs
▪ Execution and approval of Heritage Impact Assessments for activities listed in Section 38 of the NHRA. ▪ Incorporate heritage considerations into development proposals.	Developers/ Project Proponents
Interventions	
▪ Clear institutional responsibilities at a municipal level for heritage preservation. ▪ Local/District Heritage Authorities are required to take on the responsibility of managing heritage resources in their respective areas and to ensure the protection of the resources in their zone of influence through formation of heritage forums that will help in identification of heritage resources and creation of heritage inventories in each area for integration of heritage layer into urban and rural planning. ▪ Audit all existing facilities, in terms of status, management and potential. Detailed inventories of Heritage Resources should be compiled and mapped. ▪ Identified heritage sites should be graded in terms of significance and a database of inventory should be compiled. ▪ Develop a Heritage Management Plan for the HGDM to guide and assist officials with dealing with heritage sites to ensure the protection and conservation of these sites. ▪ Amafa and the District Heritage Forum should compile integrated site management	▪ SAHRA ▪ Amafa ▪ HGDM & LMs

Description	Responsible Parties
plans for all Provincial and Heritage Landmarks, places of conflict and other significant heritage resources. ▪ Municipalities should initiate a ward based community interaction programme whereby further sites of cultural and heritage importance which could be classified as Grade 3 heritage resource within the Municipality area can be identified. Programme to be extended to areas under Traditional Authorities. ▪ Existing resources such as oral histories and Heritage Impact Assessments submitted as part of the EIA process should be uploaded to SAHRIS. ▪ Buildings and structures should be assessed in terms of their various values (not just historical or architectural), including their contribution to streetscapes and townscapes. All buildings with heritage significance are protected by heritage legislation, not only those older than sixty years. However, such significance must be demonstrated to be in the public interest. Amafa and the District Heritage Forum should compile a management plan for any heritage zones identified in future. ▪ An extensive public participation programme should be undertaken to identify sites of cultural and historical significance, particularly places of significance of historically disadvantaged groups, living heritage and cultural landscapes. ▪ Optimise opportunities associated with tourism and job creation linked to the conservation of cultural and heritage resources.	
Managing & Conserving Heritage	
▪ Strict regulation of inappropriate development within footprint / buffer zone of National, Provincial and Local Heritage Sites. Buffer = 50 m in rural areas and 10 – 20 m in urban areas, or as established by an appropriate specialist and agreed to by Amafa. ▪ Strict regulation of any alterations, additions or new structures that are contradictory to protected buildings or the general character of area.	▪ SAHRA ▪ Amafa ▪ HGDM & LMs
Stakeholder Engagement	
▪ Relevant officials at HGDM and LMs to hold regular meetings with Amafa to discuss challenges and get support in managing heritage sites. ▪ Amafa and HGDM should create a functioning District Heritage Forum, as required in terms of Section 29 of the KwaZulu-Natal Heritage Act (Act No. 4 of 2008).	▪ SAHRA ▪ Amafa ▪ HGDM & LMs
Specialist Studies	
▪ Specialist disciplines required (where relevant) – Heritage, Archaeological and Palaeontological Studies, as well as associated sub-disciplines.	Developers/ Project Proponents

2.7.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Conservation. ▪ Tourism (regulated; low impact). ▪ Ecological Corridors. ▪ Open space (regulated; low impact; excluding any permanent structures).	▪ Any activity that poses a threat to cultural and heritage resources. ▪ Illegal activities (i.e. not authorised).
▪ Note that certain heritage assets (e.g. graves) have a small footprint whereas other sites (e.g. physical structures) may encompass a larger area. The appropriateness of activities thus need to be established by a suitable specialist and based on the particular nature of the heritage asset in question, the risks posed by the proposed activity, and following consultation with Amafa aKwaZulu-Natali.	

2.7.7 Performance Management

- No illegal changes to or loss of heritage assets.
- Inventory of heritage resource.
- Functional District Heritage Forum.

2.8 Urban EMZ

2.8.1 Mapped EMZ

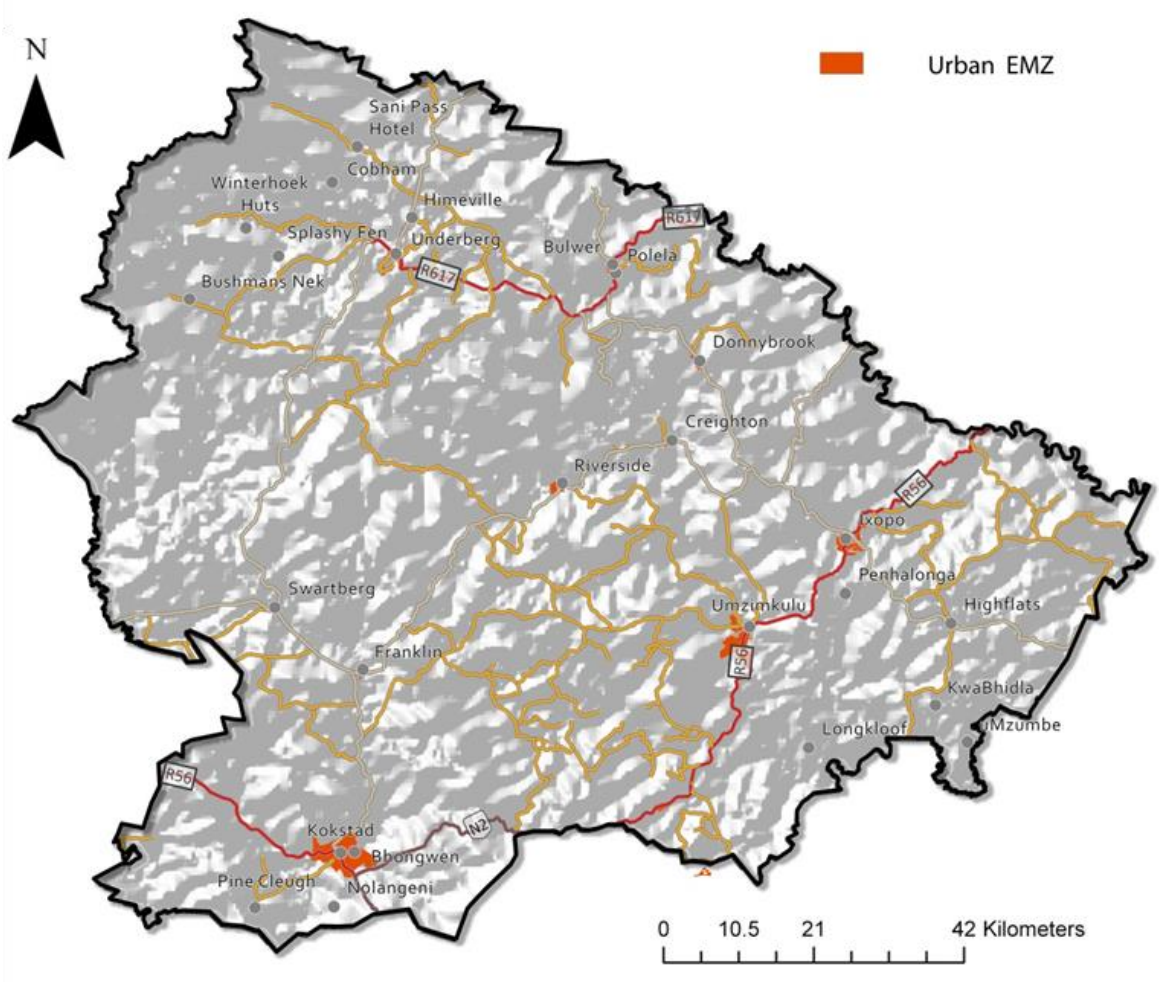


Figure 11: **Urban EMZ**

2.8.2 Expression of Desired State

- Sustainably managed urban areas within HGDM.

2.8.3 Environmental Features considered

- This zone includes urban areas identified as part of the SDF.
- Urban areas contain physical development and sprawl, as well as re-direct growth towards a more integrated, compact and efficient urban form.
- Primary Nodes: Kokstad, Umzimkulu, Ixopo & Underberg/Himeville.
- Secondary Nodes: Bulwer, Franklin, Creighton, Donnybrooke & Highflats.
- Tertiary Nodes: Swartberg, Riverside, Rietvlei & Ibisi.

2.8.4 Governance Framework

Laws & Policies	Strategies	Plans & Programmes	Authorities
▪ NEMA ▪ SPLUMA ▪ Municipal Systems Act (Act No. 32 of 2000) (MSA) ▪ NWA ▪ NEM:WA ▪ National Housing Act (Act No. 107 of 1997) ▪ National Waste Classification and Management Regulations 2013 ▪ National Norms and Standards for the Assessment of Waste for Landfill Disposal ▪ National Norms and Standards for Disposal of Waste to Landfill 2013 ▪ NEM:AQA ▪ National Framework for Air Quality Management 2007 ▪ National Ambient Air Quality Standards ▪ Listed Activities and Associated Minimum Emission Standards 2013 ▪ National Climate Change Response White Paper 2011 ▪ Climate Change Policy ▪ Municipal by-laws	▪ National Framework for Sustainable Development, 2008 ▪ National Waste Management Strategy, 2011 ▪ Air Emission Inventory for KZN ▪ Growth, Economic and Redistribution Strategy ▪ Urban and Rural Development Framework ▪ Breaking New Ground - A comprehensive plan for the development of sustainable human settlements, 2005 ▪ DAFF Urban Greening Strategy ▪ Air Quality Framework	▪ IDPs ▪ SDF ▪ Urban Regeneration Programmes ▪ Provincial Integrated Waste Management Plan ▪ HGDM Integrated Waste Management Plan ▪ HGDM Air Quality Management Plan ▪ Housing Sector Plans	▪ HGDM ▪ Local Municipalities and relevant units ▪ EDTEA ▪ DWS ▪ KZN Department of Human Settlements

Implementation Mechanisms	▪ Pollution prevention and remediation measures. ▪ LUMS. ▪ Authorisations in terms of prevailing legal framework, such as a Waste Management Licence (WML) in terms of NEM:WA or an Atmospheric Emission Licence (AEL) in terms of NEM:AQA. ▪ Municipal Open Space Systems.

2.8.5 Management Guidelines for achieving the Desired State

Description	Responsible Parties
Planning Priorities	
▪ The core objective of this zone is urbanisation and densification. ▪ Development must be aligned to the municipal LUMS. ▪ Avoid disparate or undesirable develoment outside urban edge, which does not adhere to land use planning frameworks (SDF, Land Use Scheme, etc.). ▪ Focus future settlement and economic development opportunities in Urban EMZ. ▪ Improve connectivity and mobility through an efficient movement network. ▪ Invest in places with high tourism value. ▪ Manage urban sprawl. ▪ Optimal densities for development should be identified for areas within the urban edge. ▪ Eradicate informal settlements.	▪ HGDM & LMs
Development Guidelines	
▪ Encourage infill development (i.e. development of land within built-up areas).	▪ HGDM & LMs

Description	Responsible Parties
▪ Ensure suitable storm water management measures are implemented, based on the nature of the development. ▪ Avoid encroachment into buffer zones of watercourses. ▪ Employ green building measures. ▪ Promote water conservation measures, stormwater harvesting and the use of clean energy.	
Interventions	
▪ Develop an Air Quality Management Plan for the District. ▪ Detailed emissions inventory to be developed for the District. ▪ Action plan for promoting renewable energy. ▪ Promotion of energy efficient heating and lighting. ▪ Awareness campaigns regarding dangers of local communities burning waste as a means of disposal. ▪ Provision of adequate waste management services. ▪ Establishment of municipal by-laws governing the burning of waste. ▪ Promote urban renewal and regeneration. ▪ Address service backlogs and provide adequate level of services - waste, water, electricity, sanitation and storm water. ▪ Climate change management. Development patterns and spatial planning with respect must take cognizance of climate change and the impacts it will have. The municipality should develop a Climate Change Response Strategy, which would identify the risks faced by the municipality and develop mitigation and adaptation measures to adjust the changing environment. ▪ Control illegal dumping and erradicate dumping hotspots.	▪ HGDM & LMs
▪ A clearly defined District wide Open Space System is required, with connectivity to CBAs and ESAs (where possible). Promote and safeguard urban open space system (including parks and recreational facilities). ▪ Establish buffer zones for air (e.g. WWTWs, landfills) and noise pollution, for restriction of undesirable activities and land uses.	▪ HGDM & LMs ▪ EDTEA
▪ Promote urban greening.	▪ HGDM & LMs ▪ DAFF
Compliance and Enforcement	
▪ Waste disposal sites and WWTWs, as well as other regulated facilities, to be operated in accordance with legal requirements.	▪ DEA ▪ EDTEA ▪ DWS

2.8.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Development complementary to the LUMS. ▪ Infill development. ▪ Commensurate infrastructure and utility services.	▪ Development that clashes with the LUMS. ▪ Mining. ▪ Activities that threaten cultural and historical resources. ▪ Activities that encroach upon open space corridors. ▪ Illegal activities (i.e. not authorised).

2.8.7 Performance Management

- Avoidance of disparate development.
- Upgrading of un-serviced and informal areas.
- Prevent exceedance of pollution standards.
- Prevent loss of municipal open space.
- Control rate of urban regeneration.
- Compliance of waste disposal sites and WWTWs, as well as other regulated facilities, with legal requirements.

2.9 Traditional Authorities EMZ

2.9.1 Mapped EMZ

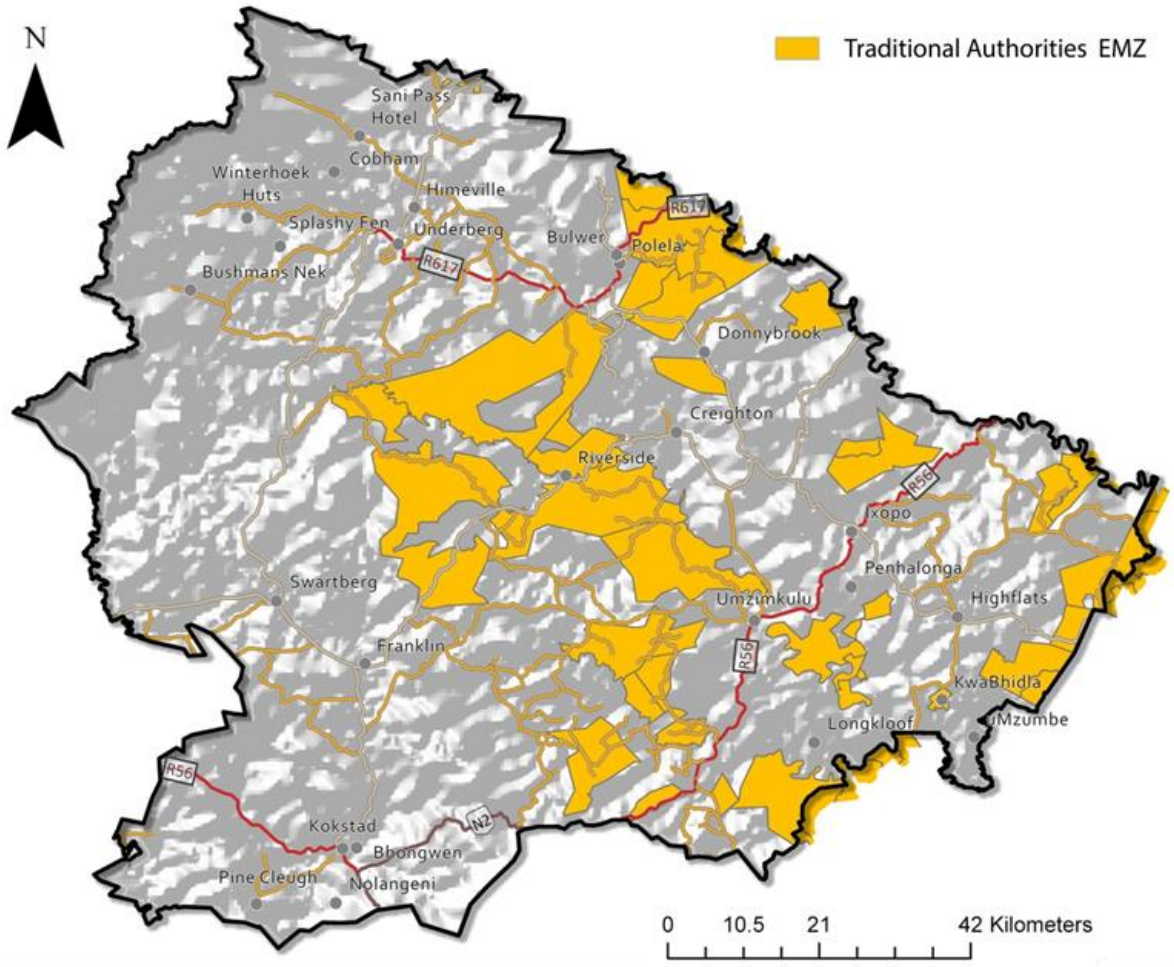


Figure 12: **Traditional Authorities EMZ**

2.9.2 Expression of Desired State

- Sustainably managed areas that fall under Traditional Authorities within HGDM.

2.9.3 Environmental Features considered

- Includes all the areas under Traditional Authorities within the HGDM. It is noted that the Greater Kokstad LM does not have any traditional areas within its jurisdiction.

2.9.4 Governance Framework

Laws & Policies	Plans & Programmes	Authorities
▪ NEMA ▪ SPLUMA ▪ MSA ▪ NWA ▪ NEM:WA ▪ MPRDA ▪ National Housing Act (Act No. 107 of 1997) ▪ Traditional Leadership and Governance Framework Amendment Act (Act No. 23 of 2009) ▪ Communal Land Rights Act (Act No. 11 of 2004) ▪ KwaZulu Ingonyama Trust Act (Act No. 3 of 1994) ▪ State Land Lease and Disposal Policy 2013 ▪ Municipal by-laws	▪ IDPs ▪ SDF ▪ Local Area Plans (LAPs)	▪ Traditional Authorities ▪ COGTA ▪ DRDLR ▪ DEA ▪ EDTEA ▪ DMR ▪ DWS ▪ KZN Department of Human Settlements ▪ HGDM & LMs

Implementation Mechanisms	▪ LUMS. ▪ Authorisations in terms of prevailing legal framework (e.g. development applications under SPLUMA). ▪ Lease agreements by the Ingonyama Trust Board (ITB), which makes provision for developers to obtain planning and environmental consents. ▪ Involvement of Traditional Authorities during the development of the SDF.

2.9.5 Management Guidelines for achieving the Desired State

Description	Responsible Parties
Planning Priorities	
▪ Coordinated planning between the relevant stakeholders (including municipalities, traditional council and COGTA) for land under Traditional Authorities in HGDM. ▪ Development must be aligned with the LUMS.	▪ HGDM & LMs ▪ Traditional Authorities ▪ COGTA
Development & Land Allocation Guidelines	
▪ Undertake environmental screening of proposed developments to determine the need to seek environmental approvals, requirements in terms of the EMF and the potential occurrence of sensitive environmental features.	▪ HGDM & LMs ▪ Developers/ Project Proponents
Interventions	
▪ Develop land allocation guidelines for Traditional Authorities, which includes environmental factors to be considered and adhered to. ▪ Create capacity amongst Traditional Authorities on spatial planning, environmental management, land management and rural governance. ▪ Control illegal dumping and erradicate dumping hotspots.	▪ HGDM & LMs ▪ Traditional Authorities ▪ COGTA
Decision-making	
▪ Collaborative decision-making by the relevant stakeholders (including municipalities, traditional council and COGTA) during land allocations. ▪ Determine the requirements of all authorities with mandate over the receiving environment, including(amongst others) – - EDTEA; - EKZNW;	▪ HGDM & LMs ▪ Traditional Authorities ▪ COGTA ▪ Mandated Authorities

Description	Responsible Parties
- DWS; - DAFF; and - Amafa aKwaZulu-Natali.	
Mitigation Measures	
▪ Ensure adequate erosion protection for steep areas. ▪ Prevent disturbance to graves and other heritage resources. Comply with the relevant legal requirements. ▪ Attempt to keep development footprints to existing disturbed areas, as far as possible. ▪ Ensure proper rehabilitation of areas disturbed as part of the development. ▪ Identify flora and fauna species of conservation concern, as well as medicinal plants, in development footprint. Ensure the protection of all these species. ▪ Provide adequate sanitation and waste management facilities. ▪ Avoid encroachment into buffer zones of watercourses. ▪ Promote water conservation measures and the use of clean energy.	Developers/ Project Proponents

2.9.6 Compatible & Incompatible Activities

Compatible Activities	Incompatible Activities
▪ Development complementary to the LUMS.	▪ Development that clashes with the LUMS. ▪ Illegal activities (i.e. not authorised).

2.9.7 Performance Management

- Avoidance of disparate development.
- Alignment of traditional land tenure system and environmental planning processes.
- Events held to create environmental awareness amongst the Traditional Authorities and ITB.
- Condition within short-term lease, placing an obligation on the applicant to consider the EMF.
- Demonstration of how the EMF was considered in project documentation / application / environmental assessment reports.

3 IMPLEMENTATION STRATEGY

3.1 Introduction

This section presents the approach and requirements for implementing the HGDM EMF.

3.2 Cyclical Implementation Approach

A pragmatic approach to the implementation of the HGDM EMF is recommended, which is based on the commonly adopted management system of a Plan-Do-Check-Act cycle. This method acknowledges that it requires dedicated commitment to continual improvement to eventually achieve the desired management outcomes. The main steps in the cycle are presented in the table to follow.

Table 2: HGDM EMF Implementation Cycle

1.	**Plan**	❖ Identify the EMF triggers (✓). ❖ Define the scope of the EMF (✓). ❖ Determine information requirements and key environmental features and attributes to be investigated (✓). ❖ Develop and implement a public participation strategy (✓). ❖ Determine context for environmental management, based on status quo, opportunities, constraints, issues, and desired state (✓). ❖ Delineate management zones and assign management objectives and requirements (✓). ❖ Develop implementation strategy (✓). ❖ Seek formal adoption. ❖ Establish institutional arrangements.
2.	**Do**	❖ EMF training of stakeholders. Depending on the audience, training mechanisms can include manuals, tutored sessions, brochures, etc. ❖ Recruitment of EMF in appraisal of proposals / applications for activities or developments. ❖ Implementation of EMF management measures, including provisions and arrangements for accomplishing management objectives and desired state.
3.	**Check**	❖ Monitoring of EMF performance and overall implementation. ❖ Monitoring to include approriate environmental performance indicators
4.	**Act**	Taking stock of the lessons learnt during the implementation of the EMF and the outcome of the review stage, management actions need to be taken to ensure that the EMF is revised as needed. New information must also be incorporated into the EMF, and the GIS must also be updated.

3.3 Linkages with other Planning and Policy Instruments

3.3.1 SDF and IDP

The EMF attempts to be aligned with existing planning tools, in particular the municipal SDF and IDP. Likewise, the EMF will feed environmental information into these planning tools. The environmental priorities emphasised in the EMF should serve as a thrust in formulating new plans and guide the decisions on existing planning arrangements.

On a spatial scale, the EMZs should form the environmental layer of the SDF for the HGDM. Any conflicts that exist between the EMF and SDF would need to be identified and ironed-out in a balanced manner, with due consideration and integration of sustainability principles.

3.3.2 BSP

The HGDM's BSP (2014) is intended to contribute to a range of multi-sectoral planning and assessment processes, such as EMFs, SDFs, Strategic Environmental Assessments (SEAs), EIAs and water use authorisations. It further provides support to land use decision-making that may impact on biodiversity e.g. rezoning, agricultural and mining authorisations.

Where relevant, the provisions of the BSP were included in the SEMP, which included the CBA and ESA Maps (amongst others) as well as management requirements for these sensitive areas.

3.3.3 IEM Tools

The purpose of Chapter 5 of NEMA is to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities. IEM has evolved to be an underlying philosophy and set of principles, supported by a range of environmental assessment and management tools that are aimed at promoting sustainability and providing a framework for environmental decision-making.

According to the Department of Environmental Affairs and Tourism (DEAT) (2004), "*IEM provides a holistic framework that can be embraced by all sectors of society for the assessment and management of environmental impacts and aspects associated with an activity for each stage of the activity life cycle, taking into consideration a broad definition of environment and with the overall aim of promoting sustainable development*".

Commonly used tools in support of IEM are listed in **Table 3**. Note that this list is not exhaustive. Further information pertaining to IEM is available in the documents that form part of the DEAT IEM Information Series. **Figure 13** provides an indicative mapping of IEM tools in terms of the hierarchy of activity and stage in the activity life cycle at which they could be applied. The choice of tools is informed by the needs expressed by stakeholders and

decision-makers, the hierarchy of activity being undertaken (e.g. project, plan, programme or policy) and the stage of the activity life cycle. At the project level, this refers to the cycle of planning, design, establishment, operations and closure. At the policy level, this refers to the cycle of issue identification, options analysis, evaluation and monitoring (DEA, 2004).

Table 3: Examples of IEM Tools (DEAT, 2004)

IEM Tool	Description
Screening	Screening determines whether or not a development proposal requires environmental assessment, and if so, what type and level of assessment is appropriate.
EIA	Aims to predict both positive and negative environmental impacts of a proposed project and find ways to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers. This tool is designed to be project specific and site-specific, and not to be focused on strategic issues.
Stakeholder Engagement	The process of engagement between stakeholders during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement can therefore be described by a spectrum of increasing levels of engagement in the decision-making process.
Life Cycle Assessment (LCA)	A tool for the systematic analysis and evaluation of the environmental aspects of a product or service through all stages of its life cycle. LCA considers all inputs and all outputs. It could be done for a specific company/organisation or for a wider industry. LCA approaches are generally guided by standards.
Environmental Auditing	Environmental auditing is a process whereby an organisation's environmental performance is tested against numerous requirements, for example, clearly defined policies, legislated requirements and key performance indicators.
Environmental Accounting	A tool used to identify, quantify and allocate the direct and indirect environmental costs and benefits of ongoing operations.
Technology Assessment	Technology Assessment systematically examines the effects on society that may occur when a technology is introduced, extended or modified. It emphasizes those consequences that are unintended, indirect or delayed.
Cumulative Effects Assessment (CEA)	Cumulative effects assessment requires a systematic procedure for identifying and evaluating the significance of effects from multiple actions representing potential causes of impacts. CEA includes an analysis of the causes, pathways (linkages) and consequences of these impacts for receptors; and the recognition that such impacts may be additive, antagonistic or synergistic.
Cost-Benefit Analysis	Cost-Benefit Analysis is a tool used by decision makers either to rank projects or to accept/reject them. The ranking or decision is based on expected economic costs and benefits and the rule is simple – a project should be undertaken if lifetime expected benefits exceeds all expected costs. The art of the analysis process comes in the measurement of these impacts, their adjustment for market failure, and for the effects of time, income distribution, incomplete information and potentially irreversible consequences.
Environmental Economics	Environmental economics helps identify the costs and benefits (negative and positive environmental impacts) not taken into account by economic agents (i.e. external costs). In addition there are those cost and benefits the producers and consumers do take account of (i.e. private costs).
Risk Assessment	Risk assessment includes as a minimum the definition of the probability and severity of an undesired effect, expressed in the context of associated uncertainties. The risk assessment procedure can be integrated with the generic EIA procedure, as well as be applied at a policy level.
State of the Environment Reporting	State of the Environment (SOE) reporting is used to highlight changes in the environment, the causes of those changes, and identify appropriate responses. The reports provide a link between information that is often technical and the general public. In South Africa, the framework most often used for organising the SOE

IEM Tool	Description
	information is called the Driving Force - Pressure - State - Impact - Response (DPSIR) framework. This uses indicators to describe changes.
Indicators	Indicators evaluate and monitor the amount and direction of change occurring in the environment and whether developments or actions are operating at a sustainable level. They are used to assess and understand the interaction between development and the environment.
Strategic Environmental Assessment (SEA)	An SEA is a widely used tool for determining the environmental implications of decisions made at a policy, plan or programme level.
Sustainability Reporting	Sustainability Reporting is an organisation's public account of economic, environmental and social performance in relation to its operations, products and services – i.e. the triple bottom line.
Environmental Management Systems (EMS)	An EMS provides guidance on how to manage the environmental impacts of activities, products, and services. It details the organisational structure, responsibilities, practices, procedures, processes and resources for implementing and maintaining environmental management.
Environmental Management Plan (EMP) / Environmental Management Programme (EMPr)	An EMP typically forms part of an EMS and specifies how an activity is to be managed to minimise potential impacts on the environment and enhance benefits, throughout the life cycle of the activity. An EMPr aims to ensure that the conditions of an authorisation associated with a project are fulfilled; and can be applied to the construction, establishment, operational or decommissioning phases of an activity.

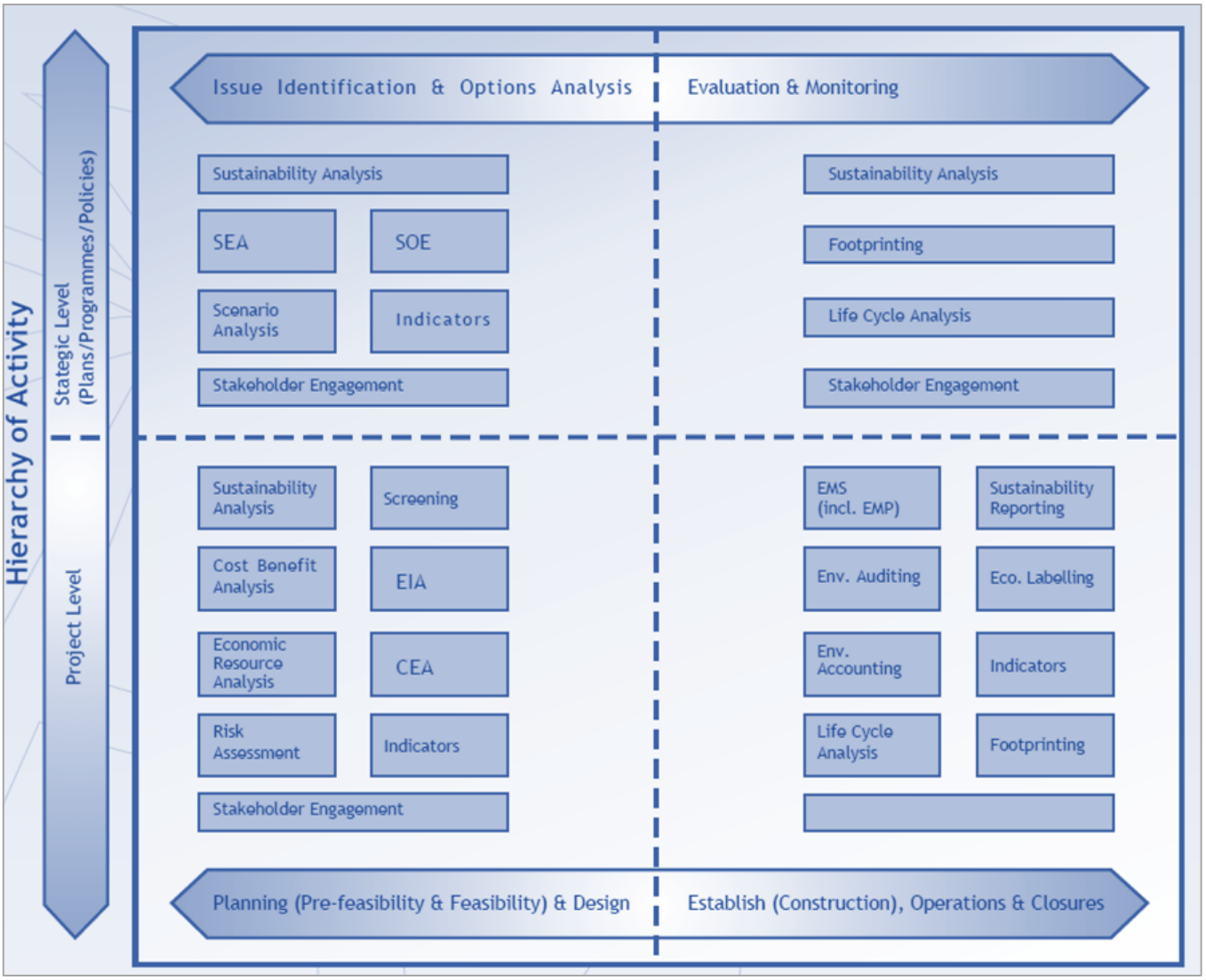


Figure 13: **Indicative mapping of IEM tools (DEAT, 2004)**

3.4 Striving towards the Desired State

Environmental Management Priorities contained in the SEMP emanate from the issues, opportunities and constraints identified during the EMF status quo assessment, and through feedback received during Public Participation.

In terms of the EMF development process, Management Priorities were not necessarily all taken forward in the mapping component of the EMF, where some of the objectives could not be presented spatially. However, the Management Priorities promote attaining the desired state of the EMF study area by playing an important role in setting Management Guidelines for the respective EMZs.

Outside of the functions of the EMF, the Management Priorities need to be captured in future environmental management strategies for HGDM, which need to be championed by the responsible government bodies.

Mapping the path from the environmental vision to the realisation of the desired state relies on the disaggregtion of the vision into management objectives. These objectives are best presented in a hierarchy, which begins at its coarsest level with the vision and ends in a series of management objectives of increasing focus, rigour and practical achievability (see example presented in **Figure 14**).

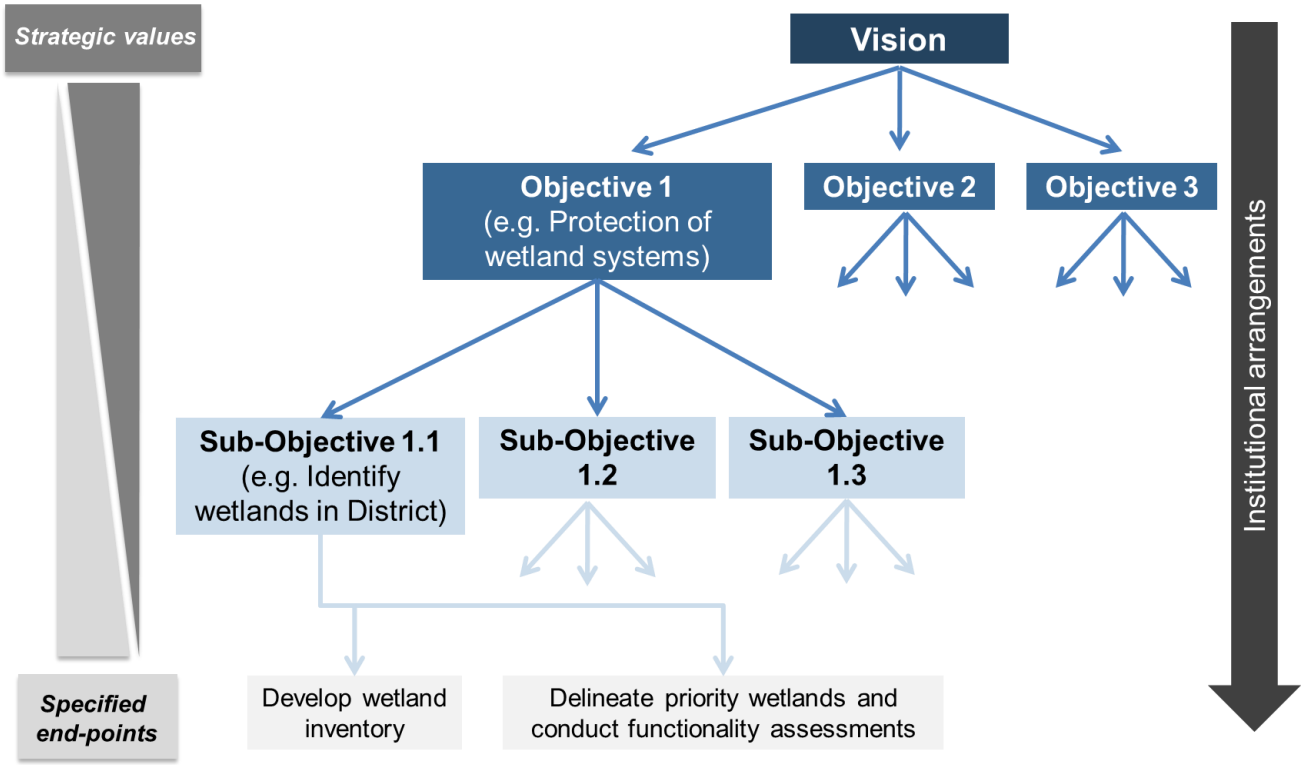


Figure 14: **Objectives Hierarchy with example**

In **Figure 14**, the higher level vision and accompanying objectives (SEMP Management Priorities) relate primarily to upper management and societal values with statements of strategic intent, while the lower level objectives provide more specified and operational-type objectives that can be linked to specific targets. The lower level objectives, which represent the most detailed and technical level of objectives, are not necessarily contained in the EMF and need to be developed as part of the roll-out of the tool through appropriate strategies, plans and programmes by the relevant stakeholders.

The role of the EMF in striving towars the desired state includes the following:

- Provide context and guidance to policies, strategies and plans, where the environmental management requirements need to be taken into consideration;
- Planning initiatives need to support the management objectives for each EMZ;
- Developers and professionals need to screen proposals against the EMF and the appropriate EMZs to identify potential incompatibility. Should the activity not conform to the desired state established for the management zone, the proponent may revise the proposal or undertake detailed investigations to verify the EMF findings; and
- National (DEA), provincial (e.g. EDTEA, DMR, DAFF, DWS) and local (HGDM and LMs) authorities should use the EMF to facilitate environmental decision-making.

3.5 Cross-boundary Environmental Management

The District borders with Umgungundlovu DM to the north-east, Alfred Nzo DM to the south and south-west, Ugu DM to the south-east and Lesotho to the north-west. The District also includes the southernmost part of the Maloti Drakensberg WHS.

EMFs for the neighbouring DMs will need to take cognisance of the HGDM's EMZs and their associated Management Guidelines. This is particularly important for collaborative management of environmental features that traverse multiple administrative boundaries (e.g. major rivers and associated catchments, mountain ranges, protected areas, threatened ecosystems, CBAs, ESAs, etc.

3.6 Giving Effect to the EMF

Institutional arrangements are regarded as the overall framework for sustainable development planning and decision-making, including political, legal, regulatory, policy and organisational frameworks and processes.

The sub-sections to follow discuss some of the high-level provisions that need to be in place to successfully implement the HGDM EMF.

3.6.1 EMF Enabling Institutional Arrangements

Provision needs to be made in terms of the capacity and ability of the HGDM and LMs to ensure effective IEM. In addition, the various environmental planning and management tools that are associated with various pieces of environmental legislation need to be in place.

The DM needs to ensure that the requisite enabling environment is created to facilitate the successful application of the EMF. The organisational arrangements required to give effect to EMF and IEM in general include the following:

1. Conduct a training needs assessment and provide environmental training to municipal officials.
2. Establish dedicated Environmental Management Units for the HGDM and LMs to oversee the following –
    a. Planning, coordinating, implementing and monitoring all aspects of IEM;
    b. Coordinating environmental compliance (where the municipality acts as the developer or project proponent, fulfils functions or conducts activities) and governance (where the municipality acts as the commenting or regulatory authority);
    c. Creating environmental awareness within the municipality and ensuring task-specific environmental training is provided to municipal officials;
    d. Designing and managing pollution prevention, abatement, and control programmes;
    e. Applying legal and regulatory tools to achieve environmental sustainability;
    f. Mainstreaming environmental sustainability within the municipal structure and functions.
3. Develop an internal system to screen all projects, functions and activities against environmental legislation and to initiate the relevant authorisation protocols.
4. Conduct environmental compliance monitoring of municipal projects.
5. Integrate EMF into the IDP, SDF and Land Use Scheme of the HGDM and LMs
6. Establish a co-operative environmental governance forum to engage with key environmental authorities from the various spheres of government.
7. Dedicated environmental officers in the HGDM and LMs to support the Environmental Managers by undertaking the following functions:
    a. Environmental compliance monitoring;
    b. Responding to environmental complaints;
    c. Roll-out of environmental education;
    d. Review of Environmental Impact Assessments, Environmental Management Programmes, planning applications, etc.;
    e. Implementing environmental projects; and
    f. Assist in compiling environmental management tools.
8. Establish community environmental forums.

3.6.2 EMF Implementation Duties

In accordance with the EMF Regulations (GN No. R547 of 18 June 2010), various role-players are involved with the conclusion of the EMF development process, its formal adoption and the ensuing implementation of the framework. The key duties that need to be performed for the implementation of the EMF are listed in **Table 4**.

Table 4: EMF Implementation Duties

EMF Implementation Duty	Roles & Responsibilities
Finalise EMF	▪ HGDM ▪ EDTEA ▪ DEA
Endorse EMF	▪ Project Steering Committee (PSC)
Seek EMF approval	▪ HGDM – Council resolution ▪ EDTEA
Gazetting of EMF	▪ DEA ▪ MEC (EDTEA)
Broadcast the EMF (e.g. roadshow)	▪ HGDM ▪ EDTEA
Consideration of EMF during the review of activities / project proposals in terms of NEMA Section 24(4)(b)(vi)	▪ DEA ▪ DMR ▪ HGDM ▪ EDTEA ▪ DWS ▪ LMs
Set operational objectives and implementation plans for desired state	▪ HGDM ▪ EDTEA
Monitor the implementation of the EMF	
Review and update the EMF	

3.6.3 EMF Functionality

Figure 15 provides a broad outline of the application of the EMF in a project life-cycle.

According to the EMF Regulations (GN No. R547 of 18 June 2010), once an EMF is adopted by the Minister or MEC it must be taken into account in the consideration of applications for environmental authorisation in or affecting the geographical area to which the framework applies. The primary purpose of an EMF is thus to function as a support mechanism in the EIA process in the evaluation and review of development applications, as well as making strategic informed decisions regarding land use planning applications.

In terms of Regulation 8(a) of the EIA Regulations of 2014 (as amended), a competent authority may advise or instruct the proponent or applicant of the nature and extent of any of the processes that may or must be followed or decision support tools (such as the EMF) that must be used in order to comply with NEMA and these Regulations. The EMF will provide applicants with an early indication of the areas in which it would be potentially appropriate to undertake an activity. If an area has been earmarked for a certain type of development where it will be incompatible with the desired state of the associated EMZ, the applicant will need to undertake an appropriate environmental assessment to determine the state of the receiving environment and the potential impacts to the features that contribute towards the sensitivity of the zone in question. As the compilation of the EMF's GIS was largely based on

desktop spatial information, a certain level of ground-truthing that is suitable for the type of activity and status of the receiving environment will be required.

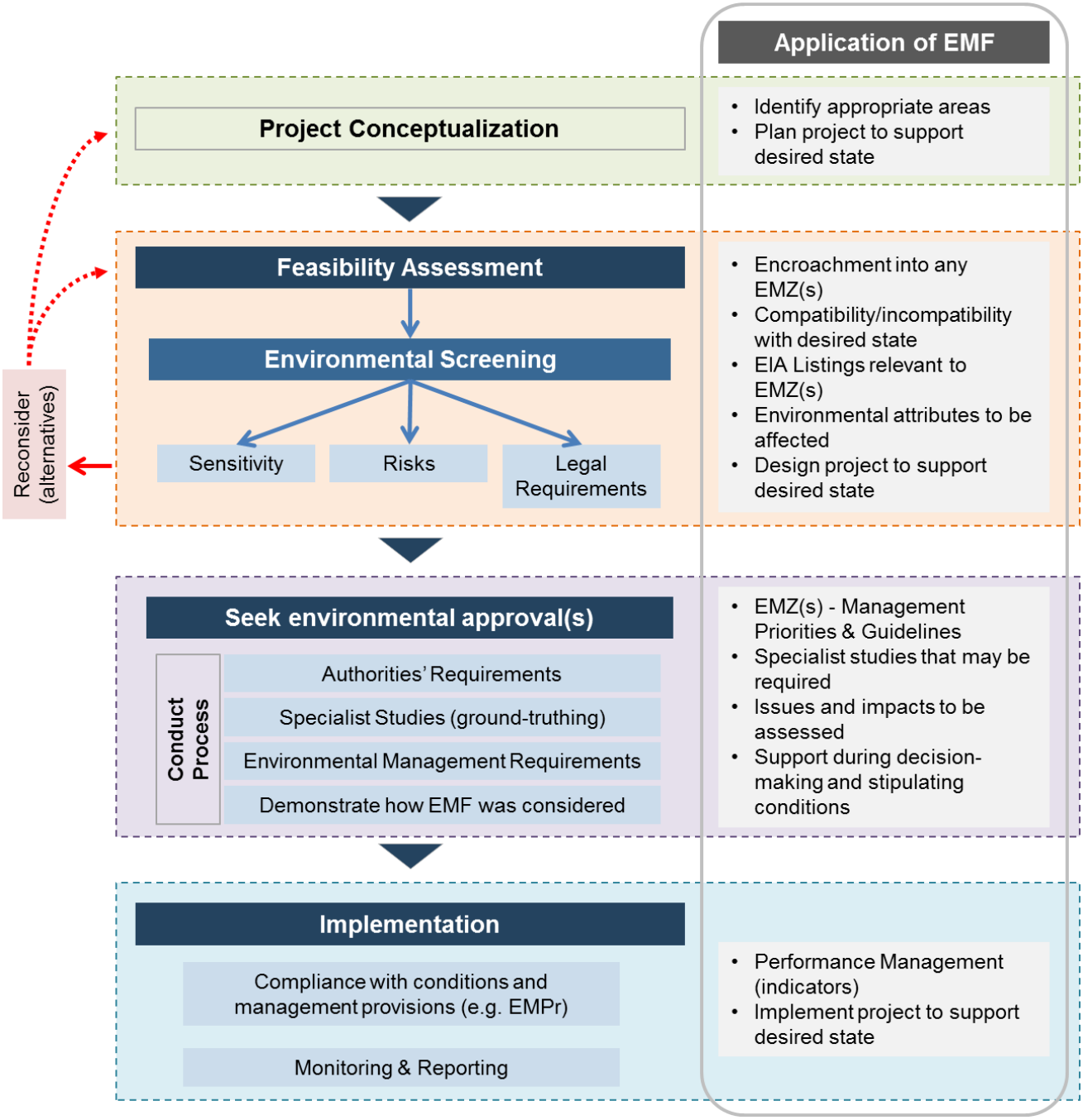


Figure 15: **Broad outline of the application of the EMF in a project life-cycle**

Other pertinent functions of the EMF include the following:

- The HGDM and LMs, as well as key government departments (e.g. DEA, EDTEA, DWS, DMR) will use the EMF as a tool for planning, environmental screening, regulatory functions and overall decision-making;
- The EMF provides a compilation of information and maps illustrating attributes of the environment in the District. This provides valuable guidance in terms of planning processes in HGDM; and

- It is important to note that, while the SEMP outlines preferred activities within the EMZs, it does not preclude a developer/ planner from having to consider the underlying sensitive features or having to comply with relevant environmental legislation.

If a proposed development is not located within an EMZ it means that the EMF does not provide specific management requirements for this development. However, the prevailing environmental legal framework will still need to be taken into consideration by the project proponent.

3.6.4 EMF Review

An EMF must be implemented and monitored on a regular basis to ensure that it achieves its purpose and goal. The HGDM EMF's intended use should be checked against the following performance indicators:

- Officials trained on the interpretation and application of the EMF;
- Appointment of dedicated Environmental Managers in the HGDM and LMs to oversee the implementation of the EMF;
- Outcomes of projects screened against EMF GIS;
- Manner in which projects were influenced by the EMZs' requirements;
- Adherence to Management Guidelines; and
- Application of EMF guidance to EIA Listing Notices.

According to the EMF Regulations (GN No. R547 of 18 June 2010), an EMF may from time to time, on the initiative of the Minister or an MEC in concurrence with the Minister, or as specified in the revision schedule of the EMF, be revised, on condition that such revision is subject to a public participation process similar to that envisaged in the Regulations. It is proposed that the review and revision cycle of the EMF be coupled to that of the other planning tools (i.e. SDF and IDP). Accordingly, an overall update cycle of 5 years is recommended.

With the review of the EMF it is recommended that the following elements be investigated in greater detail for the next generation EMF for HGDM:

1. Terrestrial Biodiversity –
   - Require detailed ground-truthing for CBAs and ESAs, in particular for areas with high development pressure;
2. Aquatic Biodiversity –
   - Aquatic CBAs and ESAs, as approved by EKZNW;
3. Geohydrology –
   - Extent of groundwater resources and possible exploitation;
   - Identification of vulnerable groundwater resources;
   - Management requirements;

4. Climate Change –
   - Climate change risks in the District;
   - Mapping of possible alternative energy sources;
5. Socio-economic Development –
   - The first generation EMF focuses heavily on sensitive environmental resources in HGDM, as reflected in the EMZs. Future versions of the EMF need to investigate the socio-economic development opportunities in the District in greater detail and dedicated management zones need to be considered that focus explicitly on these aspects.
6. Further consideration needs to be given regarding inclusion of terrain and geotechnical conditions as an EMZ in the EMF.

3.6.5 Cooperative Governance

This section provides an overview of the institutions which play a significant role in environmental management and decision making at the three levels of the government (i.e. national, provincial and local), which will be facilitated by the HGDM EMF. The environmental institutions identified at each level of government fulfil specific duties with regards to the critical environmental issues and features associated with the study area. A high-level overview of the environmental roles and responsibilities of key environmental authorities, which influence and guide environmental policies, strategies and plans in HGDM, is provided in **Table 5**.

Table 5: Environmental roles and responsibilities

Environmental Authorities	Key Objectives / Obligations / Services / Functions
DEA environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA	▪ Promote the enhancement of natural resources for sustainable equitable use and protect and enhance the quality and safety of the environment ▪ Promoting the conservation and sustainable utilisation of our natural resources to enhance economic growth ▪ Protecting and improving the quality and safety of the environment ▪ Promoting a global sustainable development agenda ▪ Transformation ▪ Regulation and management of all biodiversity, heritage and conservation matters ▪ Promote and conserve our biological diversity and cultural and local natural resources and ensure the sustainable utilisation of resources ▪ Protect the environment in the interest of the health and well-being of the people ▪ Provide environmental information in support of effective environmental management and public participation in environmental governance ▪ Manage conservation the Transfrontier Conservation Areas and Protected Areas ▪ Promote and conserve our biological diversity and cultural and local natural resources and ensure the sustainable utilisation of resources for the benefit of the people of South Africa ▪ Provide programme management support service to Line Managers in managing Poverty Relief project

Environmental Authorities	Key Objectives / Obligations / Services / Functions
KZN EDTEA	Environmental services Include – ▪ Environmental Planning, Governance & Information Management ▪ Environmental Impact Assessment ▪ Environmental Empowerment & Sustainable livelihoods ▪ Coastal & Biodiversity Management ▪ Pollution & Waste Management ▪ Compliance, Monitoring and Enforcement ▪ Air Quality & Climate Change ▪ Alien Invasive Species Management
DMR	▪ Actively contribute to sustainable development - promote sustainable resource management and contribute to skills development and the creation of meaningful and sustainable jobs ▪ Promote and transform the minerals sector o Promote and facilitate value addition to mineral resources extracted in the Republic o Redress past imbalances through promoting investment, broader participation in the minerals sector, direct intervention in communities, and increased BEE and SMME participation inclusive of women, youth and the disabled. ▪ Regulate the minerals sector - developing new policies, reviewing of existing policies and amending legislation to make them current to evolving an environment and achieving transformation in the minerals and mining industry ▪ Promote health and safety in the minerals sector - provide clear policy and regulatory framework to manage health and safety risks and promote best practice in the mining sector ▪ Protect the environment – promote the reduction of the impact of mining activities on the environment and public health through management of rehabilitation of ownerless and derelict mines, research and development in mine environmental management and development of mine environmental policies. ▪ Efficient and effective service delivery - develop and review internal processes, understand stakeholder needs and improve turn-around times ▪ Enhance DMR culture, systems and people - attract, develop and retain appropriate skills, promote good organisational culture and make the Department an employer of choice. ▪ Ensure long term financial stewardship – ensure optimal utilisation of resources, manage budges effectively, implement risk management strategies and promote corporate governance
DWS	▪ Forecasting and balancing of water demand and supply ▪ Ensure adequate information and knowledge to sustainably manage water resources ▪ Improve water allocation ▪ Improve water use efficiency ▪ Improved water resource quality ▪ Ensure protection of water resource quality and quantity ▪ Ensure water service delivery through policy and regulation ▪ Regulate Water Services Authorities ▪ Develop and construct new infrastructure ▪ Asset management ▪ Percentage maintenance of infrastructure as per maintenance plan ▪ Ensure the provision of regional bulk water ▪ Rehabilitation and refurbishment of water resources infrastructure ▪ Ensure implementation of cooperation agreements ▪ Shape the global agenda on water ▪ Strengthen regional institutions of water ▪ Organisational growth and development ▪ To provide gender equality and woman empowerment solutions ▪ Contribute towards poverty alleviation through job creation initiatives

Environmental Authorities	Key Objectives / Obligations / Services / Functions
EKZNW	▪ To improve the state of biodiversity in KwaZulu-Natal for the benefit of people ▪ To provide quality conservation and ecotourism service delivery by being a well-resourced organisation whilst striving for sustainability. ▪ To be an efficient, transparent, honest and accountable public entity with good governance. ▪ To be the employer of choice through creating decent work and sustainable livelihoods.
Amafa aKwaZulu-Natali	▪ Amafa / Heritage KwaZulu Natali is the provincial heritage conservation agency for KZN. Amafa was established as a statutory body in terms of the KZN Heritage Act of 1997, replaced by the KZN Heritage Act of 2008. ▪ Protection and preservation of cultural and heritage resources through approvals for development permits.
HGDM	The MSA makes provision for the division of powers and functions between the DM and LMs. It assigns the District wide functions to the DM and most day to day service delivery functions to the LMs. The powers and functions of HGDM include the following (HGDM, 2017): ▪ To plan for development for the DM as a whole ▪ Bulk supply of water ▪ Bulk supply of electricity ▪ Bulk sewage purification works and main sewage disposal ▪ Waste disposal sites ▪ Municipal roads ▪ Regulating passenger transport services ▪ Municipal health services ▪ Fire-fighting services ▪ Control of fresh produce markets ▪ Control of cemeteries ▪ Promoting local tourism ▪ Municipal public works

The legal framework assists in identifying mandated parties with regulatory functions in the environmental arena. According to Strydom and King (2009), three legislative mechanisms exist at a national level that afford protection to the environment. The first mechanism is the constitutional entrenchment of environmental protection through either a rights-based or regulatory approach in the Constitution. The second legislative mechanism is environmental protection through framework legislation, namely NEMA. Lastly, the third mechanism is to adopt specific environmental management acts (SEMAs) as well as other laws that cover a range of environmental themes (e.g. biophysical elements). **Figure 16** attempts to show the various environmental regulatory processes related to environmental legislation, as well as the mandated authorities (note that the processes listed are not exhaustive).

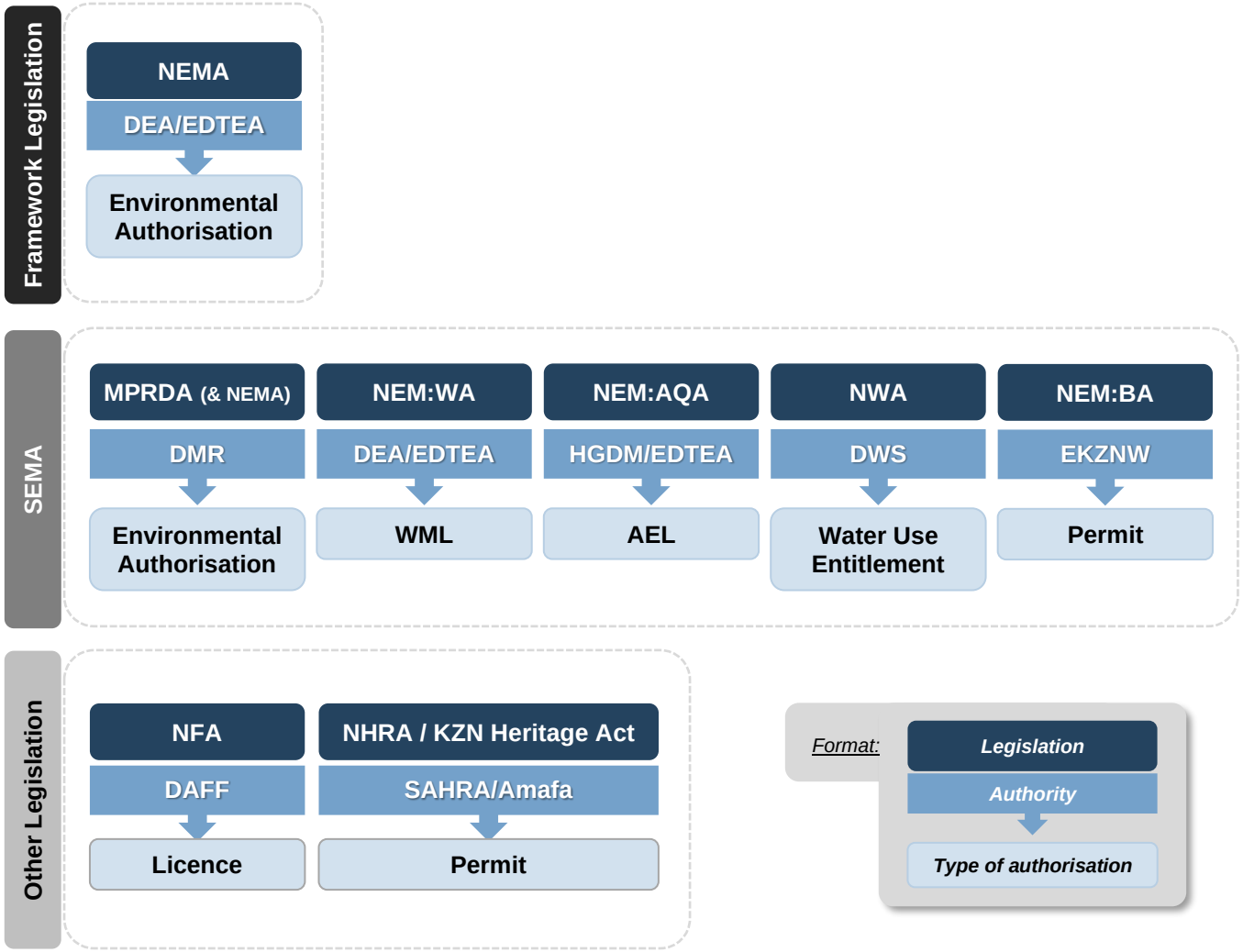


Figure 16: **Broad outline of various environmental regulatory processes**

The successful implementation of an EMF hinges on the various institutions adopting and putting into practice (where relevant) this environmental management tool. The various ways in which the EMF can assist and be applied by government departments include:

- Promoting cooperative governance. The EMF facilitates the coordinated management of the specific geographic area (HGDM in this case) by providing strategic environmental spatial information and management requirements;
- Informing decision-making. The EMF is directly linked to the decision-making framework of the DEA, KZN EDTEA and DMR in terms of applications for environmental authorisation under NEMA, where these respective government departments act as the designated competent authorities. HGDM (and local municipalities) is also obligated to employ the EMF during the review and decisions on land use applications under SPLUMA;
- Guiding spatial planning. The EMF serves as a repository of environmental spatial information for HGDM; and
- Incorporating the latest versions of spatial data and accompanying management provisions from the various environmental authorities, and thus providing a mechanism for updating (part of EMF review) and broadcasting environmental requirements to project proponents and decision-makers.

At the onset of the EMF development a Project Steering Committee (PSC) was established, which included the various government role-players and decision-makers who will be directly affected by the implementation of the EMF (as listed in **Table 5**). The purpose of the PSC included providing high level guidance to steer the EMF towards achieving its intended objectives, assisting in obtaining information from the various government departments represented on the committee and reviewing the EMF products.

3.7 Environmental Management of Land under Traditional Authorities

3.7.1 Overview

Large portions of the District are under the auspices of Traditional Authorities. uMzimkhulu LM has the largest area that is covered by traditional areas in the District, followed by Dr Nkosazana Dlamini-Zuma LM and then Ubuhlebezwe LM. Greater Kokstad LM does not have any traditional areas within its jurisdiction (HGDM, 2017).

Due to the substantial area covered under Trust land, as well as the risks posed by activities and land allocation within these areas, it was deemed necessary to provide a dedicated section with recommendations on how the EMF aims to support sustainable environmental management within the decision-making structure for Trust land.

3.7.2 Administration of Trust Land

The Constitution of South Africa recognised the role of Traditional Authorities and facilitates their involvement through COGTA. Traditional Authorities play an important social and economic role in the HGDM. A Traditional Authority performs the functions provided for in terms of customary law and customs of the traditional community concerned, and in applicable legislation. Traditional bodies communicate with the local ward committees and councils, thus forming part of the decision making body in the overall District. As land owners, Traditional Authorities directly shape the economic conditions of the area. Without consultation and permission of Traditional Authorities there can be no coordinated development on Trust land in HGDM.

The Ingonyama Trust was established in 1994 by the KwaZulu Ingonyama Trust Act (Act No. 3 of 1994) to hold the land in title for "the benefit, material welfare and social well-being of the members of the tribes and communities" living on the land. The Trust itself is separate from the Board, where the latter is a legal entity created to administer the affairs of the Trust. The aforementioned Act places emphasis on the property clause as per Section 25 of the Constitution and gives a stronger mandate for the Board to protect the land and ensure the benefit of communities from the proceeds of the land. Section 2(2) of the Act establishes the framework for the administration of the land for the benefit of communities. Section 2(5) of the Act establishes the framework in which land rights are to be granted and at the same time protecting trust land.

The functions of a Traditional Council include, amongst others, to allocate land, to administer the affairs of the traditional community in accordance with customs and tradition, to promote service delivery and development in the community together with the local municipality and to promote peace, stability and social cohesion, upholding the traditional values of the community (Sutherland *et al*, 2016).

The following is noted in terms of Trust Land Rights (http://www.ingonyamatrust.org.za/trust-land-rights):

- Sales of Trust land -
  - ITB does not usually agree to the sale of land as this could have the effect of diminishing the area of land in Black ownership. Occasionally however, where the circumstances indicate that a sale is the logical approach and with the consent of the relevant Traditional Council (if any) land is sold.
- Leases of Trust land -
  - In most cases the Board prefers to enter into leases for the use of Trust land. Ownership thus remains with the Trust for ultimate transfer in due course to its beneficiaries.
  - It is standard policy, in the case of undeveloped sites, to issue a short-term lease for up to two years to enable would-be developers to obtain planning and environmental

consents and to secure finance for the development. Thereafter a lease for a term of up to forty years with an option to renew for a further forty years is normally granted once the requirements of the short-term lease have been met.

- Shorter-term leases are however granted for agricultural uses and for short to medium term developments. Unless there are exceptional cases the Board charges a market related rent and lessees are responsible for all outgoings including assessment rates and other Municipal charges and for obtaining any necessary environmental or development planning consents.

❖ Permission to Occupy -

- In addition to applications for commercial and agricultural purposes the Board processes many applications for residential sites. Many of these sites are the subject of Permissions to Occupy which were granted up until 1st April 2007.
- Permissions to Occupy are no longer issued, except in exceptional circumstances as they afford limited security for funding and are not registrable interests.

❖ Servitudes -

- The Board has a considerable amount of public infrastructure on its land such as roads, transmission lines, pipelines, bulk water and, railway lines. It is standard policy for such infrastructure to be evidenced by a registered deed of servitude.

❖ Applications for Tenure Rights -

- Applicants for tenure rights on Trust land are required to submit a Tenure Option Application Form.

❖ Traditional Council Consent -

- It is a requirement of the Ingonyama Trust legislation that the formal consent of the relevant Traditional Council be obtained before a tenure rights application can be processed.

3.7.3 Development Pressures and Issues

Most common land uses in Traditional Council areas include settlements, grazing, limited agriculture, limited commercial and community facilities. There is increasing pressure in some areas to allocate land for tourism, conservation, mining and other non-traditional settlement uses.

Critical challenges facing ITB and Traditional Councils in their land allocation function include the following (amongst others):

❖ Traditional councils and ITB are under pressure to allocate land for a range of uses. Without considering environmental factors, land uses may be designated in inappropriate locations (e.g. wetlands) and may potentially cause significant environmental impacts;

❖ The land tenure rights of the members of a community extend beyond a portion of land allocated to each household and include grazing, fire-wood collection, harvesting of

plants, etc. There is a need to balance land tenure and use rights against environmental sensitivity;

- The traditional land tenure system, and the way in which it is administered, does not align with environmental planning processes;
- Changes in land use patterns in the rural areas may cause the encroachment into sensitive areas, which may compromise environmental quality;
- There is a need for standards and norms in the allocation of different land uses in a rural context;
- There is a lack of clarity on the environmental factors that should be taken into account when allocating land for a range of uses; and
- Overlapping land rights arising from the lack of proper systems and procedures, and technical support.

Traditional Authorities may also have the perception that environmental legislation unnecessarily hinders or delays development and the accrual of the associated benefits to the community.

3.7.4 Role of the EMF

The EMZs include large tracts of land administered by ITB in HGDM. This includes areas with high biodiversity value. The environmental governance framework still applies to this land and thus safeguards the sensitive features present by regulating activities that require authorisation prior to commencing. This includes promoting the integration of the principles of environmental management into the making of all decisions which may have a significant effect on the environment, in accordance with Chapter 5 of NEMA. According to the ITB (Bothath pers. comm., 2017), planning and environmental approvals need to be secured during the period of the short-term lease before the Board will issue the long-term lease. However, the legislative provisions are not necessarily applied during the land allocation process that takes place in the case where an individual is interested in acquiring land for residential purposes on Trust land.

The following measures are suggested to promote environmental management of Trust land, and to strive towards the desired environmental state in HGDM:

- The implementation of the EMF on Trust land needs to take place through coordinated planning and collaborative decision-making. It is recommended that a forum be established that meets at the appropriate frequency, where applications for land allocations are presented to the relevant Traditional Councils and municipality, where the last-mentioned party will interpret the application in relation to the EMF and raise red flags for incompatible activities. Alignment is required with the efforts of COGTA in terms of providing guidance on land use applications on Trust land;

- EDTEA, GOGTA and municipalities are to screen emerging nodes or areas with economic development potential within Trust land against the EMF and to guide planning to ensure that sensitive environmental features are not compromised. The results of the screening need to be explained to the Traditional Authorities;
- Evaluate current land allocation practices based on indigenous systems and recommend improvements;
- Create a user-friendly guideline to assist the Traditional Authorities with understanding *inter alia* the EMF and EMZs, and environmental factors to be considered when allocating land;
- Provide maps to the Traditional Authorities showing the EMZs at an appropriate scale in relation to individual tribal areas;
- Create awareness amongst Traditional Authorities and ITB through campaigns, workshops, user-friendly documents and other suitable means in terms of the following –
  - Importance of ecosystem goods and services (contextualise in terms of specific areas related to audience);
  - Impacts of improper land use and activities on the environment;
  - Critical role of biodiversity in improving the quality of life or rural communities;
  - Benefits of environmental stewardship; and
  - Sustainable land allocation practices (e.g. designating activities in appropriate areas, employing environmental best practices).

It is further recommended that Traditional Authorities be involved as much as possible in the various programmes and ventures aimed at enhancing the environment on Trust land. Examples include the following:

- DEA's Natural Resource Management (NRM) Programmes (e.g. Working for Water, Working for Wetlands, Working for Land, Working on Fire) aim to address the threats to the productive use of land and water, and the functioning of natural systems, by invasive alien species, wild fires and land degradation (amongst others). These programmes include the rehabilitation of natural systems;
- EKZNW's Biodiversity Stewardship Programme, which allows for partnerships and cooperative management in terms of natural resource management and custodianship for natural assets; and
- KZN DARD land care programme aim at halting degradation of agricultural natural resources through promoting community participation in sustainable use and management.

3.8 Managing Conflicts between Development and Environmental Features

Development pressures in the study area need to be screened and interpreted against the EMZs. Development and other growth demands can potentially be supported in areas where

existing transformation exists or where detailed specialist studies confirm the receiving environment to be non-sensitive to the earmarked development. The last-mentioned would constitute ground-truthing of the EMF GIS information. Alternatively, the development may be supported by the desired state of the EMZ, such as cultivation in the Agriculture EMZ or appropriate tourism activities in the Terrestrial Biodiversity EMZ.

Note that ultimately each development needs to be screened against the EMZs, and needs to adhere to the relevant Management Guidelines.

Conflict areas may arise where a proposed activity / development pressure or opportunity is disproportionate to the environmental sensitivity. In these instances, preference needs to be assigned based on the following considerations:

- Risks posed by planned development activities to the sensitive environmental attributes associated with the EMZ;
- Degree of acceptable change to the state of the environmental features affected by the proposed development;
- Application of principles underpinning sustainable development;
- Maximise the opportunities to the benefit of both the environment and development; and
- The likelihood of the development proceeding, in order to avoid compromising environmental sensitivity for unrealistic development proposals.

3.9 Monitoring and Evaluation Framework

The proposed Monitoring and Evaluation Framework, which serves to determine whether the HGDM EMF is achieving its intended objectives, is provided in **Table 6**. The results from the monitoring and evaluation will feed into the review of the EMF, and the framework provides a system to continuously improve the quality and accuracy of the EMF.

It must be noted that that the monitoring of the indicators and subsequent evaluation in terms of the EMZs is not the primary function of HGDM, but rather the various mandated authorities and institutions in terms of the prevailing governance framework for the specific environmental features and attributes that comprise each of these zones. In these instances, feedback on the performance management will be required from these respective parties to allow for an appraisal of whether the desired state of each EMZ is being supported.

Table 6: HGDM EMF Monitoring and Evaluation Framework

(Note: cells with yellow fill require feedback from the mandated authorities/stakeholders in terms of suitable targets per indicator)

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
Outcome: (1) The implementation of the EMF									
1.1 An enabling institutional environment for the EMF.	1.1.1 Establish dedicated Environmental Management Units for DM and LMs.	Revised municipal organogramme (where relevant).	-			100%			DM & LMs
		Environmental Managers appointed for DM and each LM.	-			100%			DM & LMs
		Environmental Officers appointed for DM and each LM.	-				100%		DM & LMs
		Training needs assessment completed for municipalities and sector partners.	on-going	100%		100%		100%	DM & LMs
		Municipal officials trained on the EMF.	on-going	100%		100%		100%	DM & LMs
	1.1.2 Establish a co-operative environmental governance forum to engage with key environmental authorities from the various spheres of government.	Schedule and minutes of meetings.	on-going		100%	100%	100%	100%	DM & LMs DEA EDTEA EKZNW DMR DAFF DWS DARD Amafa Other
1.2 Platform for community based involvement in environmental management in DM.	1.2.1 Establish community environmental forums.	Schedule and minutes of meetings.	on-going		100%	100%	100%	100%	DM EDTEA
1.3 An enhanced EMF.	1.3.1 Document lessons learnt during implementation.	EMF lessons learnt document.	on-going		100%			100%	DM EDTEA
	1.3.2 Incorporate new environmental information relevant to EMZs.	Record of receipt of updated / new environmental information.	on-going	100%	100%	100%	100%	100%	DM EDTEA
	1.3.3 Review EMF based on 5 yearly review cycle	Reviewed and approved next generation EMFs.	on-going					100%	DM EDTEA
Outcome: (2) Integration of information pertaining to strategic environmental management priorities in HGDM.									
2.1 Consolidated environmental information (policies, strategies, plans,	2.1.1 Identify the relevant government departments / custodians and the	Database of government departments / custodians and the type of environmental information available from each party.	on-going	100%					DM

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
programmes, spatial data) for HGDM.	environmental information available and required (e.g. based on environmental priorities) for HGDM.	List of environmental information required and its source.	on-going	100%					DM
	2.1.2 Manage and keep record of the environmental information acquired. Consider the type of information, format of information, citation, description, use constraints, point of contact for source of information, data accuracy, etc.	Information metadata matrix.	on-going	100%	100%	100%	100%	100%	DM
		Document control procedure (capturing, indexing, storage, retrieval and integration of information obtained).	on-going	100%	100%	100%	100%	100%	DM
	2.1.3 Establish a mechanism to source the latest environmental information from the relevant government departments / custodians.	Agreements with government departments / custodians in place to obtain environmental information.	on-going	100%					DM & relevant departments
		Create a schedule of review cycles of environmental information (where applicable).	on-going	100%	100%	100%	100%	100%	DM
		Data exchange mechanism in place with government departments / custodians.	on-going	100%					DM & relevant departments
		Mechanism to update the environmental layer if the municipal GIS with new/updated information.	on-going	100%	100%	100%	100%	100%	DM EDTEA
Outcome: (3) Achieve the desired environmental state for HGDM.									
3.1 Spatial planning, projects and activities within HGDM to be guided by the provisions of the EMF.	3.1.1 Screening of projects / activities against EMF.	Proof of EMF information shared with project team during pre-application phase (e.g. minutes of meeting, email transmittal, etc.).	on-going	100%	100%	100%	100%	100%	DM & LMs DEA EDTEA DMR
		Demonstration of how the EMF was considered in project documentation / application / environmental assessment reports.	on-going	100%	100%	100%	100%	100%	Project proponent
	3.1.2 Develop an internal system to screen all projects, functions and activities against	Documented screening of municipal projects against EMF and enviro-legal requirements.	on-going						DM & LMs
		Environmental compliance monitoring	on-going						DM & LMs

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
	environmental legislation and to initiate the relevant authorisation protocols.	of municipal projects.							
	3.1.3 Guide and inform development planning in the District.	EMF integration within IDP, SDF and Land Use Scheme.	on-going						DM & LMs
		EMF integration within sector plans.	on-going						DM, LMs and sector partners
3.2 EMF facilitate and informed decision-making.	3.2.1 Review of applications for environmental authorisation under NEMA against EMF.	Documented proof of review.	on-going		100%	100%	100%	100%	DEA EDTEA DMR DM & LMs
		Conditions linked to EMF management measures.	on-going	40%	100%	100%	100%	100%	
	3.2.2 Review of land use applications under SPLUMA against EMF.	Documented proof of review.	on-going						DM & LMs COGTA
		Conditions linked to EMF management measures.	on-going						
3.3 Performance management for specific EMZs.	3.3.1 Formally Protected Terrestrial Areas EMZ - Performance management	▪ To be aligned with target and indicators in respective MP's for protected areas (where relevant). ▪ Current coverage of protected areas. ▪ Percentage of biodiversity network under formal conservation. ▪ Ecosystem health and condition. ▪ Occurrence of invasive alien species. ▪ Loss of protected species.	on-going						EKZNW EDTEA DM
	3.3.2 Conservation Buffers EMZ - Performance management	▪ To be aligned with target and indicators in respective MP's for Protected Areas (where relevant to buffer zones). ▪ Expansion of protected areas into buffer zones. ▪ Measurable edge effects from developments in the buffer zones.	on-going						EKZNW EDTEA DM
	3.3.3 Terrestrial Biodiversity EMZ -	▪ Current coverage of CBAs and	on-going						EKZNW EDTEA

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
	Performance management	ESAs. ▪ Assess CBAs and ESAs in order to track the percentage of: - Areas under formal protection (including new stewardship agreements); - Areas that have been modified/lost, wholly or in part due to development; - Areas where increased development rights have been granted. ▪ Area (hectares) and % of District under 'local protected area' status (e.g. municipal open space system, municipal park, recreational areas, etc.). ▪ Ecosystem health and condition. ▪ Proportion of land invaded by invasive alien plants. ▪ Areas cleared of invasive alien plants. ▪ Occurrence of invasive alien animal populations. ▪ Conservation status of natural vegetation, by type. ▪ Area (hectares) and threat status of vegetation types remaining within the District. ▪ Level of transformation (%) of each vegetation type. ▪ Percentage of biodiversity network under formal conservation. ▪ Threatened and extinct species. ▪ Population trends of selected species (e.g. oribi, blue swallows and cranes).							SANBI DM
	3.3.4 Aquatic Biodiversity EMZ - Performance management	▪ Current coverage of CBAs and ESAs.	on-going						EKZNW EDTEA DWS

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
		▪ Aquatic ecosystem health and condition. ▪ Zero loss of wetlands. ▪ No encroachment into regulated area of a watercourse. ▪ Health of rivers as determined by the National Aquatic Ecosystem Health Monitoring Programme. ▪ Mean annual precipitation and evaporation. ▪ Improvement in the Blue and Green Drop Status of all municipalities within the District. ▪ Creation of awareness in terms of the water shortage predictions for the District. ▪ Reducing the total water loss occurring in the District to less than 10%.							CMA SANBI DM
	3.3.5 Agriculture EMZ - Performance management	▪ Current coverage of high potential agricultural land. ▪ Sustainable farming units maintained. ▪ Historical and unused agricultural areas in environmentally sensitive areas rehabilitated.	on-going						DARD DAFF DRDLR DM
	3.3.6 Heritage EMZ - Performance management	▪ No illegal changes to or loss of heritage assets. ▪ Inventory of heritage resource. ▪ Functional District Heritage Forum.	on-going						SAHRA Amafa DM
	3.3.7 Urban EMZ - Performance management	▪ Avoidance of disparate development. ▪ Upgrading of un-serviced and informal areas. ▪ Prevent exceedance of pollution standards. ▪ Prevent loss of municipal open	on-going						DM EDTEA DWS COGTA

Outputs	Tasks	Indicators	Frequency	Targets					Roles & Responsible
				2019/20	2020/21	2021/22	2022/23	2023/24	
		space. ▪ Control rate of urban regeneration. ▪ Compliance of waste disposal sites and WWTWs, as well as other regulated facilities, with legal requirements.							
	3.3.8 Traditional Authorities EMZ - Performance management	▪ Avoidance of disparate development. ▪ Alignment of traditional land tenure system and environmental planning processes. ▪ Events held to create environmental awareness amongst the Traditional Authorities and ITB. ▪ Condition within short-term lease, placing an obligation on the applicant to consider the EMF. ▪ Demonstration of how the EMF was considered in project documentation / application / environmental assessment reports.	on-going						DM & LMs ITB COGTA EDTEA DRDLR Traditional House of Leaders
3.4 State of Environment reporting.	3.4.1 Reporting on the state of the environment in the District. Description and discussion of the condition of the environment, based on pre-determined indicators (including EMZ-specific indicators).	▪ HGDM State of Environment Report.	on-going	100%	100%	100%	100%	100%	DM DEA EDTEA

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http://www.ingonyamatrust.org.za/trust-land-rights/