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SILEZA NATURE RESERVE

Protected Area

MANAGEMENT PLAN


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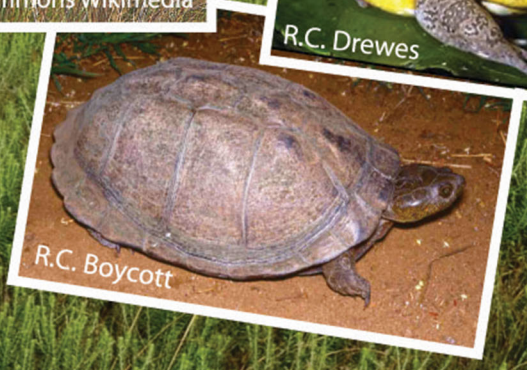
R.C. Boycott

SILEZA NATURE RESERVE

KwaZulu-Natal
South Africa

Protected Area Management Plan
Developed in: 2013

Prepared by
Ezemvelo KwaZulu-Natal Wildlife Protected Area Management Planning Unit and Sileza Nature Reserve Park Planning Committee

Citation
Sileza Nature Reserve: Management Plan. Version 1.0 (28 November 2013), Ezemvelo KZN Wildlife, Pietermaritzburg.

AUTHORISATION

This Protected Area Management Plan for Sileza Nature Reserve is recommended by the Sileza Nature Reserve Planning Committee (NRPC), a multi-disciplinary team consisting of:

Ezemvelo KZN Wildlife

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Peter Coulon	Conservation Manager: Ndumo Game Reserve and Tembe Elephant Park
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This Protected Area Management Plan for Sileza Nature Reserve is approved by:

TITLE	NAME	SIGNATURE AND DATE
KwaZule-Natal MEC: Department of Economic Development, Tourism & Environmental Affairs	See the next page for MEC approval. The change is due to reconfiguration of provincial government departments.	

Recommended:

TITLE	NAME	SIGNATURE AND DATE
Chairperson: KZN Nature Conservation Board	Prof AT Nzama Deputy Board Chairman.	10/07/2014
Chief Executive Officer: Ezemvelo KZN Wildlife	DR I.B. MKHIZE	
Chairperson: Ezemvelo, Operations Committee	pp Mr B.Z. Khoza	
Chairperson: Operations Committee : Northern Parks	R I Penn Sawers	

This Protected Area Management Plan for Sileza Nature Reserve is approved:

TITLE	NAME	SIGNATURE AND DATE
KwaZulu-Natal MEC: Department of Economic Development, Tourism and Environmental Affairs	Michael Mabuyakhulu	

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PREFACE

This Protected Area Management Plan for Sileza Nature Reserve is its primary and overarching management document. It forms the framework within which the nature reserve will be managed and developed towards the achievement of its management objectives, derived in collaboration with the protected area's stakeholders during July, 2013.

The protected area management planning process has been designed to meet the statutory requirements of the National Environmental Management: Protected Areas Act and other relevant legislation.

The protected area management planning process requires participation from the protected area's stakeholders, the general public and specialists during the various stages of plan development and implementation. An annual review process will ensure an active adaptive management planning approach.

A long-term business approach has also been introduced that ensures that the protected area's management objectives are operationalized and reflected through an Annual Plan of Operation. A Financial Plan will, at the same time, actively pursue additional and improved funding and income towards the achievement of the natural and cultural heritage conservation objectives of the nature reserve.

Ezemvelo KwaZulu-Natal Wildlife, as the appointed Management Authority for Sileza Nature Reserve, hereby commits itself to the implementation of this plan.

Dr. Bandile Mkhize
Chief Executive Officer

Date:

EXECUTIVE SUMMARY

Introduction

Sileza Nature Reserve (SNR) is situated north of the town of Mbazwana and approximately 18 km south west of Manguzi town with the R22 road passing adjacent to the nature reserve. The nature reserve falls within the Umkhanyakude District Municipality under the Local Municipality of Umhlabuyalingana.

The nature reserve lies to the south east of Tembe Elephant Park and also draws all its resources from Tembe Elephant Park. Sileza Nature Reserve covers 2124 hectares and was formally proclaimed in 1950 as a Forest Reserve. It was re-proclaimed as a Nature Reserve in 1992.

SNR falls within the Maputaland – Pondoland - Albany hotspot which is described as the centre of plant endemism. This region is home to a wide variety of endemic and near endemic fauna and flora. This resulted from the geographical location of this region and exceptional influence from the temperate zone. Sileza Nature Reserve contributes the land that is formally protected towards the Maputaland – Pondoland – Albany hotspot.

The nature reserve protects a portion of the Maputaland Wooded Grassland, Maputaland Coastal Belt, Subtropical Freshwater Wetlands and Licuati Sand Forest. Plant species of importance include Ferox Cycad (*Encephalartos ferox*) and Small Cluster Pear (*Uvaria caffra*) while important fauna species include Waterbuck (*Kobus ellipsiprymnus ellipsiprymnus),* Plain Zebra (*Equus quagga antiquorum*), Suni (*Neotragus moschatus zuluensis*) and Southern Reedbuck (*Redunca arundinum arundinum*).

Various important bird species are present in the nature reserve such as the Secretarybird (*Sagittarius serpentarius*), Red-winged Pratincole (*Glareola pratincola*), Pinkthroated Longclaw (*Macronyx ameliae*) and the Martial Eagle (*Polemaetus bellicosus*). Sileza Nature Reserve is also home to a host of reptiles and amphibians such as the Edible Bullfrog (*Pyxicephalus edulis*), Serrated Hinged Terrapin (*Pelusios sinuatus*), Flap-neck Chameleon (*Chamaeleo dilepis dilepis*) and the Bells Hinged Tortoise (*Kinixys zombensis*).

Public consultation has been undertaken through a series of meetings and discussions with key stakeholders culminating in a key stakeholder workshop, held on the 9th of July 2013. Furthermore, the draft management plan was made available for public review and comment prior to its finalisation in September 2013.

Management issues, challenges and opportunities at Sileza Nature Reserve

Upon entering the Sileza Nature Reserve on the 22nd of May 2013 for the site visit, it was noted that the fence around the nature reserve had deteriorated. There have been incidents of poaching which relates to the damaged fences. Areas where

poachers have entered were not discovered immediately due to a lack of security throughout the reserve and a low number of field rangers fit for duty. There is a lack of fire breaks and evidence of arson fires. Infrastructures such as staff accommodation are in poor conditions. The area has low rainfall throughout the year; water availability for the future needs to be investigated and the dry sands coupled with inappropriate vehicle types entering the reserve have led to damaged roads.

Managing the issues, challenges and opportunities at Sileza Nature Reserve

The development of a management plan for Sileza Nature Reserve will allow the reserve to be independent in the future and gain a better management effectiveness score. The financial section in the plan will have a costing aspect and once the plan has been signed off, the budget required will have to be provided for issues such as maintenance of infrastructure, security and staff. A water management plan will have to be developed as water is scarce in the reserve. As this is the first management plan for Sileza Nature Reserve, a number of supporting documents, species list's and research will have to be developed such as fauna and flora in the reserve and independent fire management plans.

ABBREVIATIONS

Amafa	Amafa aKwaZulu-Natali (KwaZulu-Natal Provincial Heritage Agency)
CCA	Community Conservation Area
CDP	Concept Development Plan (Component of Ezemvelo protected area management planning process)
CEO	Chief Executive Officer
CMS	Co-management Structure
DAEA	KwaZulu-Natal Provincial Department of Agriculture and Environmental Affairs
DCO	District Conservation Officer
DEA	National Department of Environmental Affairs
DWA	National Department of Water Affairs
EIA	Environmental Impact Assessment
Ezemvelo	Ezemvelo KwaZulu-Natal Wildlife
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EWT	Endangered Wildlife Trust
FP	Financial Plan (component of Ezemvelo protected area management planning process)
FPA	Fire Protection Association in terms of the National Veld and Forest Fire Act (No.1 of 1998)
GIS	Geographical Information System
IDP	Municipal Integrated Development Plan
IUCN	International Union for the Conservation of Nature
MEC	Member of the Executive Council
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEMA	National Environmental Management Act
NPAES	National Protected Area Expansion Strategy
NSBA	National Spatial Biodiversity Assessment
OIC	Officer in Charge
OPSCOMM	Operations Committee
PA	Protected Area
ROC	Ezemvelo Regional Operations Committee
SAHRA	South African Heritage Resources Agency
SDF	Municipal Spatial Development Framework
SMME	Small, Micro and Medium Enterprises
SMP	Strategic Management Plan (component of Ezemvelo protected area management planning process)
SNR	Sileza Nature Reserve
SWOT	Strengths, weaknesses, opportunities and threats analysis
TEP	Tembe Elephant Park
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WWF	World Wide Fund for Nature

1) BACKGROUND

1.1 Purpose of the plan

Protected area management plans are high-level, strategic documents that provide the direction for the development and operation of protected areas. They inform management at all levels, from the staff on-site through to the CEO, the Board and the MEC. The purpose of the management plan is to:

- Facilitates compliance with the National Environmental Management: Protected Areas Act (No. 57 of 2003)
- Provide the primary strategic tool for management of Sileza Nature Reserve, informing the need for specific programmes and operational procedures.
- Provide motivations for budgets and provide indicators that the budget is spent correctly.
- Build accountability into the management of Sileza Nature Reserve.
- Provide for capacity building, future thinking and continuity of management.
- Enable Ezemvelo KZN Wildlife to develop and manage Sileza Nature Reserve in such a way that its values and the purpose for which it was established are protected.

1.2 Structure of the plan

Section 1:	Provides an introduction and background to the management plan and Sileza Nature Reserve.
Section 2:	Establishes the context of the nature reserve, providing the basis for the strategic and operational management frameworks that follow.
Section 3:	Sets out the vision and objectives that must be achieved in efforts to effectively conserve the nature reserve.
Section 4:	Sets out the zonation of the nature reserve, outlining the permissible land uses in particular zones.
Section 5:	Describes the administrative structure required to effectively manage Sileza Nature Reserve.
Section 6:	Sets out the detailed management targets that must be achieved in managing the nature reserve.
Section 7:	Sets out the monitoring measures required to determine if management targets are being met and the requirements for reporting on performance in implementing the plan.

Section 8:	Describes the components that must be included in the annual plan of operation.

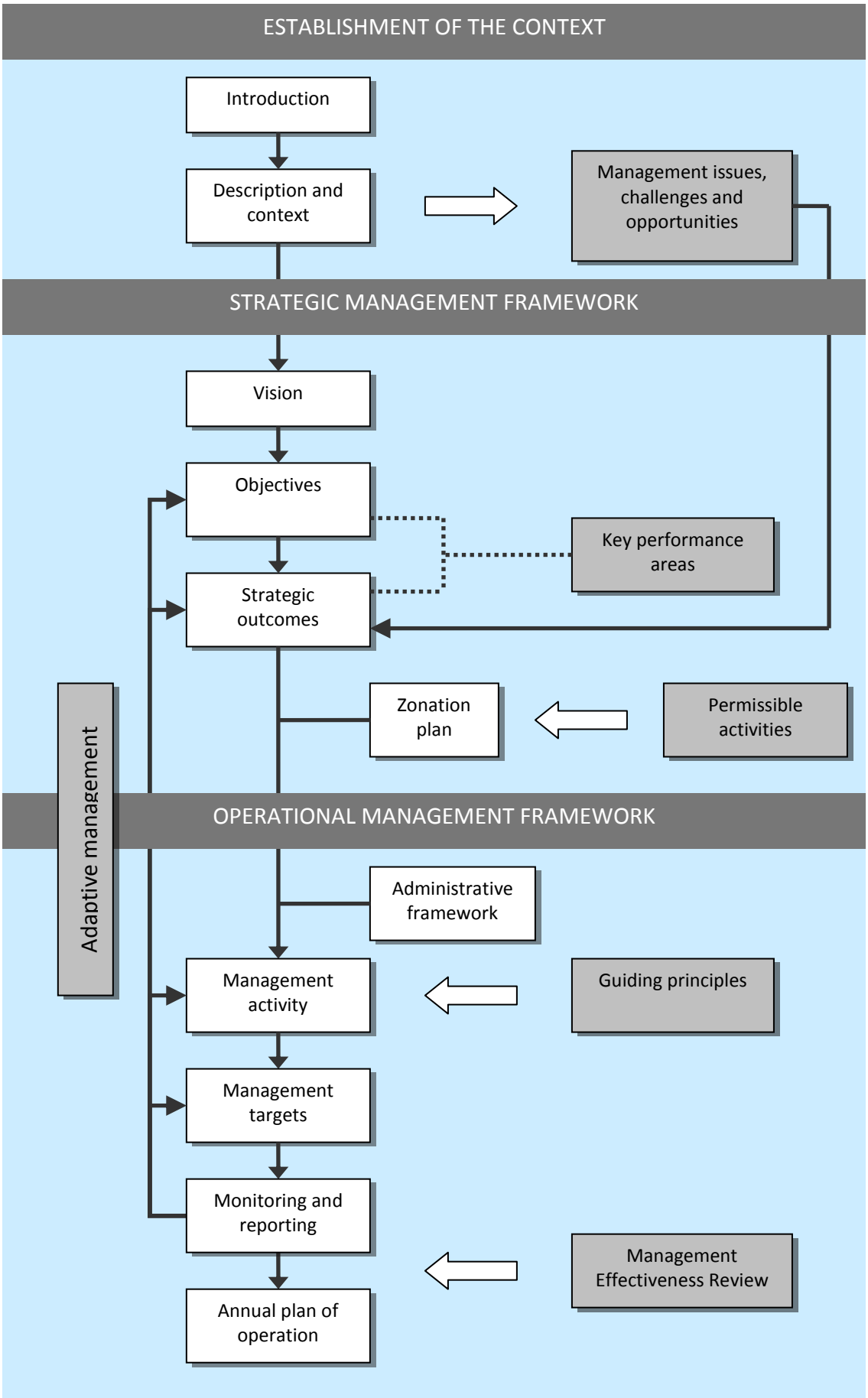

Figure 1.1 Structure of the Protected Area Management Plan

1.3 Introduction

The Sileza Nature Reserve (SNR or "the nature reserve") is located in the Umkhanyakude District Municipality and falls under the Umhlabuyalingana Local Municipality of KwaZulu-Natal (KZN) Province, South Africa. The reserve lies approximately 5 km east of the R22 and can be accessed via the D1850 Road.

The nature reserve is oval in shape, at longitude 27º 06' 59.60" S and latitude 32º 36' 33.87" E. The nature reserve is a low-relief, sandy plain that is covered by mostly grasslands and small patches of short and tall forest.

The nature reserve was formally proclaimed in 1950 as a state forest and in 1992 re-proclaimed as a nature reserve. The total area of the reserve is 2124 hectares. The area is undeveloped and was mostly utilized for the gazing of cattle.

The nature reserve lies to the south east of Tembe Elephant Park and also draws all its resources from Tembe Elephant Park.

SNR falls within the Maputaland – Pondoland - Albany hotspot which is described as the centre of plant endemism. This region is home to a wide variety of endemic and near endemic fauna and flora. This resulted from the geographical location of this region and exceptional influence from the temperate zone. Sileza Nature Reserve contributes to the land that is formally protected towards the Maputaland – Pondoland – Albany hotspot.

The nature reserve protects a portion of the Maputaland Wooded Grassland, Maputaland Coastal Belt, Subtropical Freshwater Wetlands and Licuati Sand Forest. Plant species of importance include Ferox Cycad (*Encephalartos ferox*) and Small Cluster Pear (*Uvaria caffra*) while important fauna species include Waterbuck (*Kobus ellipsiprymnus ellipsiprymnus),* Plain Zebra (*Equus quagga antiquorum*), Suni (*Neotragus moschatus zuluensis*) and Southern Reedbuck (*Redunca arundinum arundinum*).

Various important bird species have been present in the nature reserve such as the Secretarybird (*Sagittarius serpentarius*), Red-winged Pratincole (*Glareola pratincola*), Pinkthroated Longclaw (*Macronyx ameliae*) and the Martial Eagle (*Polemaetus bellicosus*). Sileza Nature Reserve is also home to a host of reptiles and amphibians such as the Edible Bullfrog (*Pyxicephalus edulis*), Serrated Hinged Terrapin (*Pelusios sinuatus*), Flap-neck Chameleon (*Chamaeleo dilepis dilepis*) and the Bells Hinged Tortoise (*Kinixys zombensis*).

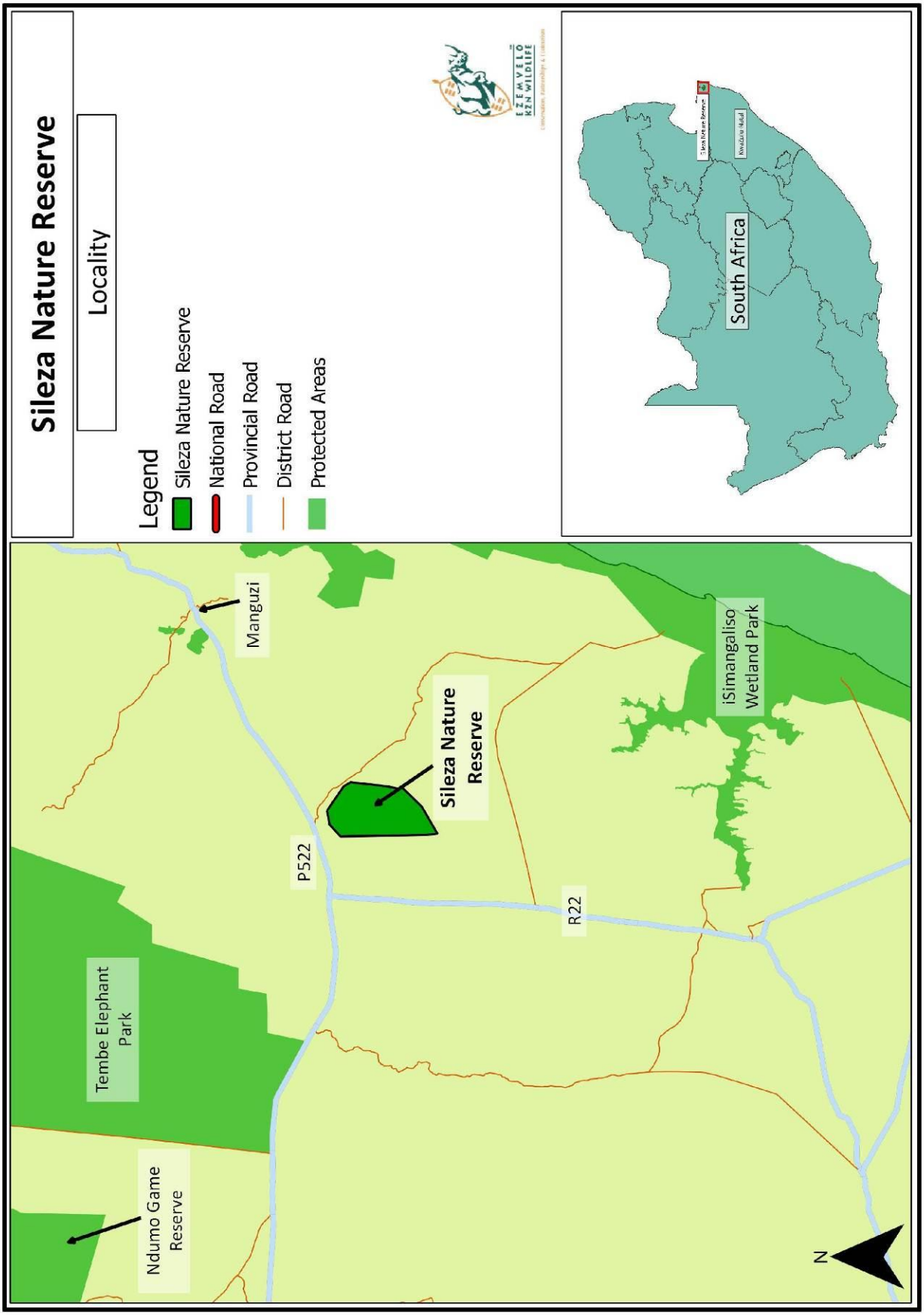

Figure 1.2 Regional location of Sileza Nature Reserve

1.4 The values of Sileza Nature Reserve

The values of a place are those remarkable attributes that exemplify it and are largely the reason that it has been proclaimed as a protected area. The values are important in planning and management, as they are the aspects of the place that must be protected. The values of Sileza Nature Reserve include:

Natural values	▪ It is an area of unique natural beauty. ▪ Sileza Nature Reserve and its surrounds have rich biodiversity and a number of key species including threatened, protected and endemic species. ▪ The nature reserve contributes to the conservation of the Maputaland Coastal Belt, Licuati Sand Forest, Maputaland Wooded Grassland and Freshwater wetlands. ▪ The nature reserve supports a population of Waterbuck (*Kobus ellipsiprymnus ellipsiprymnus),* Plain Zebra (*Equus quagga antiquorum*), Suni (*Neotragus moschatus zuluensis*) and Southern Reedbuck (*Redunca arundinum arundinum*) and a number of other rare and threatened species. ▪ It is situated close to an internationally recognised Important Bird Area and hence there have been sightings of important, rare and endangered birds within the nature reserve such as the Secretarybird (*Sagittarius serpentarius*), Red-winged Pratincole (*Glareola pratincola*), Pinkthroated Longclaw (*Macronyx ameliae*) and the Martial Eagle (*Polemaetus bellicosus*). ▪ The nature reserve contains grasslands that are untransformed and also links ecosystems from the surrounding areas – in this way; it represents a number of dispersed species.

Ecosystem service values	▪ Sileza Nature Reserve provides valuable ecosystem goods and services, such as:
	  ▪ Air pollution absorption
	  ▪ Carbon sequestration which acts as a buffer to climate change
	  ▪ In terms of pollination – creates a refuge for pollinators
	  ▪ Traditional medicines
	  ▪ Soil formation and fertility
	▪ Soil erosion and degradation reduction

Eco-tourism values	▪ Sileza Nature Reserve has the potential for low impact tourism in the future.

Cultural and historic values	▪ Sileza Nature Reserve does protect traditional fruits and natural resources which are of medicinal value that the surrounding communities previously harvested.
	▪ Various living heritage values:
	  ▪ Historically - hunting used to take place under traditional authorities in a controlled environment.
	  ▪ Known periods of grazing taking place on the boundaries of the nature reserve.
	  ▪ Local people used the white fine sands of the area as plastering sand.

Consistent with Section 17 of the Protected Areas Act, the purpose of Sileza Nature Reserve is to:

- Contribute to the achievement of provincial and national nature conservation targets through protection of a portion of the Maputoland – Pondoland – Albany region, and its associated biodiversity, including the ecological and evolutionary processes that generate and maintain this diversity.

- Protect endangered, rare and endemic species indigenous to the area.

- Promote awareness of the natural beauty and outstanding aesthetic value of the area.

- Contribute to local, regional and national economies through supporting life systems, limited eco-tourism, and sustainable use of natural resources.

1.5 Planning approach

The preparation of this management plan has been undertaken based on the following guiding principles.

1.5.1 Protecting and managing park ecosystems

Within the protected area, effort must be directed at maintaining ecosystems in as natural a state as possible and human induced disturbance must primarily be avoided. Where in those rare circumstances avoidance cannot be achieved the disturbance must be mitigated and ameliorated in compliance with Ezemvelo KZN Wildlife's conservation policies and norms and standards, and in particular the Integrated Environmental Management Policy.

It is recognised that the [Insert PA name] does not contain complete or unaltered ecosystems. This, combined with increasing and cumulative disturbances from sources outside of the protected area such as adjacent land use, upstream effects of pollution, colonisation of invasive and alien species, and visitor use, is likely to result in irreversible degradation of the protected area's ecosystems, the loss of biodiversity and impoverishment of gene pools.

Ecosystem management must be derived from a conceptual and strategic basis for the protection of park ecosystems which is based on sound research and monitoring. It must involves a holistic view of the natural environment to ensuring that all management decisions take into the consideration of the complex interactions and dynamic nature of the ecosystems and their limited capacity to withstand and recover from human induced disturbance.

It is recognised that the Ezemvelo KZN Wildlife's protected areas are becoming increasingly important, if not vital, in national and international efforts to maintain biodiversity and genetic resources of South Africa. Thus the management of the protected areas ecosystems must be credible and solidly based in science and best management practice. In this, a rigorous application of conservation science in the collection and interpretation of research and monitoring data must be achieved.

It is further recognised that, in particular cumulative, human induced disturbance or poor management practices have far-reaching and long-lasting and potentially irreversible negative impacts effects on species, habitats, ecosystems and the protected area as a whole. It is thus recognised that a cautious and risk adverse approach must be exercised.

1.5.2 Ecosystem-Based Management

Decision-making associated with the protection of park's ecosystems will be scientifically based on internationally accepted principles and concepts of conservation biology. The Protected area ecosystems will be managed with minimal interference to natural processes. Specific management may be

desirable, when the structure or function of a habitat or ecosystem has been significantly altered by way human induced impacts or previous management. Specific management will only be considered when this option is the only possible alternative available to restore ecological integrity.

Provided that park ecosystems will not be impaired, the manipulation of naturally occurring processes (e.g. creation of firebreaks, damage causing animals) may take place when no reasonable alternative exists and when monitoring has demonstrated, that without direct intervention:

- there will be serious adverse effects on neighbouring lands; or
- protected area's facilities, public health or safety will be threatened; or
- the objectives of a protected area's management plan prescribing how certain natural features or cultural resources are to be maintained cannot be achieved.

Where directed management is required, it will be based on scientific research, and will employ techniques that emulate natural processes as closely as possible.

Ezemvelo KZN Wildlife will be exemplary in the implementation of conservation and other environmental legislation including but not limited to environmental impact assessment and review.

1.5.3 Adaptive management

Adaptive management is a structured, iterative process in which decisions are made using the best available information, with the aim of obtaining better information through monitoring of performance (Figure 1.3). In this way, decision making is aimed at achieving the best outcome based on current understanding, whilst accruing the information needed to improve future management. Adaptive management can lead to revision of a part or if necessary the whole management plan.

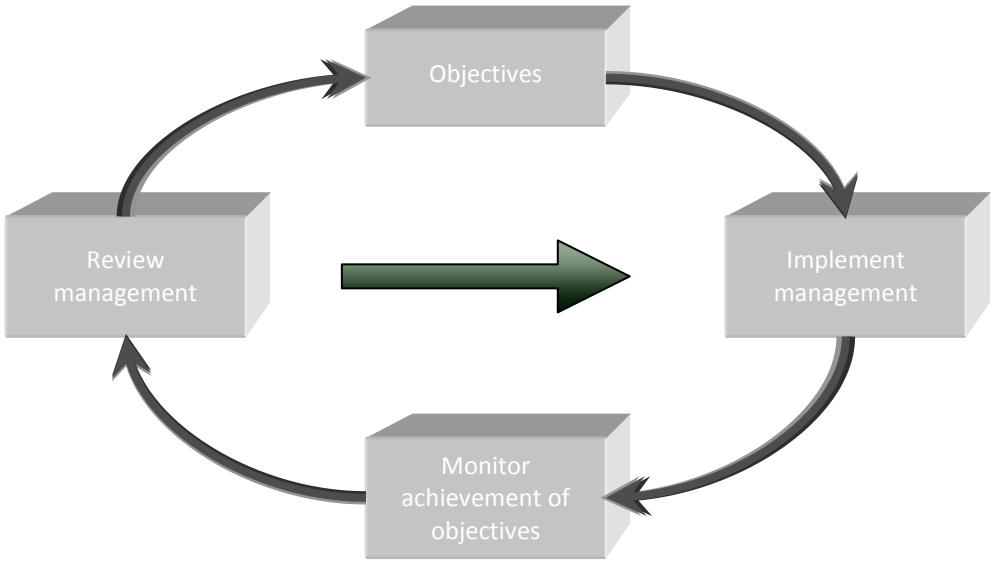

Figure 1.3 The adaptive management cycle

Adaptive management enables protected area managers to:

i) Learn through experience.

ii) Take account of, and respond to, changing factors that affect the protected area.

iii) Continually develop or refine management processes.

iv) Demonstrate that management is appropriate and effective.

1.5.4 Collaboration and transparency

Stakeholder involvement and support is an important aspect of effective protected area management. It is also a requirement in terms of Sections 39(3) and 41(2) (e) of the National Environmental Management: Protected Areas Act (No.57 of 2003). Accordingly, the development of this management plan has been undertaken through a collaborative process, involving local communities and other key stakeholders.

A stakeholder's workshop was held at Tembe Elephant Park Conference Centre on the 9th of July 2013. Various stakeholders such as the local communities, Traditional Authorities, Municipal authorities attended this workshop. The management team was present at the workshop, to give their input. A brief background of the nature reserve was given as some stakeholders present had not heard of Sileza Nature Reserve before. The Values, Vision, as well as the management issues were discussed and input from all stakeholders were noted.

Furthermore, the draft management plan has been made available for public review and comment prior to its finalisation. This process has ensured a great deal of valuable input into the development of the management plan, the outcomes of which have been incorporated into it. A detailed public participation report is available upon request from the nature reserve management.

An additional stakeholder meeting was held on the 13th of November 2013, at the Tembe Conference Centre, based at the Tembe Elephant Park. The purpose of this meeting was to engage with stakeholders and showcase, the various ways in which their comments have been incorporated into the management plan. This method of reviewing a management plan has been beneficial as it promotes ownership of the management plan within local communities. The additional comments discussed at this meeting have been incorporated into the plan.

2) DESCRIPTION OF SILEZA NATURE RESERVE AND ITS CONTEXT

2.1 Institutional and administrative framework for the management of Sileza Nature Reserve

The KwaZulu-Natal Nature Conservation Board, established in terms of the KwaZulu-Natal Nature Conservation Management Act No.9 of 1997, was appointed by the KwaZulu-Natal MEC: Agriculture and Environmental Affairs as the management authority for all provincial protected areas in KwaZulu-Natal. The Board's implementing agency is Ezemvelo KZN Wildlife.

Management of Sileza Nature Reserve will be undertaken in accordance with relevant legislation and the management policies of Ezemvelo KZN Wildlife, which includes a commitment to maintain the character and ecological, cultural and aesthetic integrity of the site.

The KwaZulu-Natal Nature Conservation Board will be responsible for reporting on the management of Sileza Nature Reserve to the designated KwaZulu-Natal Provincial Member of the Executive Committee (MEC) and the Premier thus ensuring coordination of those matters that may affect the nature reserve through the relevant provincial departments, district and local municipalities.

2.2 The legislative basis for the management of Sileza Nature Reserve

There is a large body of legislation that is relevant to the management of Sileza Nature Reserve, but the primary legislation guiding the management of protected areas is the National Environmental Management: Protected Areas Act (No.57 of 2003).

The Protected Areas Act establishes the legal basis for the creation and administration of protected areas in South Africa, as its objectives include provisions "for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes". The Act sets out the mechanisms for the declaration of protected areas and the requirements for their management.

A detailed list of relevant legislation is provided in Appendix B. Managers are required to familiarise themselves with the purpose and contents of the statutes and their subsequent amendments and regulations.

2.2.1 Proclamation status of Sileza Nature Reserve

Sileza Nature Reserve was proclaimed on the 10th of March 1950 under the Forestry Act as a Forest Reserve. In 1992, this was repealed and Sileza Nature Reserve was re-proclaimed as a nature reserve. This was listed in the Kwazulu Government Notice No.9 of 1992.

The nature reserve's boundary description is contained in the Surveyor-General Diagrams that form part of Appendix C. It was recommended that this protected area be assigned the name 'Sileza Nature Reserve' in the declaration.

2.2.2 Public Trust Doctrine

Section 3 of the National Environmental Management: Protected Areas Act Nu. 57 of 2003 mandates the State, and hence Ezemvelo KZN Wildlife to act as the trustee of protected areas. This trusteeship is derived from the Public Trust Doctrine, which in this context obligates the Ezemvelo KZN Wildlife to support the management of all protected areas and the resources therein for the benefit for current and future generations (the beneficiaries of the Public Trust). Thus it is incumbent on Ezemvelo KZN Wildlife to use all practical means to fulfil its responsibilities as trustee of the protected area for current and succeeding generations.

[See White Paper on Environmental Management — Policy for South Africa GG 749 OF 1998]

2.2.3 Invasive species control in terms of the Biodiversity Act

In terms of Section 76 of the National Environmental Management: Biodiversity Act (No.10 of 2004), the management authority of a protected area must incorporate an invasive species control plan in the protected area management plan. This is addressed in Sections 3 and 4 below.

2.3 The policy framework guiding the management of Sileza Nature Reserve

In conserving and managing the biodiversity of KwaZulu-Natal, Ezemvelo KZN Wildlife operations are undertaken within a broad framework of policies. At a national level, overarching policy is set out in:

i) The White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997.

ii) The Bioregional Approach to South Africa's Protected Areas, 2001/2002.

iii) Community Based Natural Resource Management Guidelines, 2003.

iv) National environmental management principles set out in section 2 of the National Environmental Management Act.

v) Relevant norms and standards set by the Minister and MEC in terms of the Protected Areas and Biodiversity Acts.

Within the province, Ezemvelo KZN Wildlife has adopted a Strategic Plan and Performance Plan for 2009-2014, which has developed the following corporate strategic profile:

VISION

"To be a world renowned leader in the field of biodiversity conservation"

MISSION STATEMENT

"To ensure effective conservation and sustainable use of KwaZulu-Natal's biodiversity in collaboration with stakeholders for the benefit of present and future generations."

STRATEGIC GOALS

i) To conserve indigenous biodiversity in KwaZulu Natal both within and outside of protected areas.

ii) To be a sustainable, well-resourced and capacitated biodiversity conservation and ecotourism organisation.

iii) To foster the value of biodiversity conservation with stakeholders.

iv) To be an efficient, effective and compliant organisation with good governance.

v) To effectively promote the mandate of the organisation to stakeholders.

CORE VALUES

Integrity	At all times we act morally, ethically and with honesty.
Respect	We treat stakeholders with patience, politeness and acknowledge and value their right and those of the environment.
Accountability	We involve stakeholders in the organisation's activities with a culture of openness and are answerable for the outcome of our actions and activities.
Team work	Working together to achieve our vision through goals.
Innovation	An adaptable organisation that embraces the culture of creativity and learning.
Excellence	We are a progressive organisation applying best practices to achieve the highest quality and standards.
Commitment	At all times we undertake our activities with passion, loyalty and dedication.
Productivity	We undertake to produce results timeously, efficiently and effectively.

A number of policies, specific to particular areas of operation, have also been developed by Ezemvelo KZN Wildlife (Appendix D). These policies have been considered and applied within the plan, where relevant. The nature reserve's managers are required to be familiar with them and to apply them in managing Sileza Nature Reserve.

This management plan has utilised this body of policies to develop a strategic and operational management framework for Sileza Nature Reserve that is consistent with the broad goals and specific policy requirements of Ezemvelo KZN Wildlife.

2.4 The regional and local planning context of Sileza Nature Reserve

Sileza Nature Reserve is located within the Umkhanyakude District Municipality and the Umhlabuyalingana Local Municipality. The nature reserve is recognised as an important grassland area in the District Integrated Development Plan (IDP) in 2011 – 2012 and Environmental Management Framework Plan (EMF) as a protected area.

The Biodiversity Sector Plan (BSP) for the district municipality is a tool used to guide land use planning, environmental assessments, authorisations and natural resource management by looking at Critical Biodiversity Areas and Ecological Support Areas. The BSP for the Umkhanyakude District has listed Sileza Nature Reserve as a protected area with woody grasslands and the area around the nature reserve as having a high biodiversity importance due to the mosaic of vegetation and ecosystems.

2.4.1 The National Protected Area Expansion Strategy

In an effort to address a lack of effective protection and representation of all vegetation types within the protected areas system, a National Protected Area Expansion Strategy (NPAES, DEAT 2008) has been developed and approved at a national ministerial level. The purpose of the NPAES is to provide a national framework for the expansion and consolidation of the protected area system, focussing on priority areas for representation and persistence of biodiversity.

In terms of the NPAES, areas around the northern boundary of Sileza Nature Reserve are identified as priorities for protected area expansion. The nature reserve falls within Region 24 of the National Protected Area Expansion Strategy focus areas, the Maputaland Delagoa Imfolozi Focus Area in KwaZulu-Natal.

On the basis of the NPAES, at a national level, Sileza Nature Reserve is a strategically important protected area that forms a critical nodal point for the expansion of protected area efforts.

The 20 year Protected Area Expansion Strategy does recognise land around the nature reserve as possible stewardship sites. These sites are located to

the north of the nature reserve and it has been mentioned in the BSP plans for the Umkhanyakude district as possible stewardship sites, as they contain the same vegetation as the nature reserve.

2.4.2 The Provincial Protected Area Expansion Plan

The KwaZulu-Natal Protected Area Expansion Plan (Ezemvelo KZN Wildlife 2010) also identified areas around the borders of SNR as priorities for protected area expansion and the nature reserve forms a key hub in creating a connected protected area system in the region.

Certain areas around Sileza Nature Reserve are characterised by high levels of irreplaceability, largely due to losses of natural habitat within the grassland biome and the individual vegetation types in which they occur. This is exacerbated as the grassland biome and many of its vegetation types are poorly protected.

Land identified as a priority for protected area expansion may be incorporated into Sileza Nature Reserve either through land acquisition or through stewardship agreements, established with individual landowners or communities.

In order to capitalize on these opportunities it is of great importance to resolve all issues regarding the settlement of the land claim and co-management of the area.

2.4.3 EIA Regulations in terms of NEMA

In terms of the National Environmental Management Act (No.107 of 1998) environmental impact assessment (EIA) Regulations, various activities require environmental authorisation before they may commence. In addition, in terms of Regulation RN.546, Listing Notice No.3, there are a number of activities that require environmental approval *specifically* as a result of their proximity to a protected area. The implication of this is that if any of the activities listed in Appendix E are proposed in the nature reserve, or within five kilometres of it, they will be subject to either a basic assessment or a full scoping and EIA process (Figure 2.2). A number of general activities and those proposed for either tourism development or operational management within the nature reserve or its buffer areas will thus also require environmental authorisation.

2.5 The history of Sileza Nature Reserve

2.5.1 Origins of the name of Sileza Nature Reserve

The nature reserve has been given the name “Sileza” which has been adopted from the name of the area surrounding the nature reserve.

2.5.2 History of the area

The following has been extracted from a previous draft management plan for Sileza Nature Reserve:

Most of lowlands in this region were covered by the sea when early man was known to reside in this area. As the sea continued to retreat, the coastal plain provided an important southward migration route for the Bantu people of central Africa. The Tsonga people are known to have traded precious metals, ivory, iron and cloth with the Portuguese from at least the 16th century.

In the 19th century Maputaland assumed a political importance when President Paul Kruger of the Transvaal Boer Republic attempted to procure the area as a potential anchorage site and harbour. It was proposed to create a harbour from Lake Nhlange by cutting through the coastal dunes at Banga Nek.

In 1911, the Amatongaland Rubber Corporation operated in the area. This corporation was described as having half-hearted ideas and was neglected. It later rusted and tumbled down. Thereafter there was an attempt to grow coconuts commercially in the Kosi Catchment area.

In 1921, Mr Denys Reitz further described his journey from Otobotini down the left bank of the Pongolo River, through bush covered plains teeming with game - many hippo and nyala. On the way back along the banks of the river, `lion roared, fish splashed and hippo snorted'.

In 1933, when travelling with General Smuts, after crossing the Hluhluwe River, the country was still swarming with big game. When they were over the Ubombo Mountains and after turning eastwards - where the Tongas were drinking the juice of the `umlala' palm - there were herds of zebra and wildebeest and many nyala. There were many tsetse flies, but the locals had cattle and knew where to keep them. A trader had amassed thousands of tusks which he had hidden in the sand. At `Sibaya' herds of hippo were observed, and turning Northwards, the party travelled over pleasant open country dotted with park-like groves with abundant game and many monkeys; and on reaching Kosi Lakes, the estuary was covered for miles with fish traps (Reitz 1942, `No Outspan', pp 39,40,60-63).

In 1998 it was decided by the Chief Executive of the KwaZulu Natal Nature Conservation Service, Dr G. Hughes, that the administration of the Sileza Nature Reserve and the Tembe Ndumo Complex should be amalgamated and

rationalized. Sileza Nature Reserve became a section of Tembe Elephant Park under the OIC TEP, to be run by a Section Ranger, based at Sileza.

2.5.3 History of Eco-tourism in Sileza Nature Reserve

There have not been any activities of eco-tourism taking place in the nature reserve. There are no plans for eco-tourism development within Sileza Nature Reserve at the moment. It is recommended that no such plans be made until other management issues have been resolved. However there is potential for low impact tourism and the feasibility of this will be investigated.

2.6 Ecological context of Sileza Nature Reserve

2.6.1 Climate and weather

Sileza Nature Reserve experiences a warm to hot subtropical climate, with a high annual average of humidity and even drier conditions towards the inner regions. Winter months experience drier weather compared to summer months although rain is experienced throughout the year. Mean annual temperatures fluctuate between 21 degrees Celsius along the coast to 18 degrees Celsius towards the inner regions. Mean annual rainfall decreases from an average of 1200 – 1400mm along the coastal region to an average of 831mm in the nature reserve.

2.6.2 Topography

Sileza Nature Reserve is located on uneven sand ridges with various low points forming pans and swamps due to a high water table and poor drainage. The low lying, flat areas do not allow for rapid water movement which hinders channel formation and an increase of wetland areas. The lowest region of the reserve is situated at just over 79 metres above sea level and the highest point at 99 metres above sea level.

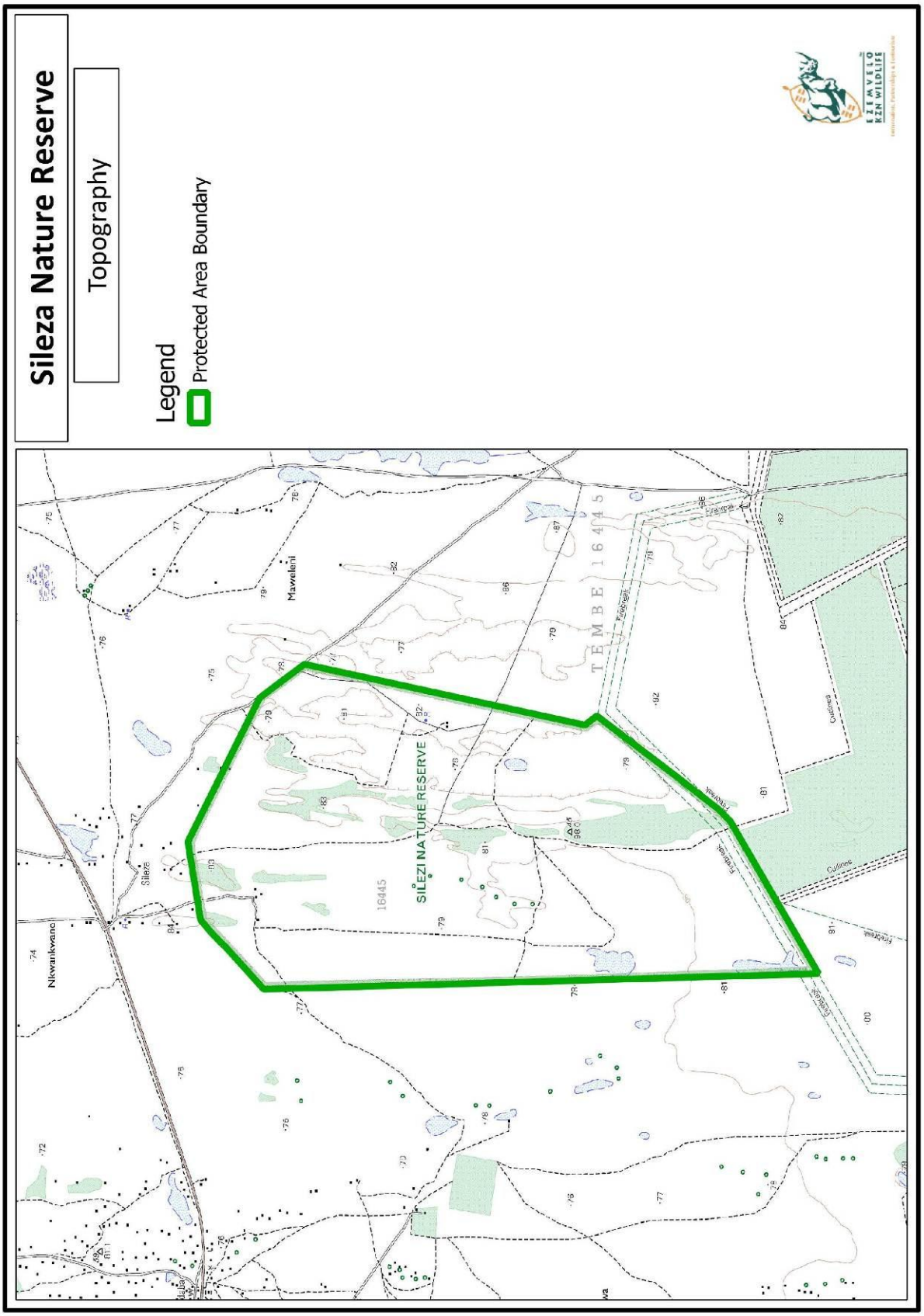

Figure 2.1 Topography of Sileza Nature Reserve

2.6.3 Geology and soils

Sileza Nature Reserve is dominated by sandy soils which by nature are very susceptible to erosion and unstable (making them very erodible). These soils tend to have accelerated erosion under poor land uses and in areas that the top soil is exposed. This accounts for the unstable and erodible roads within the nature reserve on the slopes.

The soil has been developed from relatively homogenous, grey, siliceous, Aeolian sands. Most of the soils are acidic in nature and show extreme forms of leeching.

According to Matthews (1999), there are three main soil types present, namely, dystric regosols (SA-Namib), histosols (SA-Champagne) and humic gleysols. Histosols are found in swampy areas and pans, as they are sour organic soils with organic rich A horizons. Dystric regosols are moderate to well drained acidic sands found in elevated places such as dune crests and slopes. Humic gleysols have an abnormal accumulation of organic matter and are usually found in areas with a high water table and regarded as wet acidic sands.

2.6.4 Hydrology

According to Matthews (1999), Sileza Nature Reserve has a shallow water table which extends to a depth of 7-15m below ground level. The exact ground water level is difficult to determine as a number of factors such as ground water movement, topography, rainfall and surrounding land use practices influence each other. Ground water is replenished by rainfall which then feeds marshes and pans in the nature reserve. The general flow of water in the area is in an easterly direction, away from the watershed. Various freshwater wetlands occur in the nature reserve especially in the southern sections of the reserve. Water levels fluctuate as mentioned above.

2.6.5 Vegetation

Sileza Nature Reserve has been classified into the following vegetation types according to the KZN Vegetation Map 2011:

- Licuati Sand Forests : Eastern Licuati Sand Forest
- Maputaland Coastal Belt
- Maputaland Wooded Grassland
- Subtropical Freshwater Wetlands

The following vegetation descriptions have been extracted from the KwaZulu Natal Vegetation Type Description Document for Vegetation Map 2011:

2.6.5.1 Licuati Sand Forests: Eastern Licuati Sand Forest

- **Distribution:**

Found in KwaZulu-Natal and Mozambique: Occurring in a broad and highly fragmented belt in South Africa from False Bay Park (Greater St Lucia Wetland Park) in the south to the national border with Mozambique (Tembe Elephant Park, Ndumo Game Reserve and Sileza Nature Reserve). The main distribution of this forest is in Maputaland, where still reasonably extensive patches of this forest can be encountered. There are special thicket communities, floristically very close to the Maputaland sand forest, which are found in the northern part of the Kruger National Park—here imbedded within Nwambyia and Pumbe sandvelds. They occur at low altitudes between 20 and 160 m, with about half of the area between 100 and 120 m.

- **Vegetation and Landscape features:**

Dense thickets of 5-6 m (=short forest' of Matthews et al. (2001)) up to tall forests with the canopy reaching 15 m (=tall forest' of Matthews et al. (2001)) exist, with a well-developed shrub layer and very poorly developed ground layer. The dominant trees are *Cleistanthus schlechteri, Dialium schlechteri* and emergent *Newtonia hildebrandtii* in Maputaland, whereas *Baphia massaiensis subsp. obovata, Cleistanthus schlechteri* and *Guibourtia conjugata* are most conspicuous in the tree layer in the Nwanbyia and Pumbe regions. The shrub layer is dominated by *Croton pseudopulchellus*, *Cola greenwayi, Pteleopsis myrtifolia, Psydrax locuples, Drypetes arguta* and the woody climber *Uvaria lucida*. The most conspicuous graminoid in the herb layer is *Eragrostis moggii*. Epiphytic orchids and lichens festoon the tall trees.

2.6.5.2 Maputaland Coastal Belt

- **Distribution:**

Found in KwaZulu-Natal (and continuing in southern Mozambique) and forming up to a 35 km broad strip along the coast of the Indian Ocean stretching from the Mozambique border in the north to Mtunzini in the south. The altitude varies from about 20–120 m.

- **Vegetation and Landscape features:**

The flat coastal plain was originally probably densely forested in places with a wide range of interspersed non-forest plant communities including dry grasslands (which include palm veld where special conditions prevail), hygrophilous grasslands and thicket groups. Today the vegetation landscape is composed of pockets of various forest types (separated into different vegetation units), thickets, primary and secondary grasslands, extensive timber plantations and cane fields. The Indian Ocean Coastal Belt immediately inland (only a few kilometres wide) and parallel to the line of the Northern Coastal Forest has a characteristic appearance of very irregular

dunes with generally open vegetation and *Syzygium cordatum* dotted predominantly on the dunes with many irregular dune slacks interspersed. There is little to suggest that this part of the vegetation e.g. between Lake Sibaya and Kosi Lake, is secondary.

2.6.5.3 Maputaland Wooded Grassland

- **Distribution:**

Found in South Africa from the Mozambique border near KwaNgwanase southwards to Sileza, Sibaya, Mseleni, Mbazwana, Sodwana Bay, Ozabeni, eastern and western shores of Lake St Lucia, KwaMbonambi and as far south as near Richards Bay. Altitude varies from about 20–120 m.

- **Vegetation and Landscape features:**

It has a generally flat landscape of the Maputaland coastal plain supporting coastal sandy grasslands rich in geoxylic suffrutices, dwarf shrubs, small trees and very rich herbaceous flora. Excluded from this unit are the many inter-dune depression wetlands and hygrophilous grasslands neighbouring the wooded grasslands

2.6.5.4 Subtropical Freshwater Wetlands

- **Distribution:**

Found in KwaZulu-Natal, Mpumalanga, Gauteng, North-West, Limpopo and Eastern Cape Provinces as well as in Swaziland. These wetlands are embedded within the Albany Thicket Biome, the Coastal Belt from Transkei as far as Maputaland as well as those of the Lowveld and the Central Bushveld regions. Their altitudes range from 0–1 400 m.

- **Vegetation and Landscape features:**

The flat topography supporting low beds containing reeds, sedges and rushes and water logged meadows are dominated by grasses. Found typically along edges of often seasonal pools in Aeolian depressions as well as fringing alluvial backwater pans or artificial dams.

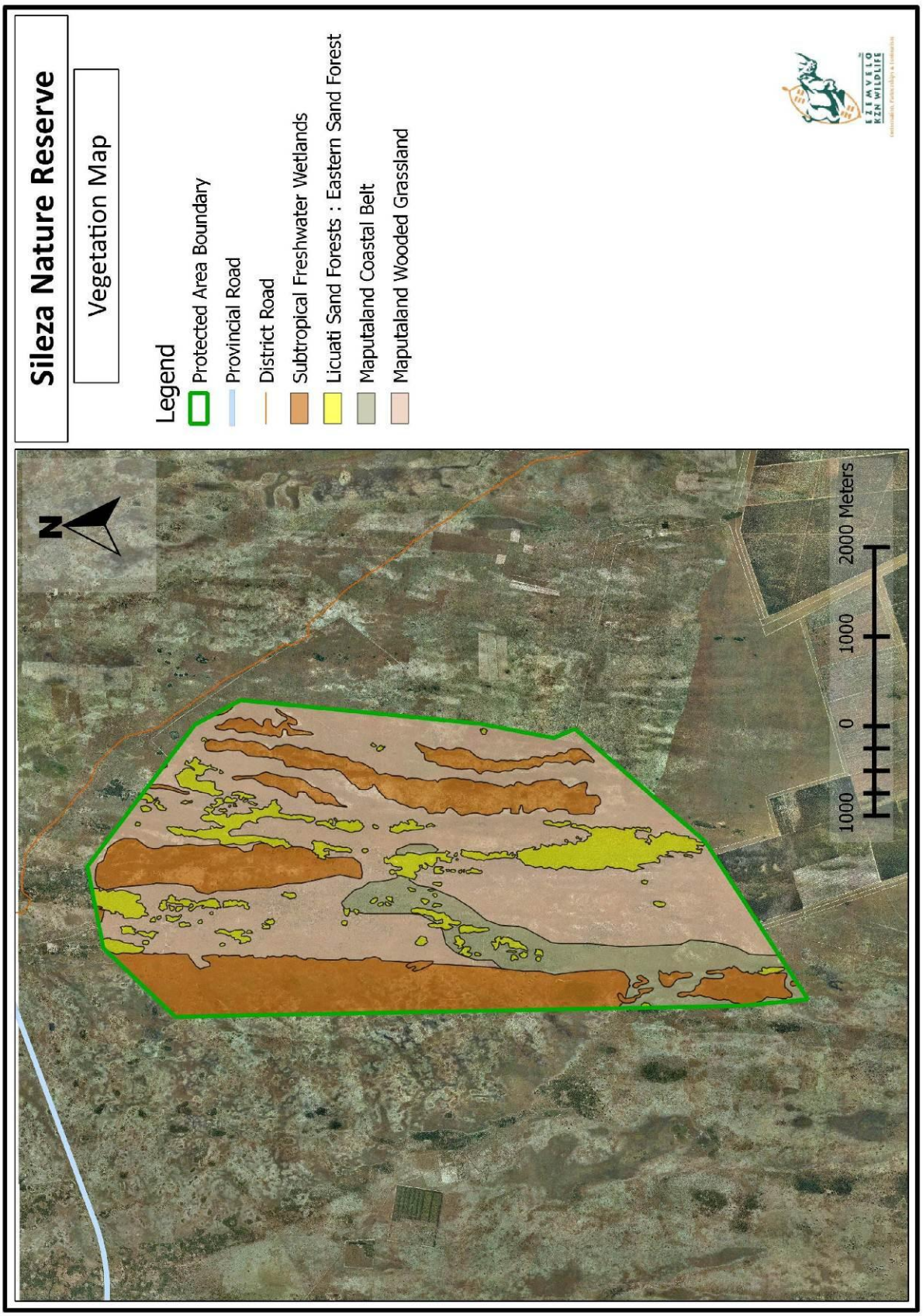

Figure 2.2 Vegetation of Sileza Nature Reserve

2.6.6 Fire regime

Fire plays an important role in the ecological dynamics of grasslands and wetlands, and has important effects on vegetation composition, primary productivity and nutrient cycling.

The absence of a fire regime would lead to an expansion of forest at the expense of the grassland. In the absence of fire, the grassland would be less species rich. Defoliation and subsequent plant growth caused by fire provides nutritious food for herbivores, and is important for their survival. The frequency, timing and nature of fire, coupled with climatic conditions and herbivore numbers, determines the effect of fire on the system.

In developing burning and fire management strategies for the nature reserve, the following guiding principles should be adhered to:

- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape.
- A patch mosaic of burnt and un-burnt areas should be maintained.
- The burning of areas should be undertaken in such a way that promotes patchy burns (i.e. within the block being burnt, some patches will remain un-burnt rather than aiming for a complete burn).
- Burning must be undertaken with due consideration to the biodiversity conservation requirements of the nature reserve and the need to protect rare and endangered species.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act (No.101 of 1998).

2.6.7 Invasive species

A listed invasive species means any species, which is listed in terms of section 70 of the Biodiversity Act, whose establishment and spread occurs outside of its natural distribution range. Such plants are considered to be a serious threat to the ecological functioning of natural systems and to water production, and must be strictly controlled.

There have not been any incidents of invasive species in Sileza Nature Reserve however regular monitoring should continue during patrols and all staff should be educated on invasive species. Infrastructure within the reserve that houses fauna, which has been transported from other reserves, should be monitored carefully, as invasive species can spread from one reserve to another in this way.

In undertaking invasive plant control, the following guiding principles will be adhered to:

- When new fauna are brought into the bomas, their droppings should be disposed of outside of the nature reserve.
- Areas around the bomas should be inspected regularly for invasive species that were brought in with new fauna or fodder.
- Invasive plant control will require an on-going programme that prioritizes key infestations along water courses, drainage lines and catchment areas.
- Initial clearing efforts should focus on containing infestations that are most likely to spread into new areas.
- All follow-up requirements must be strictly adhered to otherwise the problem will be exacerbated.
- Strategic partnerships and poverty relief programmes such as the Working for Water programme should be utilized in controlling invasive plants.

2.6.8 Mammalian fauna

The mammalian fauna within Sileza Nature Reserve is not fully understood. Although we do rely on the Biodiversity Database, the information is out dated as the presence of Suni (*Neotragus moschatus zuluensis*) in the reserve has not currently been established.

The Ezemvelo Biodiversity Database for Sileza Nature Reserve lists the Side-striped jackal (*Canis adustus adustus)* as a near threatened species and the Southern Reedbuck (*Redunca arundinum arundinum*) as a protected species. The nature reserve provides a habitat for one of the healthiest populations of Waterbuck (*Neotragus moschatus zuluensis)* in KwaZulu-Natal.

A full mammalian fauna inventory list should be populated and fed back into the Biodiversity Database.

For a full list of fauna present in the reserve, refer to Appendix F.

2.6.9 Avifauna

Sileza Nature Reserve is located in close proximity to the Isimangaliso Wetland Park and Ndumo Game Reserve. These two parks are recognized as International Bird Areas. It wouldn't be uncommon to spot important birds in the vicinity of Sileza Nature Reserve.

The Biodiversity Database does have recordings of bird species such as the Secretarybird (*Sagittarius serpentarius*) and Red-winged Pratincole (*Glareola pratincola*) which is near threatened; Martial eagle (*Polemaetus bellicosus*), African Marsh-Harrier (*Circus ranivorus*) and Stanley's Bustard (*Neotis denhami*) which are Vulnerable. The Saddle-billed stork (*Ephippiorhynchus senegalensis*) is endangered but has not been sighted in the reserve.

A full avifauna inventory is currently not available.

For a list of birds recorded, see Appendix F.

2.6.10 Herpetofauna (reptiles and amphibians)

Reptiles and amphibians play an important part in the ecosystem as certain species serve as bio-indicators since they are sensitive to environmental factors. Much remains to be discovered about the reptile and amphibian species complement of the reserve, their life histories, inter-relationships and contributions to the functioning of its ecosystems.

No formal surveys have been done, although the Biodiversity database does list two amphibians, the Edible bull frog (*Pyxicephalus edulis*) and the Banded rubber frog (*Phrynomantis bifasciatus*) as being present in the reserve.

Sileza Nature Reserve does provide habitats to the Serrated hinged terrapin (*Pelusios sinuatus*), Flap-neck chameleon (*Chamaeleo dilepis dilepis*) and the Fornasini's blind snake (*Typhlops fornasinii*) which all are restricted to KwaZulu-Natal.

For a full list reptiles and amphibians, refer to Appendix F.

2.6.11 Invertebrates

Invertebrates play critical roles in the functioning of all ecosystems as they are responsible for maintaining soil fertility, waste disposal, water purification, pest control and pollination. Few studies quantifying the contribution of invertebrates to these processes have been carried out in South Africa, but internationally the complexity of the invertebrate interactions required to sustain ecosystems and even in influencing the structure of plant communities is becoming increasingly evident. Several invertebrates, such as termites, are considered to be keystone species. Termites recycle large quantities of plant biomass into the soil and keep the soil porous with their tunnelling, allowing water to infiltrate the soil profile. Earthworms play a similar role and are more diverse and widespread in the reserve grasslands than termites. Pollination of a large proportion of flowering plants, including endemics, is dependent on a range of insect groups, such as bees, wasps, flies, and butterflies. In some cases the survival of locally endemic plant species is linked to pollination by a single insect species.

Several invertebrate species occur in the reserve such as the Zulu Buff (*Teriomima zuluana*) and Large Vagrant (*Nepheronia argia varia*) which are restricted to KwaZulu-Natal and endemic to South Africa. The Spotted Buff (*Pentila tropicalis tropicalis*) and Millar's Buff (*Deloneura millari millari*) are near-endemic to KwaZulu-Natal and endemic to South Africa. The Confusing Sandman (*Spialia confuse confusa*) has been listed as rare.

The millipede (*Orthoporoides corrugatus)* is reflected in Table 6.7 Systematic biodiversity planning conservation targets to which Sileza Nature Reserve contributes.

A full list of Invertebrates can be found under Appendix F.

2.7 Cultural context of Sileza Nature Reserve

There are no cultural sites or items within the nature reserve. As discussed at the stakeholder workshop, the reserve was previously used as traditional hunting grounds. During certain times in a year, the local Induna would allow hunting but at a controlled level. The communities were only allowed to hunt a certain number of animals and in this way – controlled the population numbers of animals and prevented total loss of a certain species from that area. People from the local communities previously harvest traditional fruits, medicinal plants and thatch, from the area. The white fine sands found in the reserve was used as building sand for the local communities.

2.8 Socio-economic context

Sileza Nature Reserve is located in the Local Municipality of Umhlabuyalingana and the District Municipality of Umkhanyakude. Umhlabuyalingana has an area of 3621 km^2 and is located in the North Eastern part of KwaZulu-Natal. It has a population of approximately 163 694 people with an average household size of 6 people per household. 99% of the municipal area is classified as rural. Close to 60% of land falls under the ownership of traditional authorities with the remaining 40% made up of conservation areas and commercial farms.

The population in the Umhlabuyalingana municipal area is predominantly African, while the White, Coloured and Indian/Asian communities make up less than 1% of the total population.

Only 52% of the population is economically active and from that 52%, only 3% earns more than R1600 per month with 47% earning, less than R1600 per month or receives no income.

Agricultural production contributes about 20% and the secondary sector, consisting of manufacturing, electricity, gas and water supply, contributes 10% to the gross domestic product (GDP) of the municipality. The economic wealth of the municipality relies solely on tertiary services, with community services accounting for about 70% of the GDP.

Out of a total population of 163 694, 2% obtained a tertiary education, 8% completed grade 12 and higher education, 57% did not complete grade 12 and 18% has had no formal education.

There has been an increase in water supply to household's from 30.06% in 2001 to 48.30% in 2007. This is vital as the area has been experiencing an 11

year drought. Water is scarce in these parts of the country due to the drier region and inappropriate land use.

The impacts of HIV/AIDS have had a severe consequence on the socio economic development of the area. This is evident in the relatively low life expectancy rates and lower potential years of economic productivity. Life expectancy in that region is as low as 43.1 years. Female life expectancies are slightly higher at 44.5%.

Households are faced with a high number of occupants per household whilst receiving a low income per household. It is evident in this area, that communities are poor and mainly rely on natural resources. There are low levels of Education levels within the area and programmes to educate the local communities about the reserve would benefit them.

2.9 Operational management within Sileza Nature Reserve

2.9.1 Infrastructure

The boundary of Sileza Nature Reserve is fenced with approximately 20km of fence which is approximately 2m in height. There are 3 vehicular entrance gates to the reserve, but only the main gate located off the P522 is used to enter on a daily basis. The gate on the western side of the reserve is used by Ezemvelo Game Capture Unit when capturing game and/or utilizing the bomas situated in the reserve. At the main entrance of the reserve, a security hut has been built to station a security guard and control access in and out of the reserve which is currently not in use.

The responsible Manager of the reserve resides at the main house within the reserve located towards the North West region approximately 800m from the main gate. The 4 field rangers are housed in the 2 staff accommodation units located in the field ranger camp site which is to the east of the manager's house. A single communal ablution facility has been provided for the staff and consists of 2 sets of showers, basins and toilets. The single ablution block make's use of a septic tank and soak away system.

A 5000 litre water tank is also present in the field ranger camp. Water is fed into the tank via a pump and water is extracted from a single borehole.

Addition housing quarters has been brought in to the field ranger camp by the South African Police Services (SAPS), as they have an agreement with Ezemvelo KZN Wildlife to house their staff on the nature reserve. They are currently using the same ablution facilities as the field rangers and consume water from the water tank (See Appendix I for Agreement).

2.9.2 Staffing establishment

At present, Sileza Nature Reserve is being managed by a Section Ranger from Tembe Elephant Park. There is 4 permanent staff stationed at Sileza Nature Reserve which has been sourced from Tembe Elephant Park. On various

occasions staff has been rotated between Sileza Nature Reserve and Tembe Elephant Park but the number of staff at Sileza Nature Reserve have always been maintained at 4. During firebreaks and routine maintenance, if additional staff is required, they should be sourced from Tembe Elephant Park and temporary staff, from the local community.

2.9.3 Funding levels at Sileza Nature Reserve

Sileza Nature Reserve falls under the management of Tembe Elephant Park. The nature reserve does have its own operational budget which is extracted from the Tembe Elephant Park budget. In the future Sileza Nature Reserve should have its own cost centre and budget separate from Tembe Elephant Park as it will have its own independent management plan. There are no additional sources of funding even though this avenue should be investigated.

2.9.4 Management effectiveness in Sileza Nature Reserve

In 2010 Ezemvelo KZN Wildlife conducted management effectiveness assessments for all of its protected areas (Carbutt and Goodman 2010). Management effectiveness assessments consider protected area design, the appropriateness of management systems and processes, and delivery of protected area objectives. Such assessments are intended to enable conservation organisations to refine their conservation strategies, re-allocate budget expenditures, and develop strategic, system-wide responses to the most pervasive threats and management weaknesses (Carbutt and Goodman 2010). They are not performance assessments of individuals but serve to reflect an organisation's proficiency for protected area management as a whole.

Sileza Nature Reserve achieved a management effectiveness score of 64% in the 2010 assessment which dropped down to 62% in 2013. It was decided that an individual management plan for Sileza Nature Reserve would boost its scores and push it over the 67% national standard. The following issues were highlighted through the assessment:

- The nature reserve scored low because it was not independent in terms of a management plan and operational budget.
- There is a lack of maintenance of infrastructure in the nature reserve.
- There is a lack of tourist activities within the nature reserve.
- There has been poor land-use planning and water management.
- The reserve lacked an education and awareness plan.
- And to a lesser extent – operational issues such as staffing numbers, skills and skill development, budgets and equipment.

2.10 Summary of management issues, challenges and opportunities

The following specific issues have been identified within the nature reserve.

Table 2.9.1 Management challenges, issues and opportunities

Key performance area	Issue that must be addressed
Legal compliance and law enforcement	▪ Legal agreements between Ezemvelo KZN Wildlife and South African Police Services regarding accommodation are outdated.
	▪ Free movement of people at the main gate – no security or lock.
	▪ Issues of arson fires.
	▪ Poaching of wildlife in the nature reserve.
Stakeholder engagement	▪ Stakeholder relationships need to be maintained.
	▪ Uneven relationships between Ezemvelo KZN Wildlife and surrounding local communities.
Buffer zone protection and regional management	▪ Possibility of land extension in south west section.
	▪ Alignment of the nature reserve with municipal planning documents including IDPs and SDFs.
Eco-tourism development	▪ Alignment of proposed low impact eco-tourism facilities with municipal development corridor.
	▪ Lack of picnic sites in the reserve to enjoy the scenic areas.
Conservation management	▪ Spread of emerging weeds such as Parthenium.
	▪ Game management such as monitoring zebra and waterbuck.
	▪ Management of rare and endangered species that occur within the Nature reserve.
	▪ Accelerated soil erosion and instability related to infrastructure such as roads.
	▪ Controlled harvesting of natural resources.
Operational management	▪ Poor condition of infrastructure.
	▪ Road from main gate to the accommodation is in poor condition.
	▪ No signage of the nature reserve.
	▪ Inadequate staff and accommodation for staff.
	▪ Lack of access to the nature reserve.
	▪ Insufficient employment of local people.

3) STRATEGIC MANAGEMENT FRAMEWORK

In an effort to ensure that Sileza Nature Reserve is effectively managed, the following strategic framework has been developed. It is aimed at providing the strategic basis for the protection, development and operation of the nature reserve has been prepared collaboratively through a process involving stakeholders within Ezemvelo KZN Wildlife, the communities around the nature reserve, local and provincial government departments and other stakeholders.

The vision describes the overall long-term goal for the operation, protection and development of Sileza Nature Reserve. The objectives and strategic outcomes that follow are intended to provide the basis for the achievement of the vision. The objectives provide a broad description of the goals for each key performance area. The strategic outcomes, which flow from the objectives, set out what is needed to achieve the objectives, based on the management challenges, issues and opportunities described in Section 2 above.

3.1 Sileza Nature Reserve vision

A well-protected Nature Reserve aimed at maintaining the existing habitat and its associated biodiversity, as well as improving the quality of life for the local people, through biodiversity conservation and sustainable resource use.

3.2 Objectives and strategic outcomes

An objective has been identified for each of Sileza Nature Reserve key performance areas, which follow from the management challenges, issues and opportunities, and relate to the important functions and activities necessary to protect, develop and manage it effectively. The objectives have then been translated into strategic outcomes, which form the basis for the management activities and targets set out in the operational management framework, described in Section 6 below. Table 3.1 sets out the key performance areas, the objective for each key performance area and the strategic outcomes, required to realise the objectives.

Table 3.1 Objectives and strategic outcomes for Sileza Nature Reserve

Key performance area	Objective	Strategic outcome
Legal compliance and law enforcement	Maintain a high level of security within Sileza Nature Reserve in order to protect its integrity and natural environment in collaboration with the justice system	▪ Up-to-date legal agreements between Ezemvelo KZN Wildlife and the South African police Services. ▪ There is adequate law enforcement within the nature reserve.
Stakeholder engagement	Establish and maintain effective and cordial relations with neighbouring communities and stakeholders in order to ensure effective management of the nature reserve to the benefit of the environment and surrounding neighbours	▪ Constructive community involvement in the nature reserve's management through an effectively functioning Community Liaison Forum. ▪ Facilitate research and partnerships with educational institutions.
Buffer zone protection and regional management	Integration of the nature reserve requirements into regional and municipal plans, and management with neighbouring communities in order to create a buffer zone	▪ Align municipal and regional planning documents to that of the requirements of the nature reserve.
Eco-tourism development	Investigate opportunities for low impact visitor activities and environmental awareness	▪ Determination of a tourism market profile, through tourism market research for the nature reserve. ▪ Promote tourism in the area through collaboration with local municipality tourism initiatives and Ezemvelo marketing programme. ▪ Development and implementation of an environmental interpretation and education programme.
Conservation management	Protect the ecosystem functioning, ecological integrity and species of the reserve through interventions based on principles of adaptive management	▪ Development and implementation of the comprehensive fire management plan for the nature reserve. ▪ Adequate fire safety within the nature reserve is ensured. ▪ Development of an invasive species control plan for the nature reserve including the bomas situated inside the reserve. ▪ Identify and rehabilitate areas that have been affected by soil erosion as a result of vehicles. ▪ Implementation of procedures to manage alien animals found within the nature reserve.

		▪ Determine the value of the Eco-system goods and services that Sileza Nature Reserve provides. ▪ If extractive resource use is undertaken, it is done legally and conforms to NEMBA Chapter 6, and the nature reserve's zonation plan. ▪ If bioprospecting is undertaken, it is done legally and conforms to NEMBA Act Nu 10 of 2004 Chapter 6, and the nature reserve's zonation plan. ▪ Implement a strategy for the management of wildlife in the nature reserve in accordance with Ezemvelo KZN Wildlife policies. ▪ Implementation of the strategy for human animal conflict. ▪ Gain a better understanding of flora and fauna within the nature reserve. ▪ Processes are established to determine the success of management interventions in protecting the ecosystems, communities and species of the nature reserve. ▪ Ensure the conservation targets of endangered and threatened species are met. ▪ Rare and endangered species management is undertaken based on the best available scientific knowledge.
Operational management	Provide adequate human resources, equipment and funding to enable the effective protection, development and management of Sileza Nature Reserve	▪ Development of a financial plan that identifies the resource needs to achieve the objectives for the nature reserve. ▪ All facilities and infrastructure in the nature reserve are adequately maintained. ▪ The nature reserve is adequately staffed for its effective management and operation.

4) ZONATION PLAN

The purpose of zonation within a protected area is to identify types and levels of usage that are acceptable based on an area's sensitivity and resilience, and to manage visitor experience and inter-user conflict. Zonation is used to identify areas in which infrastructure may be located.

4.1 Zonation of Sileza Nature Reserve

A standardised zonation system has been developed for all of Ezemvelo KZN Wildlife's protected areas. This system enables a protected area to be zoned according to six categories, which are spread along a continuum, starting from pristine wilderness. The zonation system recognises and reflects:

- Sensitive features associated with a protected area (i.e. biophysical, cultural and sense of place).
- A general gradation in the zonation categories, in which the next use level provides a buffer to the lower use level.
- Influence of existing and historic facilities, infrastructure and use.
- Opportunities and constraints (biophysical, social or managerial constraints) for use.

The final management zonation is a composite of ecological zonation (based on natural resource sensitivity), sense of place, cultural features, patterns of environmental settings, and existing development and use patterns. The final zonation map is represented as a desired state, i.e. directing management towards a vision for each zone, which reflects and respects the broader conservation and eco-tourism objectives for the protected area. Biophysical features that are readily located on the ground have been used to demarcate and delineate the zone boundaries.

The criteria used to determine each zone are described as:

Key feature protection overlay	▪ An area that is vulnerable or scientifically important where specific additional controls are imposed in order to prevent undesirable impacts. ▪ This zone overlay other zones instituting site specific rules and regulations in addition to the restrictions of the underlying zone.
Low use zone	▪ An area where the ecotourism principles of low human impact will prevail. ▪ This area is characterised by facilities of a rustic nature such as overnight hiking huts. ▪ Motorised access is low key and there are limited management roads and tracks.
Moderate use zone	▪ This is also an area in which the ecotourism principles of low human impact will prevail, but higher levels of usage are permitted. ▪ This area includes the main tourism road network, including

	access and game viewing roads. ▪ Infrastructure is accessible by motorised access in this area.
Tourism development node	▪ This is a node within the moderate use zone, which includes commercial tourism developments such as lodges, picnic and camping sites.
Park management node	▪ This is a node within the moderate use zone, which includes facilities for staff accommodation, administrative offices and operational infrastructure.
Preliminary buffer zone	▪ This is outside of a protected area, where actions and agreements are taken to protect its integrity. ▪ It is an area in which the protected area managers work collaboratively with neighbours and municipalities to try to ensure land uses that are compatible with the protected area.

Figure 4.1 depicts the proposed zonation layout for Sileza Nature Reserve. The Reserve has been zoned within the following classes low use zone, moderate use zone and the key feature protection overlay zone which are placed over areas that require additional protection. The majority of the reserve is zoned as the low use zone which allows for low human impact. A small square unit in the north of the reserve has been zoned as moderate use which allows low human impact but higher levels of usage. This area also includes two nodes: namely the park management node and tourism development node. The park management node includes areas for staff accommodation, administrative offices and operational infrastructure whilst the tourism management node which is also placed in the moderate use zone allows for commercial tourism developments. A key feature protection overlay has been placed over the Lucati Sand Forest which is present within the moderate use zone. This allows for development within the moderate use zone but with minimal impact on the Lucati Sand Forest.

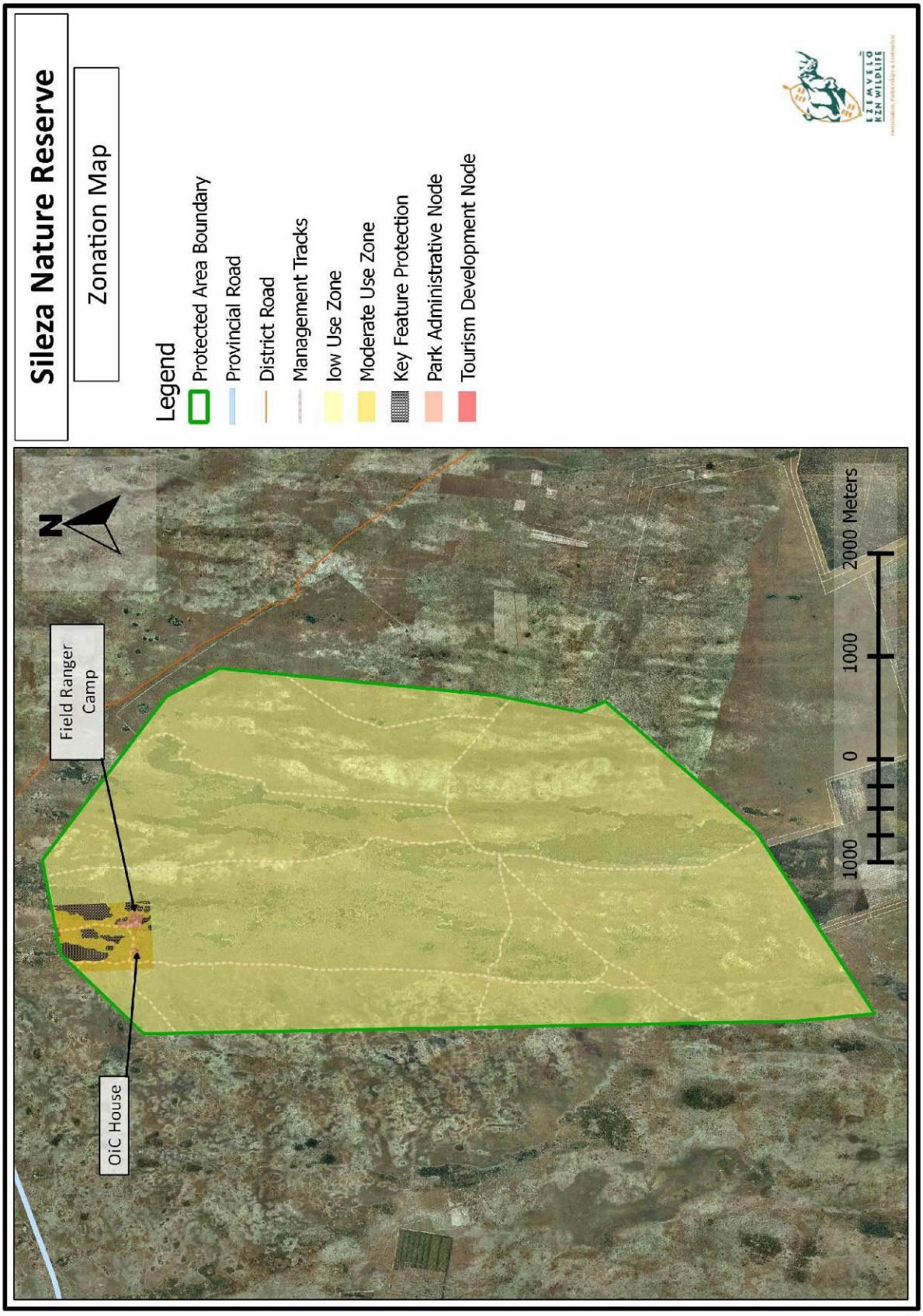

Figure 4.1 Zonation Map of Sileza Nature Reserve

4.2 Concept development guidelines

The purpose of the zonation of Sileza Nature Reserve is to control the intensity and type of use within it, in efforts to ensure the overriding goals of biodiversity conservation are met whilst enabling acceptable levels of eco-tourism and other resource use. On this basis, within some zones, the permissible intensity of use will be relatively higher than in others.

<table>
<tr><th colspan="2">Low Use Zone</th></tr>
<tr><td colspan="2">Description:
An area where there is little evidence of modification of natural processes and landscapes, that is more sensitive than the moderate use zone and where the ecotourism principles of low human impact will prevail. The zone also serves as a buffer to the wilderness zone.</td></tr>
<tr><td colspan="2">Objective:
To designate an area for tourism experiences and management activities that are focused primarily on low impact activities and where general sensitivity requires that management and tourism impacts on the natural landscape should be mitigated.</td></tr>
<tr><th>Permissible activities and infrastructure</th><th>Constraints and implementation</th></tr>
<tr><td>▪ Facilities of a rustic nature such as small bush camps, hides, hiking and formalised trails.
▪ Management activities must focus on protecting park resources and core values.
▪ Limited management roads and tracks.
▪ Controlled extractive resource use in line with EKZNW policies and norms and standards.</td><td>▪ Activities are mostly low impact and low density.
▪ No modern facilities such as restaurants and shops are permissible in this zone.
▪ Where possible, facilities should be developed on the periphery of the zone towards the less sensitive adjacent zone.</td></tr>
<tr><th colspan="2">Moderate Use Zone</th></tr>
<tr><td colspan="2">Description:
An area where natural processes and the landscape may be altered to support protected area operation. This zone is less sensitive than the low use zone and this is where experiences, facilities, infrastructure and services are provided to visitors and where general park management activities can take place.</td></tr>
<tr><td colspan="2">Objective:
▪ To designate a tourism area that is primarily focused on visitor experience while still securing the values of the protected area.
▪ To designate an area that serves the operational and support functions of the protected area.</td></tr>
<tr><th>Permissible activities and infrastructure</th><th>Constraints and implementation</th></tr>
<tr><td>▪ Hiking on formalised trails.
▪ The tourism road network including access roads and game viewing roads.
▪ Traditional game viewing routes with associated more formalized infrastructure.
▪ Infrastructure is accessible by motorized access.
▪ Management roads and tracks.
▪ Management activities are directed to maintaining park infrastructure for biodiversity conservation, park</td><td>▪ Within the moderate use zone a specific Tourism development node will be defined which could include areas of commercial use.
▪ Where possible this node should be outside the protected area.
▪ The node should preferably be on the periphery of the Moderate and Low use zone, this will ensure a quality visitor experience in the lower use zone but place the bulk of the impact e.g. access roads and services in the Moderate use zone.
▪ This node should be developed in the less</td></tr>
</table>

operations, equipment and material storage.
▪ Controlled extractive resource use.
	sensitive part of the moderate use zone.
	▪ The Tourism development node can only be developed in areas where it does not compromise the values of the protected area.
	▪ The node must have a specified footprint.
	▪ Examples of developments in a Tourism development node include:
	  ▪ Small, medium and large resorts.
	  ▪ Lodges
	  ▪ Rock Art Centre
	  ▪ Restaurants
	  ▪ Picnic Areas
	  ▪ Camping sites
	▪ **Park Administrative Node** (Within the Moderate use zone)
	▪ Facilities include staff accommodation, administrative offices, other operational required infrastructure, bomas and waste handling sites etc.
	▪ Wherever possible facilities and infrastructure related to park operations should be located outside of the protected area. If not possible they will form part of this node.
	▪ The node must have a specified area as a footprint.

Protected Area Buffer Zone	
Description:	
An area outside the boundary of the protected area where actions are taken and agreements are made to protect the integrity of the protected area and to enhance the livelihoods of protected area neighbours.	
Objective:	
To influence land use adjacent to the protected area to manage external pressures and threats that may threaten its values and objectives.	
Permissible activities and infrastructure	**Constraints and implementation**

Each protected area must define these activities in terms of its specific values and objectives and taking into consideration the following:
▪ Alien and invasive species
▪ Pollution
▪ Impact on sense of place or wilderness
▪ Habitat fragmentation and isolation
▪ Water resource protection
▪ Damage causing animal management
▪ Climate change adaptation
▪ Compatible land use
▪ Priority species management
	▪ It is desirable for the intensity of land use to decrease closer to the protected area.
	▪ Discourage activities that are not compatible with the adjacent protected area zonation.
	▪ Management activities will focus on:
	  ▪ Strategically promoting and monitoring compatible land-use and land-care on adjacent lands and upstream catchments
	  ▪ Integrated alien species control
	  ▪ Biodiversity stewardship and environmental awareness
	  ▪ Working collaboratively with neighbours to secure sensitive sites that contribute to the protection of values and objectives of the protected area.
	▪ Influencing and input into the municipal and regional planning tools such as SDF's, Schemes, IDP's and Bioregional plans.
	▪ Park management is responsible for the buffer zone management and planning.
	▪ The Buffer should spatially indicate the 5km

	and 10 km border of listed activities as per National Environmental Management Act No. 107 of 1998 Notice 3 of 2010.

5) ADMINISTRATIVE STRUCTURE

A recommended organisational structure for Sileza Nature Reserve is set out in Figure 5.1. The figure represents the staff complement and positions that are required to enable the effective operation, management and protection of Sileza Nature Reserve.

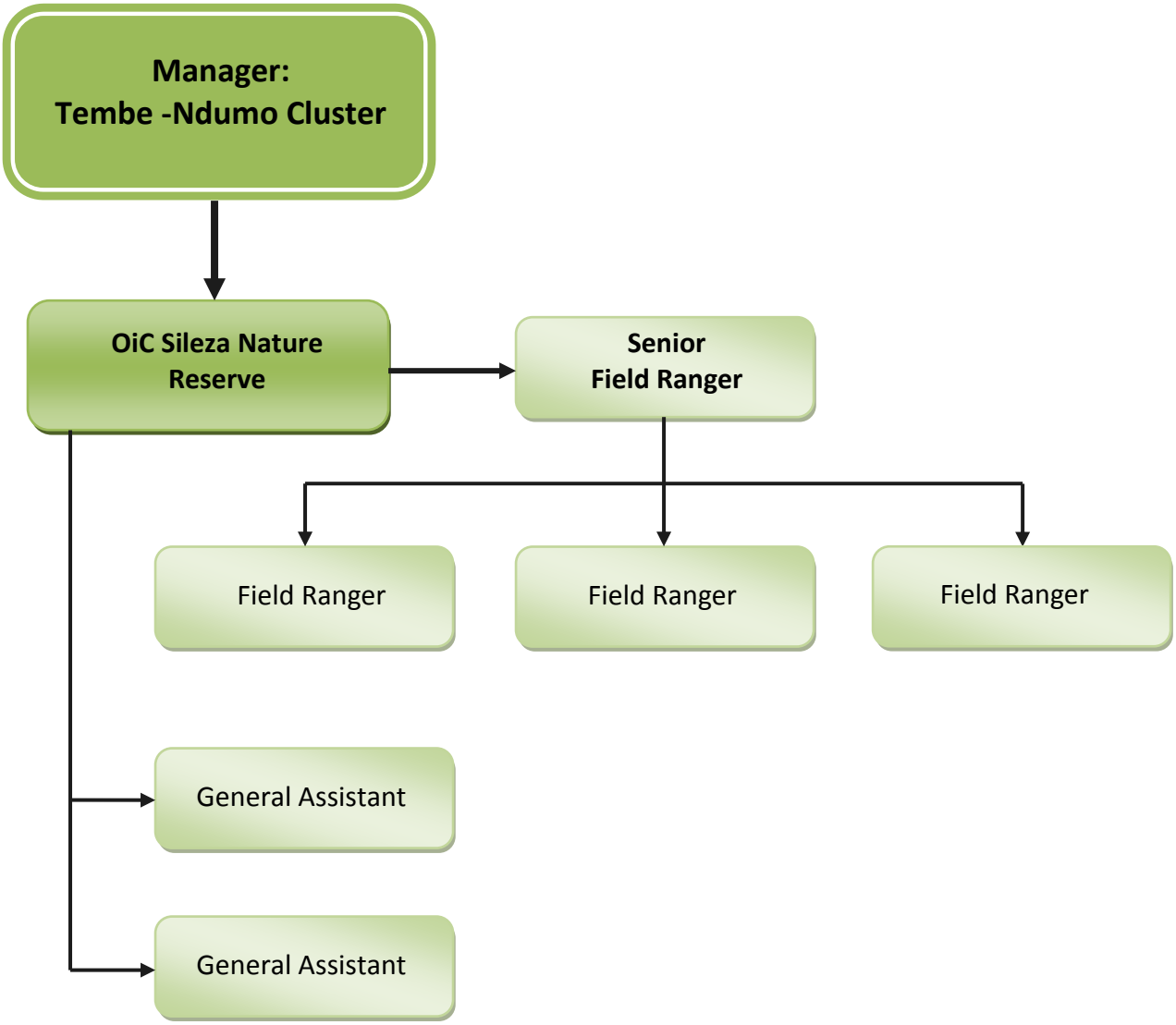

Figure 5.1 Recommended organisational structure for Sileza Nature Reserve

6) OPERATIONAL MANAGEMENT FRAMEWORK

This section translates the strategic framework described in Section 3 above into management activities and targets, which will be used to inform annual plans of operation and the resources required to implement them. The management targets will form the basis for monitoring of performance in implementing the plan and are thus measurable.

6.1 Determination of priorities for strategic outcomes

In the tables that follow in this section, a column has been included entitled "Priority", which is intended to convey the level of priority attached to its strategic outcome. The purpose of prioritising activities is to direct funds and resources to the most important activities, in the event that there are insufficient funds or resources to undertake all of the activities outlined in a particular year. Priorities are ordered in three categories, which have been determined on the following basis:

Priority 1:	A management target that is central to the responsibilities and mandate of Ezemvelo or that addresses an aspect of management that is fundamental to the protection of the values and purpose of the Sileza Nature Reserve.
Priority 2:	A management target that addresses an aspect of management that contributes towards community involvement and support for the conservation of the Sileza Nature Reserve, which is a key principle of effective protected area management.
Priority 3:	A management target that indirectly contributes towards the protection of biodiversity or the development of social and/or economic benefits and opportunities for the Sileza Nature Reserve and/or its surrounding local communities.

The priorities are presented in the tables below using the colour system above, which depicts the level of priority shown for the particular strategic outcome.

6.2 Legal compliance and law enforcement

Through its mandate to undertake the conservation and management of protected areas in KwaZulu-Natal, Ezemvelo KZN Wildlife must ensure that the province's protected areas are appropriately legally protected and that the laws governing the use of protected areas and the prohibition of particular activities are enforced. In fulfilling this role, the managers of Sileza Nature Reserve will adhere to the following guiding principles:

- All reasonable efforts must be made to ensure the effective conservation of biodiversity within and on the boundaries of the nature reserve.
- Cooperative structures should be established to enable participation by key stakeholders such as local communities and the South African Police Service in addressing offences and breaches of the law.
- Law enforcement within the nature reserve will be undertaken through surveillance, monitoring and appropriate reaction in the event of an offence.

Although the reserve is small, there have been incidents of poaching, arson fires have entered the reserve and for this reason, attention does need to be given to various conservation related issues.

Management must therefore initiate and implement a strategy that, not only develops in-house procedures, but also ensures participation in all relevant local security forums and networks. The Ezemvelo Board: Biodiversity Conservation Operations: Conservation Management Corporate Policy No. 2.10 (State Security Service Activities within Board Areas) applies (Appendix D – Ezemvelo Corporate Policies [Norms and Standards]).

6.3 Stakeholder engagement

Constructive relationships with adjacent communities are an important aspect of the effective conservation of protected areas. Stakeholder engagement should be aimed at developing a strong sense of partnership between the neighbours and communities around the nature reserve and its managers. The following guiding principles should be adhered to:

- Efforts should be made to ensure that the communities living around the nature reserve are aware of the role that it fulfils in biodiversity protection and the provision of ecosystem services to the region.
- Stakeholder engagement should be undertaken to engender a sense of ownership of the nature reserve, within the communities, and support for its biodiversity conservation objectives.
- A common understanding of the issues that affect both the nature reserve and the surrounding communities should be developed and efforts to resolve them should be undertaken cooperatively.

- Neighbour relations and partnerships are guided by the Ezemvelo Board: Biodiversity Conservation Operations: Relationships Corporate Policies No. 4.1, 4.2 and 4.4 **(Appendix D** – Ezemvelo Corporate Policies [Norms and Standards]**)**.

Community involvement in the management of the nature reserve through collaboration in the following programmes and projects will be encouraged.

6.3.1 Liaison Forum

Sileza Nature Reserve is relatively small in size. There is currently no community liaison forum present for the reserve and relevant stakeholders. The management team should champion the development of a community liaison forum where all external issues and ideas will be discussed. The community liaison forum should be independent of the forums present between Tembe Elephant Park and Ndumo Game Reserve; however stakeholders from these areas will be allowed to participate in the Sileza Nature Reserve liaison forum.

6.3.2 Land Claims

There are no land claims on the nature reserve.

The operational requirements for legal compliance and enforcement, and stakeholder engagement are set out in Table 6.1 below.

Table 6.1 Framework for legal compliance and law enforcement, and stakeholder engagement

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
LEGAL COMPLIANCE					
Up-to-date legal agreements between Ezemvelo KZN Wildlife and the South African police Services.	▪ Review legal agreements between Ezemvelo KZN Wildlife and South African Police Services pertaining to the staffing structures and staff numbers. ▪ Ensure that the legal agreement has been followed as stipulated.	▪ Up to date legal document s. ▪ Implementation of relevant agreements.	▪ Over-population at the staff accommodation. ▪ High water usage. ▪ High levels of waste, disposed.	***Year 1***	Regional Manager and Officer in Charge
LAW ENFORCEMENT					
There is adequate law enforcement within the nature reserve.	▪ Develop an integrated security strategy for the nature reserve, which ensures collaboration with all relevant institutions.	▪ Creation of cooperative structures with local communities and law enforcement officials.	▪ Frequent recovery of snares. ▪ Arson fires. ▪ Recorded losses of game species. ▪ Recorded losses of known rare and endangered plant species.	***Year 2***	Officer in Charge
	▪ Ensure that staff are equipped and trained to undertake patrols within the nature reserve for law enforcement purposes. ▪ Implement a programme of patrols of the nature reserve and its boundaries.	▪ Regular patrols covering the full extent of the nature reserve. ▪ Prosecution of any offender caught committing an offence.		***Year 1-on-going***	Officer in Charge
STAKEHOLDER ENGAGEMENT					
Constructive community involvement in the nature reserve's management through an effectively functioning Community Liaison Forum	▪ Develop a community liaison forum for the nature reserve and surrounding communities. ▪ Conduct regular meetings with the management team and surrounding neighbouring communities. ▪ Ensure open lines of communication between members of the local communities and the nature reserve's management regarding job opportunities.	▪ A fully developed community liaison forum for Sileza Nature Reserve ▪ Quarterly meetings of the Sileza Nature Reserve community liaison forum. ▪ Easy communication between the nature reserve management and local communities.	▪ Lack of regular meetings. ▪ Community dissatisfaction with the nature reserve. ▪ No input from the local community.	***Year 1-on-going***	Officer in Charge and Community Conservation Officer

Facilitate research and partnerships with educational institutions.	▪ Identify possible co-learning opportunities with various relevant institutions & partner organizations. ▪ Prioritize and communicate relevant co-learning opportunities to relevant institutions and organisations.	▪ Relevant external organisations are kept in contact frequently in-order to empower the nature reserve management team	▪ Inability to meet the learning outcomes and opportunities of the nature reserve. ▪ Unclear understanding of the functioning of the nature reserve.	***on-going***	Officer in Charge and Community Conservation Officer

6.4 Regional management

6.4.1 Local and regional planning

It is important, in managing the buffer areas around the nature reserve, that Ezemvelo KZN Wildlife work with local government authorities to ensure that their land use planning considers the biodiversity conservation imperatives of Sileza Nature Reserve. In this regard it is necessary to ensure that buffer zone considerations are captured in planning tools such as IDPs and SDFs. In developing relationships with the local and district municipality, Ezemvelo KZN Wildlife will adhere to the following guiding principles:

- Relationships with local government and other provincial and national departments will be developed in the spirit of cooperative governance.
- Ezemvelo KZN Wildlife will endeavour to assist the local and district municipality in determining appropriate land uses and development strategies in the areas surrounding the nature reserve.
- Ezemvelo KZN Wildlife will endeavour to align its plans and strategies with the programmes and strategies of the local and district municipality, where appropriate.

The detailed operational requirements for buffer zone protection and regional management are set out in Table 6.2 below.

Table 6.2 Framework for buffer zone protection and regional management

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
LOCAL AND REGIONAL PLANNING					
Align municipal and regional planning documents to that of the requirements of the nature reserve.	▪ Make inputs into the development and review of local and district municipality IDPs and SDFs in an effort to avoid environmentally harmful land uses within the buffer zone of Sileza Nature Reserve. ▪ In collaboration with the planning department of the Local and District municipal offices, make joint decisions regarding the best land use practices surrounding the nature reserve.	▪ Adoption of environmentally appropriate land uses in IDPs and SDFs in the areas immediately surrounding the nature reserve. ▪ Retention of existing benign land uses in the areas immediately surrounding the nature reserve.	▪ Identification/approval of environmentally harmful land uses on the boundaries of the nature reserve.	***Annually***	Ezemvelo KZN Wildlife Planning Unit

6.5 Eco-tourism development

6.5.1 Tourism product development

Ezemvelo KZN Wildlife has the mandate to sustainably develop Sileza Nature Reserve to fully realise its eco-tourism and associated income-generating potential, within the context of protecting its biodiversity and cultural values. In the future, all developments should adhere to the following principles:

- Tourism products developed within the nature reserve must be appropriate to the values and purpose for which the nature reserve has been proclaimed and must not threaten its biodiversity or ecological function.
- In developing tourism products, requirements for environmental authorisation must be considered and adhered to.
- Tourism products should be designed to capitalise on the unique beauty and biodiversity features of the nature reserve.
- Tourism products should be developed in response to tourism market demands and opportunities within the nature reserve and should be carefully assessed to determine their viability.
- The development of tourism products within the nature reserve must be integrated with tourism strategies and plans in the region.
- Tourism should be used as a tool for the generation of economic activity and employment in the communities surrounding the nature reserve.
- Tourism products developed within the nature reserve must adhere to the zonation of the nature reserve.

6.5.2 Environmental interpretation and education

Environmental interpretation and education of Sileza Nature Reserve natural and cultural resources will be aimed at creating awareness, understanding and appreciation of its biodiversity and ecological function, and their significance. In developing an environmental interpretation and education programme, the following guiding principles should be adhered to:

- There should be a strong focus on neighbouring communities, in efforts to engage, inform and benefit them.
- Wherever possible, local community members should be trained to assist and operate environmental interpretation and education tours.

The detailed operational requirements for eco-tourism development and environmental interpretation and education are set out in Table 6.3 below.

Table 6.3 Framework for eco-tourism

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
TOURISM PRODUCT DEVELOPMENT					
Determination of a tourism market profile, through tourism market research for the nature reserve.	▪ Identify the activities that could be offered to visitors within the nature reserve. ▪ Develop an understanding of tourism in the region in order to inform the types of products and activities that may be offered. ▪ Conduct a tourism feasibility study in order to determine whether potential product's offered by the nature reserve matches the tourist market. ▪ Develop a map, outlining the location of infrastructure, including walking trails and hides, within the context of the nature reserves' zonation plan.	▪ An understanding of annual tourist numbers and a tourism market profile for the nature reserve. ▪ A map outlining the tourism infrastructure of the nature reserve.	▪ Declining tourist numbers. ▪ Unprofitable occupancy rates in accommodation within the nature reserve.	***Year 5***	Ezemvelo KZN Wildlife Ecotourism and Marketing Unit
Promote tourism in the area through collaboration with local municipality tourism initiatives and Ezemvelo marketing programme.	▪ Develop and implement a marketing strategy to be incorporated in the Ezemvelo marketing programme. ▪ Promote tourism activities of the nature reserve with the aid of local municipality tourism marketing. ▪ Engage regularly with the Local and District Municipality to ensure that any planned tourism activities are aligned with regional tourism initiatives such as the Local Corridor.	▪ The nature reserve will be fully marketed with the aid of local municipality programmes.	▪ Declining tourist numbers. ▪ Unprofitable occupancy rates in accommodation within the nature reserve.	***After the implementation of new tourism products***	Ezemvelo Marketing Unit and Local Municipality.
ENVIRONMENTAL INTERPRETATION AND EDUCATION					
Development and implementation of an environmental interpretation and education programme.	▪ Focus on environmental interpretation and education amongst the nature reserve's neighbouring communities and visitors. ▪ Employ and train members of the local community to assist in and to implement the programme.	▪ Provision of an environmental interpretation and education tour to each school in the neighbouring local communities.	▪ Lack of interest in implementing the programme. ▪ Lack of understanding of the values of the nature reserve.	***Year 3***	Officer in Charge and Community Conservation Officer

6.6 Conservation management

The management philosophy to be followed is one of adaptive management. This includes setting conservation targets, implementing management actions, monitoring progress towards achievement of these targets, and adapting the management strategy accordingly. A participatory and team-based approach is to be followed. The principle of sustainable use of natural resources is implicit in the philosophy.

Natural resource management will aim to conserve the valuable biodiversity, especially that of the important Licuati Sand Forest, through addressing threats and ensuring the maintenance and/or re-instatement of the ecological processes that are considered the main determinants of ecosystem structure and function. Where these processes or regulatory mechanisms have been disrupted and cannot be re-instated, management should attempt to simulate their effects, otherwise management intervention in the system should be minimized.

6.6.1 Fire management

Fire plays an important role in the ecological dynamics of grasslands and wetlands, and has important effects on vegetation composition, primary productivity and nutrient cycling. In developing burning and fire management strategies for the nature reserve, the following guiding principles should be adhered to:

- Burning should be undertaken in such a way that it maintains spatial and temporal heterogeneity within the landscape.
- A patch mosaic of burnt and un-burnt areas should be maintained.
- The burning of areas should be undertaken in such a way that promotes patchy burns (i.e. within the block being burnt, some patches will remain un-burnt rather than aiming for a complete burn).
- Burning must be undertaken with due consideration to the biodiversity conservation requirements of the nature reserve and the need to protect rare and endangered species.
- Burning and fire management must be undertaken in a safe manner that is legally compliant with the National Veld and Forest Fire Act (No.101 of 1998).

In terms of Section 17 of the National Veld and Forest Fires Act, a landowner (in this case the nature reserve) must have such equipment, protective clothing and trained personnel for extinguishing fires as may be prescribed or, if not prescribed, reasonably required in the circumstances. It is therefore necessary to consider the following in relation to fire fighting:

- The need to maintain a system of firebreaks to enable the management of controlled burns and to effectively fight wildfires.
- The size of the nature reserve and the requirements necessary to access different areas in the event of a wildfire. This relates to both roads and vehicles.
- The number of personnel necessary to effectively fight wildfires.

- The equipment necessary to effectively fight wildfires. This would include:
    - Water tankers and pressure pumps mounted on or pulled behind tractors.
    - Fire fighting equipment mounted on the backs of vehicles.
    - Backpack sprayers.
    - Beaters.
    - Safety equipment for personnel involved in fire fighting.

The OiC of Sileza Nature Reserve will be responsible for attending relevant fire workshops held in that region. Various burns of the previous burning season will be reviewed and targets set out for the next burning regime. A separate Fire Management Plan should be developed for the nature reserve.

The detailed operational requirements for fire management are set out in Table 6.4 below.

Table 6.4 Framework for conservation management – fire management

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
FIRE MANAGEMENT					
Development and implementation of the comprehensive fire management plan for the nature reserve.	▪ Develop a fire management plan that must address: ▪ Fire management objectives, ▪ Scientific understanding, ▪ Legal compliance, ▪ Equipment, ▪ Personnel training requirements, ▪ Monitoring and the research required. ▪ Implement the fire management plan. ▪ Review the previous fire season burns (planned and unplanned) to determine the burning plan for the coming season.	▪ Adoption and implementation of the fire management plan. ▪ An up to date fire management plan for the nature reserve. ▪ Annual burns are aligned to burning objectives.	▪ Burning regimes that result in ecological degradation of the nature reserve. ▪ Unplanned fires. ▪ Burning objectives are compromised.	***Year 1***	Officer in Charge and Ecological Advice Unit
Adequate fire safety within the nature reserve is ensured.	▪ Maintain a system of firebreaks within the nature reserve that are of adequate extent, which are prepared at the correct time of the year under the appropriate weather conditions. ▪ Ensure that staff is trained and that adequate fire fighting equipment is available within the nature reserve.	▪ Enable the nature reserve to have efficient firebreaks in place. ▪ Compliance with the National Veld and Forest Fires Act.	▪ Inadequate personnel, equipment or an inability to communicate effectively in fighting fires. ▪ Wildfires spreading from the nature reserve to neighbouring properties.	***On-going***	Officer in Charge

6.6.2 Invasive plant control

A listed invasive species means any species, which is listed in terms of section 70 of the Biodiversity Act, whose establishment and spread occurs outside of its natural distribution range. Such plants are considered to be a serious threat to the ecological functioning of natural systems and to water production, and must be strictly controlled. In undertaking invasive plant control, the following guiding principles will be adhered to:

- Invasive plant control will require an on-going programme that prioritises key infestations along water courses, drainage lines and catchment areas.
- Initial clearing efforts should focus on containing infestations that are most likely to spread into new areas.
- All follow-up requirements must be strictly adhered to otherwise the problem will be exacerbated.
- Strategic partnerships and poverty relief programmes such as the Working for Water programme should be utilised in controlling invasive plants.

There have been no sightings or recordings of alien invasive plants in the nature reserve, however it will be prioritised to develop an alien invasive plants control plan which will guide field rangers and staff on how to deal with such issues and most importantly, deal with items concerned with the movement of animals in and out of the bomas which are located in the nature reserve. State poverty relief programmes such as “Working for Water”, “Working on Fire” and “Working for Wetlands” should be used to full effect to complement the nature reserve budget for this management task.

6.6.3 Soil erosion control

Soil erosion is a process which takes place naturally in the nature reserve. However, in the case of human-induced and / or accelerated soil erosion, appropriate remedial management action must be taken.

Human-induced and / or accelerated soil erosion in the nature reserve is primarily the result of poor alignment and management of footpaths and vehicle. Areas that have been cleared of invasive alien vegetation (if present) are also at risk and must be rehabilitated as appropriate. If a system of paths or trails is ever to be set up it must be effectively designed in a manner that will require minimal maintenance and to have the lowest possible risk of causing soil erosion.

In addressing soil erosion, the following guiding principles should be adhered to:

- Areas impacted by soil erosion should be stabilised and re-vegetated with indigenous plant species to prevent the spread of listed invasive plant species.
- Areas susceptible to soil erosion, or showing early signs of soil erosion such as loss of vegetation cover, must be managed to prevent soil erosion.

Soil erosion control and rehabilitation measures may include the need to re-vegetate disturbed areas. A detailed assessment of the nature and extent of soil erosion within the nature reserve will determine the appropriate responses required and the costs associated with them.

Extensive sites of existing or potential aggravated soil erosion must be mapped, and the rehabilitation prioritized annually.

The detailed operational requirements for invasive plant and soil erosion control are set out in Table 6.5 below.

Table 6.5 Framework for conservation management – invasive plant control and soil erosion control

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
INVASIVE PLANT CONTROL					
Development of an invasive species control plan for the nature reserve including the bomas situated inside the reserve.	▪ Outline the measures required to monitor, control and eradicate listed invasive species. ▪ Identify measurable indicators of progress and success in implementing the invasive species control plan. ▪ Continuous monitoring and evaluation during field ranger patrols ▪ Include the management practices of bomas into the alien invasive species control plan.	▪ Compliance with the Biodiversity Act. ▪ Efforts to prevent the emergence of invasive species in the nature reserve ▪ Continuous monitoring during field ranger patrols. ▪ The management of Bomas will be aligned to the invasive species plan.	▪ Further spread of existing levels of infestation of listed invasive species if present. ▪ Persistence of existing infestations. ▪ New infestations of listed invasive species. ▪ New infestations brought in through movement of animals from one reserve to another.	***Year 1***	Officer in Charge, Ecological Advice Unit and Alien Plant Control Unit
SOIL EROSION CONTROL					
Identify and rehabilitate areas that have been affected by soil erosion as a result of vehicles.	▪ Undertake a detailed survey of the nature reserve to identify the extent and severity of soil erosion. ▪ Identify the requirements for soil erosion control and rehabilitation within the nature reserve. ▪ Implement soil erosion control and rehabilitation measures, focussing strategically on key areas such as those impacting on watercourses or that are growing larger. ▪ Undertake preventative measures in areas with low plant cover that may be at risk of soil erosion.	▪ A detailed map depicting areas of soil erosion within the nature reserve. ▪ Implementation of soil erosion control measures in areas in which plant cover is low, which are susceptible to erosion.	▪ Further erosion of impacted areas. ▪ Sedimentation impacts in watercourses and wetland areas.	***Year 3***	Officer in Charge

6.6.4 Alien animal control

Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of Sileza Nature Reserve and can be vectors for the spread of diseases. In dealing with the control of alien animals, procedures to deal with animals that stray into the nature reserve should be developed. In addressing alien animal control, the following guiding principles should be adhered to:

- Domestic animals such as horses and donkeys will only be allowed if kept at the nature reserve for official purposes such as patrolling.
- Feral animal species that pose a threat to indigenous species will be destroyed (as humanely as practicably possible with due regard to the tourist experience).

To minimize the need to control human wildlife conflict, pro-active and preventative measures (e.g. fencing) should be considered a priority, while affected visitors or neighbours need to be informed appropriately regarding the relevant animal behaviour and / or dangers. Where the only solution to the problem lies in destroying or capturing animals, the methods decided upon must be with due regard for possible public criticism.

When dealing with Sileza Nature Reserve and animals that are causing damage to communities, the matter should be dealt with according to the principles of the Ezemvelo KZN Wildlife Policy and Strategy for Human wildlife Conflict (Appendix D, Item 2). If neighbouring communities contact the Sileza Nature Reserve Officer in Charge timorously and are able to demonstrate clearly that animals originating from the nature reserve are causing them damage, the Officer in Charge must attempt to capture or destroy that animal according best-practice guidelines for this type of control work.

Any control actions in terms of Red Data Book species need authorization of the planning committee.

Rabid animals must be destroyed as soon as they are detected.

6.6.5 Resource utilisation

It is an accepted tenet of biodiversity conservation in South Africa and KwaZulu-Natal that the sustainable use of natural and biological resources may be undertaken within a protected area, provided that it does not compromise its ecological functioning or biodiversity conservation imperatives. Accordingly, applications for the extractive use of resources within the nature reserve will be considered, based on the following guiding principles:

- The context of the nature reserve's zonation plan, in particular the ecological sensitivity of particular areas.

- The benefits that such resource use will provide to the neighbouring communities around the nature reserve.
- The equitable access of members of the neighbouring communities to such resource use opportunities.
- Whether activities such as the collection of biological materials/samples are for legitimate scientific purposes, are from *bone fide* South African research institutions and are undertaken in accordance with relevant Ezemvelo KZN Wildlife policies.
- The ability of the nature reserve's managers to effectively control and monitor such resource use.

Ezemvelo will consider requests for extractive use of plant and animal resources provided that the natural and cultural heritage conservation management objectives are not compromised, and there is no long-term detrimental effect on the ecological and managerial functioning of the nature reserve.

Illegal activities within Sileza Nature Reserve and illegal utilization of natural resources are realities that are ever- present. In addition, it must be assumed that such threats have the potential to increase significantly.

It is policy to maintain an on-going vigilance through cost-effective surveillance monitoring programmes and reaction capabilities. It is noted that the communities and neighbours are potentially of key importance in this regard. To further assist in maintaining the ecological integrity of Sileza Nature Reserve, it is essential that the situation be regularly and critically recorded and assessed in terms of a well-kept statistical incident register (See also monitoring and Evaluation under Par. 7).

The main effort towards resolving illegal utilization of natural resources by communities for purposes of subsistence will be to create understanding and awareness through pro-active and reactive environmental awareness programmes. Management will however be ruthless with those that illegally utilize natural resources for commercial or other purposes.

The detailed operational requirements for alien animal control and resource utilisation are set out in Table 6.6 below.

6.6.5.1 Plants and Animals

Extractive resource use applications must be considered within the framework of the Ezemvelo Board: Biodiversity Conservation Operations: Resource-use Corporate Policies No. 3.12 to 3.18 (Appendix D – Ezemvelo Corporate Policies [Norms and Standards]).

The NRPC must evaluate applications according to accepted guidelines that ensure:

- sustainable and wise use of the resource,
- ecological and social acceptability,
- benefit to neighbouring communities,
- equitable access to the resource,
- that the transaction is within the conditions of the PFMA,
- that the harvesting operations are effectively controlled and monitored,
- a written agreement stipulating resource price and conditions of harvest, and
- Due consideration of alternatives.

6.6.5.2 Bioprospecting

Requests to collect biological material / samples from Sileza Nature Reserve will only be considered in accordance with the Ezemvelo Board: Biodiversity Conservation Operations: Integrated Environmental Management Corporate Policy No. 2.15 (Appendix D – Ezemvelo Corporate Policies [Norms and Standards]) and in accordance with NEMBA chapter 6 (Bioprospecting, Access and Benefit Sharing).

Bioprospecting activities within the nature reserve must be closely monitored and regulated in terms of present environmental legislation.

Table 6.6 Framework for conservation management – alien animal control and resource utilisation

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
ALIEN ANIMAL CONTROL					
Implementation of procedures to manage alien animals found within the nature reserve.	▪ Together with neighbouring communities, agree on the approach to dealing with stray livestock and domestic animals found in the nature reserve, particularly dogs, which may be used for illegal hunting. ▪ Analyse the entry points for formal dog hunts into the area and "soft target" sites. ▪ Monitor and record effectiveness of control measures and policies. ▪ Engage with EWT regarding their dog-hunting prevention project.	▪ Creation of cooperative structures between Ezemvelo KZN Wildlife, local communities and law enforcement officials. ▪ Control of any alien animals found within the nature reserve. ▪ Secure Entry points and areas that may be soft targets of entry. ▪ Records of incidents and actions taken to address incident. ▪ Assistance from EWT regarding dog hunting prevention.	▪ Uncontrolled access of domestic animals or livestock within the nature reserve. ▪ No relative control over alien animals although Control measures and policies in place. ▪ Incidents not reported or monitored. ▪ Illegal and unlawful entry into the nature reserve via areas known to be soft targets due to the location.	***Year2- on-going***	Officer in Charge and EWT
RESOURCE UTILISATION					
Determine the value of the Eco-system goods and services that Sileza Nature Reserve provides.	▪ Initiate a study to identify and quantify the value of the ecosystem goods and services of Sileza Nature Reserve.	▪ Concise knowledge of the value of goods and services that Sileza Nature Reserve has to offer.	▪ Lack of understanding of the value of the goods and services contributed by the nature reserve.	***Year 4***	Resource Use Ecologist
If extractive resource use is undertaken, it is done legally and conforms to NEMBA Chapter 6, and the nature reserve's zonation plan.	▪ Consider, with relevant scientific and management staff request, for extractive resource use in accordance with relevant National and provincial Legislation, norms, standards and guidelines. ▪ If resource use is approved, communicate with neighbouring communities on the agreed approach to sustainable resource use in the nature reserve. ▪ Approved resource use is managed, monitored and reported. ▪ Ensure that resource use is in line with zonation of nature	▪ An agreed upon approach to any extractive resource use. ▪ Approved resource use records	▪ Uncontrolled or unsustainable resource extraction ▪ Resource use not monitored or reported.	***If required***	Officer in Charge and Resource Use Ecologist

	reserve.				
If bioprospecting is undertaken, it is done legally and conforms to NEMBA Act Nu 10 of 2004 Chapter 6, and the nature reserve's zonation plan.	▪ Only allow the collection of biological materials or samples if the appropriate permits or permission has been given in accordance with Ezemvelo KZN Wildlife policy and in accordance with national legislation.	▪ No illegal collection of biological material or samples.	▪ Illegal collection of biological material or samples.	***If required***	Officer in Charge and Resource Use Ecologist

6.6.6 Wildlife management

Management interventions related to indigenous wildlife will be limited to those that are for the purposes of safeguarding populations of rare and endangered species or to meet set conservation targets. Interventions may also be required for problem animal management. In addressing wildlife management, the following guiding principles should be adhered to:

- Wildlife management must be focussed primarily on protecting the ecological functioning of the nature reserve and meeting set provincial conservation targets for species and vegetation types.
- The introduction of indigenous species into the nature reserve must be undertaken in accordance with relevant Ezemvelo KZN Wildlife policies.
- Population management of wildlife species may be required to ensure that such species are not causing ecological degradation of the nature reserve.
- Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour must be managed in accordance with relevant Ezemvelo KZN Wildlife policies.

6.6.7 Conservation targets

The KwaZulu-Natal systematic biodiversity plan identifies the provincial conservation targets. The conservation of Sileza Nature Reserve contributes towards the achievement of a portion of some of these targets. Targets will continue to be updated as knowledge develops about the ecology of areas, connectivity between them, and other process requirements for ecosystems, communities and species. On this basis, the conservation targets should be viewed as a set of working hypotheses around which conservation planning and evaluation can take place. An advantage of developing strategies around targets is that this process highlights critical knowledge deficits thus guiding future research.

Table 6.7 Systematic biodiversity planning conservation targets to which Sileza Nature Reserve contributes

Feature	Description	Percentage of target located within Sileza	Status
Ourebia ourebi	Mammal	0.97	Endangered
Orthoporoides corrugatus	Millipede	0.73	-
Edouardia conulus	Molusc	0.95	-
Encephalartos ferox	Plant	8.82	Least Concern
Restio zuluensis	Plant	16.67	Vulnerable
Licuati Sand Forests : Eastern Licuati Sand Forest	Vegetation Type	1.27	Least Threatened
Maputaland Coastal Thicket	Vegetation Type	1.08	Least Threatened
Maputaland Wooded Grassland	Vegetation Type	4.42	Endangered
Subtropical Freshwater Wetlands	Vegetation Type	3.40	Least Threatened

The detailed operational requirements for wildlife management and the achievement of conservation targets are set out in Table 6.8 below.

Table 6.8 Framework for conservation management – wildlife management and conservation targets

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
WILDLIFE MANAGEMENT					
Implement a strategy for the management of wildlife in the nature reserve in accordance with Ezemvelo KZN Wildlife policies.	▪ Implement the strategy in order to manage wildlife within the nature reserve in accordance with Ezemvelo norms and standards. ▪ Conduct censuses for wildlife throughout the nature reserve.	▪ An implemented strategy to manage wildlife present in the nature reserve.	▪ No records of management strategies to base future management on.	***Year 3***	Officer in Charge and Ecological Advice
	▪ Ensure that adequate population control measures are included in the strategy for the management of wildlife in the nature reserve.	▪ Control population numbers of species that are exceeding identified carrying capacities.	▪ Ecological degradation as a result of over-stocking of wildlife species	***On-going***	
Implementation of the strategy for human animal conflict.	▪ Undertake preventative measures, such as boundary fence maintenance, to minimise the need for problem animal control. ▪ Apply appropriately humane methods, if problem animals must be destroyed or captured in line with Ezemvelo KZN Wildlife policies.	▪ Effective procedures and relationships with neighbours in dealing with problem animal control.	▪ Frequent complaints from neighbours with no clear response.	***Year 1***	Officer in Charge
Gain a better understanding of flora and fauna within the nature reserve.	▪ Conduct a full botanical and faunal inventory survey. ▪ Prioritise the survey for endangered and threatened species.	▪ Botanical inventory survey report on which to base management decisions. ▪ Faunal inventory report on which to base management decisions.	▪ Lack of knowledge regarding the composition of fauna and flora within the nature reserve.	***On-going***	Officer in Charge, Resource Use Ecologist and Ecological Advice
CONSERVATION TARGETS					
Processes are established to determine the success of management interventions in protecting the ecosystems, communities and species of the nature reserve.	▪ Develop surveillance and monitoring plans for key management interventions in accordance with the Ezemvelo KZN Wildlife policies and norms and standards.	▪ Surveillance and monitoring plans for key threatening processes. ▪ Monitoring plans for key rare and endangered species.	▪ Lack of awareness of the status of key threatening processes including infestations of invasive plant species and severity and extent of soil erosion.	***Year 3***	Officer in Charge and Ecological Advice Unit
Ensure the conservation targets of endangered and	▪ Ensure all management interventions outlined in Table	▪ Conservation targets are met.	▪ Decline in the number of endangered and	***On-going***	Officer in Charge

threatened species are met.	6.8 – Wildlife Management is carried out to full capacity.		threatened species		
Rare and endangered species management is undertaken based on the best available scientific knowledge.	▪ Ensure that the officer in Charge of the nature reserve is aware of any research being conducted on rare and endangered species that occur in the reserve, especially those that have conservation targets. ▪ Adopt procedures for the management of rare and endangered species within the reserve based on known best practices.	▪ Maintenance of optimum population numbers of rare and endangered species.	▪ Declining population numbers of rare and endangered species.	***On-going***	Officer in Charge and ecological Advice Unit
	▪ Undertake monitoring of key rare and endangered species.	▪ Monitoring of flagship species. ▪ Integration of nature reserve within NGO's species monitoring programmes.	▪ Lack of understanding of flagship species.	***On-going***	Officer in Charge and ecological Advice Unit

6.7 Operational management

6.7.1 Financial and human resources

Sileza Nature Reserve cannot be effectively managed without adequate sustained funding and sufficient human resources. In addressing the financial and human resource needs of the nature reserve, the following guiding principles should be adhered to:

- Adequate funding must be provided for the management of the nature reserve to ensure the protection of its biodiversity and cultural values and the continued provision of its ecosystem services.
- Commercial operations within the nature reserve must be self-sufficient and, if profitable, should be used to subsidise its conservation and community programmes.
- A capable, experienced administrator and leader is required to fulfil the position of nature reserve manager.
- Adequate, properly trained and experienced staff must be employed at the nature reserve to undertake the operations required for its effective management.

6.7.2 Facilities and infrastructure

In order for Sileza Nature Reserve to operate appropriately, adequate facilities and infrastructure need to be developed and maintained both for management and eco-tourism purposes. In addressing facilities and infrastructure needs in the nature reserve, the following guiding principles will be adhered to:

- Facilities and infrastructure must be maintained to avoid any damage to the environment and ensure the safety of staff and visitors to the nature reserve.
- Facilities and infrastructure must be provided to ensure the effective management and operation of the nature reserve.
- Practical solutions to the provision of electricity should be sought at the nature reserve based on available renewable energy technologies.
- Facilities and infrastructure must be provided to support the eco-tourism activities in the nature reserve.

The detailed operational requirements for financial and human resource, and facilities and infrastructure development and management are set out in Table 6.9 below.

Table 6.9 Framework for operational management – financial and human resources, and facilities and infrastructure

Strategic outcome	Management activities	Management targets	Indicators of Concern	Priority	Responsibility
FINANCIAL RESOURCES					
Development of a financial plan that identifies the resource needs to achieve the objectives for the nature reserve.	▪ Undertake an assessment of past income and expenditure trends in the nature reserve. ▪ Develop a projection of income and expenditure targets that will allow for the effective achievement of the nature reserve's objectives. ▪ Detailed annual budgets must be prepared for each key performance area in the integrated management plan. ▪ Secure future funding to implement the ideal staff structure as determined by the review committee (see Table 6.9 – Human Resources).	▪ Adequate funding to achieve the objectives set out in the annual plan of operation. ▪ Funds to implement the ideal staff structure.	▪ Inadequate funding to effectively protect and operate the nature reserve. ▪ Inadequate staff at the nature reserve.	***Annually***	Officer in Charge
HUMAN RESOURCES					
The nature reserve is adequately staffed for its effective management and operation.	▪ Investigate the feasibility of appointing 2 general assistants ▪ Apply for funding to implement the ideal staff structure as determined by the review committee (see Table 6.9 – Financial Resources). ▪ Undertake regular training and skills development to ensure that staff are able to effectively complete their duties.	▪ Appointment of staff in all positions in the nature reserve. ▪ Nature reserve is adequately staffed. ▪ Allocate staff in positions that are best suited towards them in-order for them to carry out their duties efficiently.	▪ Inadequate staff numbers or skills for the effective management of the nature reserve. ▪ Inability to react timeously to crises with the Nature reserve due to an absence of staff on site.	***Annually***	Regional Manager: Ndumo Tembe Cluster
FACILITIES AND INFRASTRUCTURE					
All facilities and infrastructure in the nature reserve are adequately maintained.	▪ Ensure that the boundary fence is regularly inspected and adequately maintained to ensure security and to contain game species within the nature reserve. ▪ Boundary and corporate signboards are to be placed at existing and potential boundary entrance points to the nature reserve. ▪ Develop and implement a schedule maintenance programme to	▪ Scheduled maintenance of the boundary fence. ▪ A report on the condition of the boundary fence and its level of maintenance.	▪ Environmental, health or safety incidents associated with inadequately maintained facilities and infrastructure.	***On-going***	Officer in Charge

	maintain facilities and infrastructure in a condition that meets relevant environmental, health and safety requirements.	▪ Regular scheduled maintenance of all facilities and infrastructure.	▪ Dilapidated, worn out and damaged fences in the nature reserve. ▪ Unlawful entry into the nature reserve. ▪ Decline in game species. ▪ New and unfamiliar game.		

7) MONITORING AND REPORTING

Monitoring and reporting is a critical component of the adaptive management cycle. It enables the effective assessment of management interventions and, if necessary, can be used to direct modifications of management in an effort to achieve the outcomes required.

7.1 Annual monitoring

The annual monitoring schedule should be designed to monitor the implementation of aspects of the management plan. It should be designed to be straightforward and relatively easy to implement by on-site staff. In accordance with the Ezemvelo KZN Wildlife norms and standards for surveillance and monitoring (Goodman 2011), monitoring is characterised by:

- An objective, target or desired state of the attribute or resource (as described in the management targets in Section 6 above).
- Being part of a formalised adaptive management cycle.
- Establishing and repeatedly evaluating the measures of success of conservation project or management intervention.

Records should be maintained of all key management interventions and of problem events or incidents such as uncontrolled access, poaching, illegal plant collection or uncontrolled/arson fires. In terms of the norms and standards set for surveillance and monitoring (Goodman 2011) these incidents would be deemed to be surveillance.

Scientific monitoring programmes may be established to monitor specific management interventions such as measures for the protection of flagship species. Not all of the management interventions will be monitored through the monitoring schedule. Most of the outcomes of the monitoring process will be captured in an annual report, which will be used to inform the following year's annual plan of operation.

On this basis, a monitoring schedule for Sileza Nature Reserve is set out in Table 7.1.

Table 7.1 Annual surveillance and monitoring schedule for Sileza Nature Reserve

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Law enforcement	Schedule of patrols	Written record	Weekly	Officer in Charge	Annual report
	Recovery of snares	Photographs/written record	Weekly		Annual report
	Illegal incidents	Photographs/written record	Per event		Record of event
Stakeholder engagement	Minutes of meetings of the Community Liaison Forum	Written record	Bi-monthly	Officer in Charge	Annual report
Buffer zone management	Influx of listed invasive vegetation on the nature reserve's boundaries.	Surveillance plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
Local and regional planning	Land uses that are approved in the areas around the nature reserve in local and regional IDPs and SDFs	Written record	Annually	Ezemvelo KZN Wildlife Senior Conservation Manager	Annual report
Eco-tourism	Visitor statistics	Completion of questionnaire	On-going	Officer in Charge	Annual report
Fire management	Burning of firebreaks as part of fire management	Written record/map/photography	Annually	Officer in Charge	Annual report
	Burning of blocks as part of controlled burning		Annually		Annual report
	Unplanned wildfires	Written record/map/photography	Per event		Record of event
Invasive plant control	Areas subject to invasive plant control	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report

Table 7.1 (cont.)

Management issue	Parameters to be monitored	Monitoring measures	Monitoring frequency	Responsibility	Reporting requirements
Soil erosion control	Areas subject to erosion control	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
	State of rehabilitated areas of erosion				Annual report
Conservation targets	Incidents related to flagship species	Photographs/written record	Per event	Officer in Charge	Record of event
	Status of key rare and endangered species, particularly those for which conservation targets have been set	Monitoring plan	To be determined	Officer in Charge supported by Ecological Advice Unit	Annual report
Resource utilisation	Extraction of resources from the nature reserve	Photographs/written records	Per event	Officer in Charge	Annual report
Human resources	Staffing levels	Number of full-time staff	Annually	Officer in Charge	Annual report
Facilities and infrastructure	State of roads, 4x4 tracks and paths	Photographs/written records	Quarterly	Officer in Charge	Annual report
	State of the boundary fence	Photographs/written records	Monthly		Annual report
	Weather data	Surveillance plan	To be determined	Ezemvelo KZN Wildlife Ecological Advice Unit	Annual report
	State of facilities and service infrastructure	Maintenance schedule/written records	Monthly	Officer in Charge	Annual report
	Pollution events	Photographs/written records	Per event		Record of event

As set out in Table 7.1 the following issues require a surveillance plan:

- The influx of listed invasive vegetation on the nature reserve's boundaries.
- The capture of weather data.

In addition, the following issues require a monitoring plan:

- Measures taken to control invasive plant species.
- Measures taken to control soil erosion.
- Measures taken to manage rare and endangered species, particularly those for which conservation targets have been set.
- The ecological status of the wetlands within the nature reserve.

These surveillance and monitoring plans must be developed and implemented in accordance with the Ezemvelo KZN Wildlife Norms and Standards: Surveillance and Monitoring Plans for Biodiversity (Goodman 2011).

The preparation of these plans must be undertaken by the Ezemvelo KZN Wildlife Ecological Advice Unit with the support of the Surveillance and Monitoring Working Group of Ezemvelo KZN Wildlife.

7.2 Annual protected area management plan implementation review

The purpose of undertaking an annual performance review of implementation of the protected area management plan will be to:

- Determine how effectively the management plan has been implemented.
- Assist in determining the focus for the annual plan of operation and the setting of appropriate time frames and budgets.
- Enable effective adaptive management by identifying changes and modifying management interventions.

The report produced from the annual protected area management plan implementation review should be submitted to the Regional Operations Committee, prior to the annual management meeting for Sileza Nature Reserve, for its review and comment. Records of recommendations for update/changes to the management plan should be kept so that when the management plan is revised, these recommendations can be assessed and included where necessary. This should be undertaken in the form of a running list, which is updated in each annual report so that the final annual report before the review of the management plan contains the complete list of recommendations. The review process should include:

- Any recommended minor amendments to the management plan that do not affect the substance of the vision, objectives or zonation.
- The results of an evaluation of the management effectiveness achieved for the protected area, calculated using the WWF and World Bank Protected Area Management Effectiveness Tool (Stolton *et al*. 2007).

Any proposed significant changes to the management plan that are likely to result in amendment to the vision, objectives and zonation must be supported by the Regional Operations Committee and the Biodiversity Conservation Operations Committee (OPSCOMM) before being subjected to the appropriate stakeholder participation process and before OPSCOMM recommends that the proposed amended protected area management plan be submitted for authorisation to the Ezemvelo KZN Wildlife Board and to the MEC.

8) SILEZA NATURE RESERVE ANNUAL PLAN OF OPERATION

Each year an annual plan of operation will be prepared, based on the objectives, strategic outcomes, management activities and targets contained in the protected area management plan.

8.1 Implementation of the protected area management plan

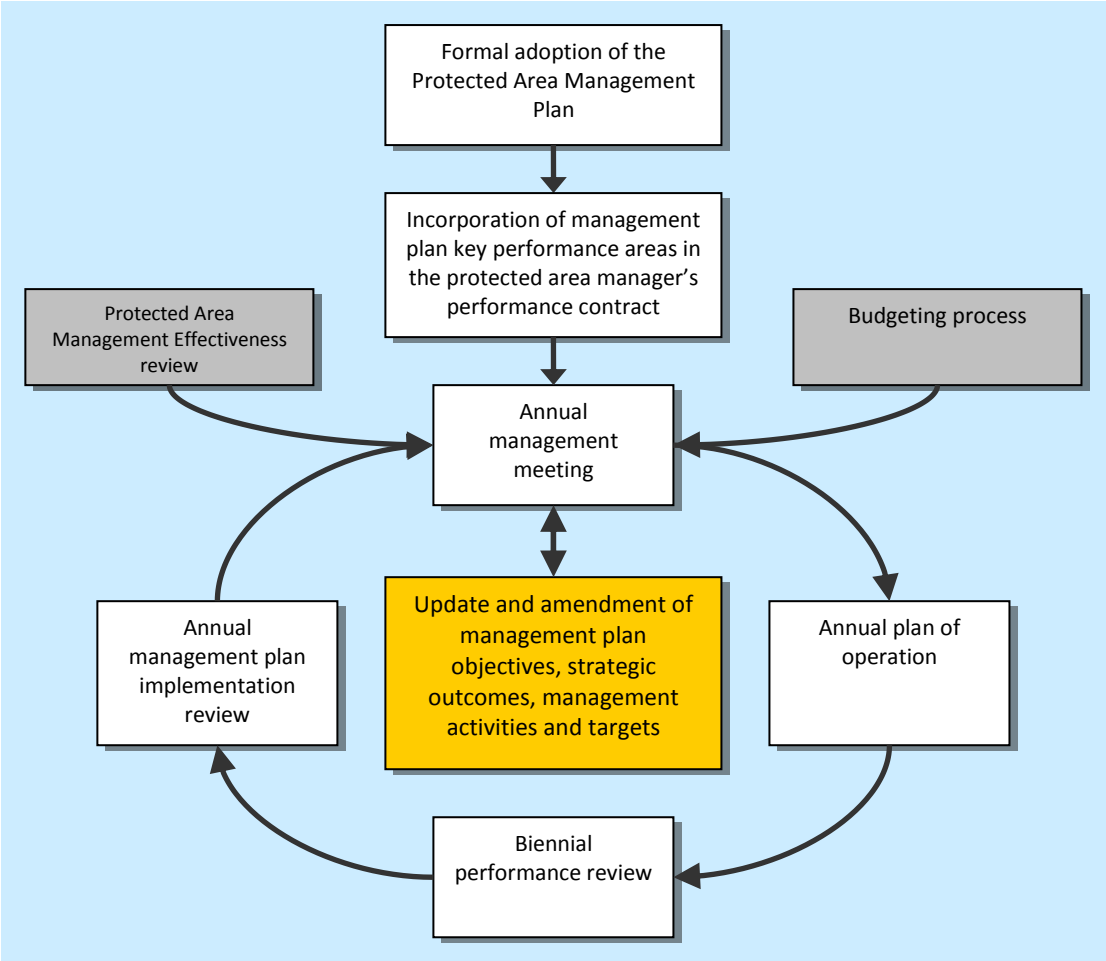

Figure 8.1 Process for the implementation of Protected Area Management Plans

Each year an annual management meeting is held for each protected area managed by Ezemvelo KZN Wildlife. In terms of the implementation of the protected area management plan, the purpose of the annual management meeting for Sileza Nature Reserve will be to:

- Finalise the annual report, as part of the annual protected area management plan implementation review described in Section 7.2 above.

- As part of the annual performance review, determine the need to modify or change any of the management plans objectives, strategic outcomes, management activities or targets.
- Determine management activities for the coming year and to set goals for each quarter, based on the key performance areas set out in the management plan, in accordance with the Sileza Nature Reserve manager's performance contract.
- Determine how budgets will be spent in an effort to achieve the goals for each of the quarters of the coming year.

The minutes and notes of the annual management meeting will be compiled in an annual plan of operation, which will include all of the information, set out above, and will determine what management activities need to be completed for the coming year, based on the management plan. The annual plan of operation will be tied to staff performance contracts, and goals set in them will be categorised within the same key performance areas as the integrated management plan. A pro forma annual plan of operation is set out in Appendix G.

8.2 Responsibilities in implementing the protected area management plan

In the tables in the operational management framework, the responsibilities for the completion of management activities are identified. In many cases the people responsible for implementing the activities will be in attendance at the annual management meeting and the requirements for the achievement of the management activities can be discussed and agreed to at the meeting. In some cases, however, the management activities may be required to be referred to the Regional Operations Committee and the Biodiversity Conservation Operations Management Meeting (OPSCOMM) in order to assign responsibility for the completion of the management activity. In this instance an action of the annual management meeting would be to refer this management activity to the OPSCOMM so that the correct unit can be assigned responsibility to complete the management activity.

8.3 Sileza Nature Reserve resource requirements

In developing annual plans of operation for Sileza Nature Reserve the resource requirements, associated with management activities and targets set out in the operational management framework must be considered and budgeted for. The following section broadly identifies the issues that must be considered in determining adequate human resources, funds and equipment for the nature reserve.

8.3.1 Staff and equipment

Annual plans of operation must consider the staff and equipment needs to undertake the following activities:

- Administration and management of the nature reserve.
- Patrolling of the nature reserve and its boundaries.
- An annual burning programme and fire fighting response to wildfires.
- An on-going invasive plant species control programme.
- An on-going soil erosion control and rehabilitation programme.
- Ecological monitoring and data capture.
- Maintenance of roads, paths and fences within the nature reserve.
- Maintenance of facilities and infrastructure within the nature reserve.
- Capture of visitor information and statistics.
- Community liaison and cooperation.
- Environmental interpretation and education.

8.3.2 Projects

In addition to the requirements for annual recurrent funding for the issues outlined above, there will be a need to identify funding requirements for the following capital projects:

- Equipment and infrastructure required to undertake appropriate waste management practices within the nature reserve.
- Upgrade of staff houses and administrative facilities within the nature reserve.
- Installation of signage to the nature reserve.
- Installation of directional and interpretive signage within the nature reserve.
- Development of facilities and infrastructure to support new tourism products identified in the concept development plan.
- The possible re-introduction of game species into the nature reserve.

8.4 Annual financial plan

The annual plan of operation must contain a financial plan, which must be approved by the Regional Operations Committee. The annual goals, contained in the annual plan of operation, will be prioritised with the approved budget and guided by the strategic direction of the protected area management plan (See Appendix H).

8.5 Financial accounting system

It is accepted that all fiscal management will be guided by the Public Finance Management Act (No.1 of 1999) and the Ezemvelo KZN Wildlife Financial Policy and Procedures directive. Funding sources not generated internally will be accounted for in the prescribed process as determined by the donor source.

8.6 Financial reporting

Annual and quarterly fiscal reports will be submitted as directed by the Regional Operations Committee.

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DEFINITIONS OF TERMS

Alien species	Species or genotypes, which are not indigenous to Sileza Nature Reserve and the surrounding area including hybrids and genetically altered organisms.
Biodiversity	The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004]).
Bioprospecting	In relation to indigenous biological resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes – the systematic search, collection or gathering of such resources or making extractions from such resources for purposes of such research, development or application (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004])
Board	The KwaZulu-Natal Nature Conservation Board as defined by the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No.9 of 1997).
Buffer zone	An area surrounding Sileza Nature Reserve that has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the nature reserve.
Co-management	The term 'Co-management' must be understood within the context of Section 42 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Cultural heritage	As defined in Article 1 of the World Heritage Convention (UNESCO) 1972 , 'cultural heritage' is considered as "monuments, architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of (…) value from the point of view of history, art or science, groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of significance from the point of view of history, art or science, sites, works of man or the combined works of nature and man, and areas including archaeological sites which are of (…) value from the historical, aesthetic, ethnological or anthropological point of view." For the purpose of this IMP, living heritage features such as mountains, pools, rivers, boulders, etc. as well as paleontological features are included under this definition.
Eco-tourism (ecotourism):	The travel to natural areas to learn about the way of life and cultural history of people, the natural history of the environment, while taking care not to change the environment and contributing to the economic welfare of the local people (adapted from a definition of ecotourism by Hecto Ceballos Lascurain).
Ecological integrity	The sum of the biological, physical and chemical components of an ecosystem and its products, functions and attributes (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Ecosystem	A dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Ecosystem services	As defined in Section 1 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as "environmental goods and services" meaning: a. Benefits obtained from ecosystems such as food, fuel and fibre and genetic resources. b. Benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification. c. Cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;" For the purposes of this IMP, sustainable water production is also specifically included under this definition.
Environmental degradation	The deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the loss of species or undesirable reduction of species population numbers from a specific area from an environmental health perspective
Ezemvelo KZN Wildlife	Nature Conservation Service as established in terms of the KwaZulu-Natal Nature Conservation Management Act No. 9 of 1997.
Indigenous species	In relation to a specific protected area, means a species that occurs, or has historically occurred, naturally in a free state of nature within that specific protected area, but excludes a species introduced in that protected area as a result of human activity (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Invasive species	Means any species whose establishment and spread outside of its natural distribution range – a. Threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species. b. May result in economic and environmental harm or harm to human health. (As per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Joint management	The agreed co-ordination of management and/or management actions by landowners and/or mandated managers on their individual or combined properties in order to achieve common management objectives.
Local community	Any community of people living or having rights or interests in a distinct geographical area (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Management	In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community-based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act (as per the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

Management authority	In relation to a protected area, means the organ of state or other institution or person in which the authority to manage the protected area is vested (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
Monitoring	The collection and analysis of repeated observations or measurements to evaluate change in status, distribution or integrity in order to track the impacts of directed management implemented to achieve a stated management objective.
Nature conservation	The conservation of naturally occurring ecological systems, the sustainable utilisation of indigenous plants and animals therein, and the promotion and maintenance of biological diversity (as per the KwaZulu-Natal Nature Conservation Management Act, 1997 [Act No.9 of 1997]).
Neighbouring community	The communities and people permanently living in the local municipal area/s bordering onto the Nature Reserve.
Natural heritage	As defined in Article 2 of the World Heritage Convention (UNESCO) 1972 'natural heritage' is as: "natural features consisting of physical and biological formations or groups of such formations, which are of (…) value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of (…) value from the point of view of science or conservation, natural sites or precisely delineated natural areas of (…) value from the point of view of science, conservation or natural beauty." For the purposes of this IMP, this would include the required ecological integrity of the protected area for the production of ecosystem services.
Partnerships	A co-operative and / or collaborative arrangement between the Game Reserve management / EZEMVELO KZN WILDLIFE and a third party that supports the achievement of the Game Reserve management objectives.
Protected areas	• Means any area declared or proclaimed as such in terms of section 3 or listed in the Second Schedule to the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997); or • Means any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
Protected area management committee	Is the management body that deals with the day-to-day management of the protected area and is chaired by the OIC.
Ramsar Convention	Means: "The Convention on Wetlands of International Importance, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources." (There are presently 158 Contracting Parties to the Convention, the Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.)

Stakeholders/ interested parties	These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups and the general public. According to the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), "stakeholder" means a person, an organ of state or a community contemplated in section 82 (1) (a), or an indigenous community contemplated in section 82(1) (b).
Surveillance	The collection and analysis of single or repeated measurements to establish status or distribution or integrity at a point in time in the absence of a specific management context or objective.
Sustainable	In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
Wilderness area	Means an area designated in terms of section 22 or 26 for the purpose of retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless, without permanent improvements or human habitation (as defined by the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).
World heritage site	Means a World Heritage Site as defined in the World Heritage Convention Act, No. 49 of 1999 under Chapter 1, section 1 subsection (xxiv).

LIST OF STATUTES TO WHICH THE SILEZA NATURE RESERVE IS SUBJECT

Biodiversity and Cultural Resource Management and Development:

- Animals Protection Act [No. 71 of 1962]
- Atmospheric Pollution Prevention Act [No. 45 of 1965]
- Conservation of Agricultural Resources Act [No. 43 of 1983]
- Constitution of the Republic of South Africa [No. 108 of 1996]
- Criminal Procedures Act [1977]
- Environment Conservation Act [No. 73 of 1989]
- Forest Act [No. 122 of 1984]
- Hazardous Substances Act [No. 15 of 1973]
- KwaZulu Nature Conservation Act [No. 8 of 1975]
- KwaZulu-Natal Heritage Management Act [No. 10 of 1997]
- KwaZulu-Natal Nature Conservation Management Act [No. 9 of 1997]
- National Environmental Management Act [No. 107 of 1998]
- National Environmental Management: Biodiversity Act [No. 10 of 2004]
- National Environmental Management: Protected Areas Act [No. 57 of 2003]
- National Forests Act [No. 84 of 1998]
- National Heritage Resources Act [No. 25 of 1999]
- National Water Act [No. 36 of 1998]
- National Water Amendment Act [No. 45 of 1999]
- National Veld and Forest Fire Act [No 101 of 1998]
- Nature Conservation Ordinance [No. 15 of 1974]

General Management:

- Development Facilitation Act [No. 67 of 1995]
- Disaster Management Act [No. 57 of 2002]
- Fire Brigade Services Act [No. 99 of 1987]
- Local Government: Municipal Systems Act [No. 32 of 2000]
- National Road Traffic Act [No. 93 of 1996]
- National Building Standards Act [No. 103 of 1977]
- Natal Town Planning Ordinance [No. 27 of 1949]
- Occupational Health and Safety Act [No. 85 of 1993]
- KwaZulu-Natal Planning and Development Act [No. 5 of 1998]
- Water Services Act [No. 108 of 1997]

Financial Management:

- Public Finance Management Act [No. 1 of 1999]

Human Resource Management:

- Basic Conditions of Employment Act [No. 75 of 1997]
- Broad-Based Black Economic Empowerment Act [No. 53 of 2003]
- Compensation for Occupational Injuries and Diseases Act [No. 130 of 1993]
- Employment Equity Act [No. 55 of 1998]
- Labour Relations Act [No. 66 of 1995]
- Occupational Health and Safety Act [No. 85 of 1993]
- Pension Funds Act [No. 24 of 1956]
- Skills Development Act [No. 97 of 1998]
- Skills Development Levies Act [No. 9 of 1999]
- Unemployment Insurance Act [No. 63 of 2001]

COPY OF SILEZA NATURE RESERVE PROCLAMATION

KWAZULU GOVERNMENT NOTICE NO. 9 OF 1992
ESTABLISHMENT OF THE SILEZA NATURE RESERVE, INGWAVUMA DISTRICT, KWAZULU

Under and by virtue of the powers vested in me by section 29 (1) of the KwaZulu Nature Conservation Act, 1975 (Act 8 of 1975) as amended, I, Mangosuthu Gatsha Buthelezi, Minister of Economic Affairs, hereby determine that the area defined by the accompanying diagram (S.G. No. 2408/1991) and supporting Schedule be known as a nature reserve and that the name Sileza Nature Reserve be assigned to the said area.

Government Notice No. 487 of 10 March 1950 is hereby repealed.

M.G. BUTHELEZI
MINISTER OF ECONOMIC AFFAIRS

SCHEDULE

SILEZA

DESCRIPTION OF ~~SIZELA~~ NATURE RESERVE

Beginning at Beacon A on diagram S.G. No. 2408/1991; thence along the boundaries of the diagram as indicated, through Beacons B C D E F G H J K L, and returning to A; covering an area of 2124,0754 hectares; situated on Reserve 14 No. 15834.

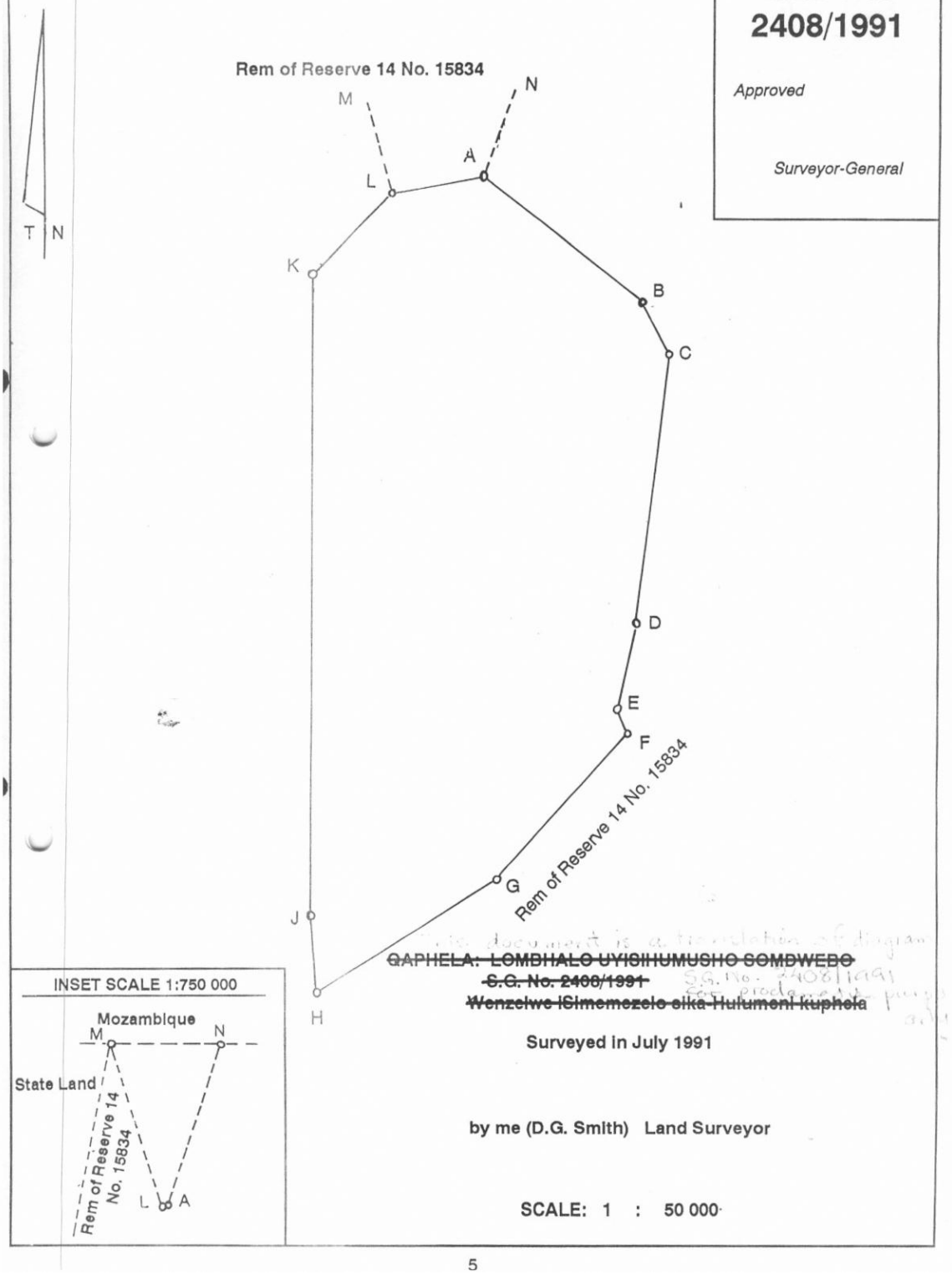
4

SICK MOODIE | PROCLAMATION DIAGRAM | SHEET 2 OF 2 SHEETS

S.G. No. 2408/1991

Approved

Surveyor-General



~~GAPHELA: LOMBHALO UYISIHUMUSHO SOMDWEBO~~
~~S.G. No. 2408/1991~~
~~Wenzelwe ISimemezelo elika-Hulumeni kuphela~~

Surveyed in July 1991

by me (D.G. Smith) Land Surveyor

SCALE: 1 : 50 000

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VISICK MOODIE | **PROCLAMATION DIAGRAM** | SHEET 1 OF 2 SHEETS

SIDES metres		DIRECTIONS		CO-ORDINATES SYSTEM Y Lo. 33° X	
		CONSTANTS		+ 0,00	+ 0,00
AB	1 991,20	307 12 50	A	+ 38 603,11	+ 2 996 460,04
BC	582,01	331 56 10	B	+ 37 017,36	+ 2 997 664,32
CD	2 682,65	5 36 00	C	+ 36 743,55	+ 2 998 177,90
DE	851,57	10 52 50	D	+ 37 006,04	+ 3 000 847,68
EF	257,92	336 47 30	E	+ 37 166,80	+ 3 001 683,94
FG	1 926,19	40 49 10	F	+ 37 065,16	+ 3 001 920,98
GH	2 108,41	56 53 54	G	+ 38 324,28	+ 3 003 378,66
HJ	770,92	174 35 10	H	+ 40 090,50	+ 3 004 530,11
JK	6 320,19	178 53 40	J	+ 40 163,23	+ 3 003 762,63
KL	1 113,53	223 45 00	K	+ 40 285,07	+ 2 997 443,61
LA	929,38	258 53 00	L	+ 39 515,04	+ 2 996 639,24
Connecting Data					
LM	25 326,18	163 22 03	M	+ 46 764,23	+ 2 972 372,71
AN	25 052,72	198 52 40	N	+ 30 496,94	+ 2 972 755,00
		45/2732		+ 38 476,79	+ 3 001 354,55
		59/2732		+ 43 289,16	+ 2 995 355,68

S.G. No. 2408/1991

Approved

Surveyor-General

Description of Beacons

A, B, C, D, E, K, L : Iron standard in concrete
F, G, H, J : Iron standard
M, N : 2m conical concrete pillar

The figure A B C D E F G H J K L

represents 2124.0754 Hectares of land, being

PORTION OF RESERVE No.14 No. 15834

Situate in Administrative District and Province of Natal

Surveyed in July 1991 by me

(Framed for Proclamation purposes) (D.G. Smith) Land Surveyor

as a Forest Reserve

This diagram is annexed to	The original diagram is	File No. 15834
No.	Plan No. 98 x 4L No. 14	S.R. No. 1105/1991
	Grant	Comp HVN

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LIST OF UNPUBLISHED AND SUPPORTING DOCUMENTATION

Copies available from: a) Reserve Management and / or,
b) Regional Ecologist

Item:

1. EZEMVELO KZN WILDLIFE Corporate Strategic Plan and Performance Plan for 2009 - 2014.
2. Ezemvelo KZN Wildlife Corporate Policies and Procedures (Norms & Standards) listed in the table below.
3. Ezemvelo KZN Wildlife Biodiversity Database Checklists for Sileza Nature Reserve.
4. Proclamations of Sileza Nature Reserve
5. Sileza Nature Reserve Public Participation Report, September 2013.

The table below lists the Ezemvelo KZN Wildlife corporate policies (norms and standards) referenced from the intranet that are most relevant to Ezemvelo KZN Wildlife protected area management. It is the responsibility of all management and other personnel associated with management of protected areas to ensure that they familiarise themselves and comply with the most recent versions of all Ezemvelo KZN Wildlife Board Approved Policies.

Ezemvelo KZN Wildlife CORPORATE POLICIES (NORMS & STANDARDS)	
Policy File No.	**CORPORATE AFFAIRS**
B 2	➢ Access to Ezemvelo KZN Wildlife Areas and Employment.
B 5	➢ Outsourcing of Functions and Services
B 7	➢ Monuments, Memorials and Names of Protected Areas under the control of Ezemvelo KZN Wildlife.
B 8	➢ Restricted use of Board Theatres, Halls and Conference Facilities etc.
B 9	➢ Code of Ethics / Conduct.
B 10	➢ Photography in Board Protected Areas.
B 13	➢ Mission Statement
B 14	➢ Access to Information.
Policy File No.	**INTERNAL AUDIT**
C 5	➢ Management Control
	BIODIVERSITY CONSERVATION OPERATIONS
	1. NATURAL RESOURCE SUSTAINABILITY
Policy File No.	**Threatened Species and Ecosystems**
D 1.1	➢ Disposal of Black Rhino.
D 1.2	➢ Disposal of Surplus White Rhino.
D 1.3	➢ Strategy for the Management of Southern White Rhino in KwaZulu-Natal.
D 1.4	➢ Strategy for the Biological Management of Black Rhino in KwaZulu-Natal.
D 1.5	➢ Rhinoceros Products.
D 1.6	➢ Crocodilians
D 1.7	➢ Cycads.
D 1.8	➢ Disposal of Threatened Species.

Ezemvelo KZN Wildlife CORPORATE POLICIES (NORMS & STANDARDS)	

	BIODIVERSITY CONSERVATION OPERATIONS
	1. NATURAL RESOURCE SUSTAINABILITY
Policy File No.	**Exotic and Invasive Species**
D 1.9	➢ Release of Alien Species.
D 1.10	➢ Control Measures for Red-billed Quelea.
D 1.12	➢ Grass Carp.
D 1.13	➢ Establishment of Alien Plantations.
	➢
Policy File No.	**Migratory Species**
D 1.14	➢ Black Wildebeest and Blue Wildebeest Hybridization and Conservation.
D 1.15	➢ Permit authorising the collection of Biological Material within Board Areas.
	2. CONSERVATION EFFECTIVENESS
Policy File No.	**Strategic Applications**
D 2.1	➢ Involvement of the KwaZulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme.
Policy File No.	**Conservation Management: Protected Area Management**
D 2.2	➢ Management of Wilderness Areas.
D 2.3	➢ Protected Area Development.

D 2.4	➢ Prohibition of Works and Servitudes in Board Areas.
D 2.5	➢ Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board.
D 2.6	➢ Quarries in KZN Protected Areas.
D 2.7	➢ Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas.
D 2.8	➢ Ecotourism and Protected Areas.
D 2.9	➢ Solid Waste Management within Protected Areas.
D 2.10	➢ State Security Service Activities within Board Areas.
D 2.11	➢ Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas.
Policy File No.	**Integrated Environmental Management**
D 2.12	➢ Integrated Environmental Management - incorporating the procedure for the assessment of the impact of proposed development projects on nature conservation concerns.
D 2.13	➢ Precautionary Principle.
D 2.14	➢ Shark Net Installations.
D 2.15	➢ Bioprospecting in KwaZulu-Natal.
D 2.17	➢ Use of Pesticides by the Ezemvelo KZN Wildlife: Safety to Humans and the Environment.
D 2.18	➢ Interference with the Mouth of a Lagoon or River (Breaching).
Policy File No.	***Ex Situ* Wild Animal Management**
D 2.21	➢ Re-establishment of Terrestrial Mammals in Board Areas.
D 2.22	➢ Translocation of Animals.
D 2.25	➢ Elephant Introductions and Elephant in Enclosures.
D 2.27	➢ Introduction and Keeping of Large Predators in Enclosures in KZN.
D 2.28	➢ Use of Narcotic Drugs.
D 2.29	➢ Falconry.
Ezemvelo KZN Wildlife CORPORATE POLICIES (NORMS & STANDARDS)	
	BIODIVERSITY CONSERVATION OPERATIONS
	2. CONSERVATION EFFECTIVENESS
Policy File No.	**Human Animal Conflict - Inside and Outside Protected Areas**
D 2.30	➢ Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas.
D 2.31	➢ Problem Animal Control.
D 2.32	➢ Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops.
D 2.33	➢ Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board.
Policy File No.	**Environmental Awareness**
D 2.34	➢ Environmental Education Policy.
	3. BIODIVERSITY PROTECTION
Policy File No.	**Co-management**
D 3.1	➢ Supply of Game to Conservancies, Community Conservation Areas and Biosphere Reserves in KwaZulu-Natal
D 3.2	➢ Establishment and Management of Community Conservation Reserves (CCR)
D 3.4	➢ Community Conservation Programmes
D 3.5	➢ Neighbours' Access to Board Protected Areas

D 3.6	➢ Relationship with Local Boards
D 3.7	➢ Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners
D 3.8	➢ Community Trust
D 3.9	➢ Community Levy Policy and Guidelines
D 3.10	➢ Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal
D 3.11	➢ Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal
Policy File No.	**Resource-use benefits**
D 3.12	➢ Disposal of Venison from Ezemvelo KZN Wildlife Management Operations.
D 3.13	➢ Sustainable use of wildlife resources.
D 3.14	➢ Freshwater Angling.
D 3.15	➢ Freshwater species utilisation.
D 3.16	➢ Use of plant resources from protected areas.
D 3.17	➢ Use of doomed biological material.
D 3.19	➢ Provision of hunting by Ezemvelo KZN Wildlife.
Policy File No.	**4. RELATIONSHIPS**
D 4.1	➢ Neighbour Relations.
D 4.2	➢ Participation - Non Government Organisations.
D 4.3	➢ Data Access.
D 4.4	➢ Consultation and Communication with Stakeholders: Policy and Guidelines.

Ezemvelo KZN Wildlife CORPORATE POLICIES (NORMS & STANDARDS)	
Policy File No.	**COMMERCIAL OPERATIONS**
E 1	➢ Concessions for Welfare Groups.
E 2	➢ Hiking and Mountaineering.
E 3	➢ Educational Concessions.
E 4	➢ Club Facilities within Board Areas.
E 5	➢ Hutted Camps.
E 6	➢ Joint Venture Scheme.
E 7	➢ Allocation of Sites in terms of the Joint Venture Scheme.
E 8	➢ Access to Protected Areas through Unofficial Entry Points.
E 9	➢ Visitor Facilities Management by Ezemvelo KZN Wildlife.
E 10	➢ Lease of Lakeshore at State Dam Protected Areas.
E 11	➢ Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife).
E 12	➢ Private Sector Reservations Policy.
E 13	➢ Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas.
E 14	➢ Discounting of Tariffs for Walk-in Guests.
E 15	➢ Ecotourism Discounting Strategy.
E 16	➢ Travel Trade Commissions: Tour Operator/ Travel Agency.
E 17	➢ Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements.
E 18	➢ Administrative and operational policy on Professional hunting in South Africa.
E 19	➢ Commercialisation.

LISTED ACTIVITIES REQUIRING ENVIRONMENTAL AUTHORISATION IN TERMS OF REGULATION R.546, LISTING NOTICE NO.3

If any of the following activities are proposed in a protected area, proclaimed in terms of the Protected Areas Act, or within five kilometres of one, they will be subject to either a basic assessment or full scoping and environmental impact assessment process:

- The construction of billboards exceeding 18 square metres in size.
- The construction of reservoirs for bulk water supply with a capacity of more than 250m^3.
- The construction of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast:
    - Is to be placed on a site not previously used for this purpose.
    - Will exceed 15 metres in height but excluding attachments to existing buildings and masts on rooftops.
- The construction of a road wider than four metres with a reserve less than 13.5 metres.
- The construction of resorts, lodges or other tourism accommodation facilities.
- The conversion of existing structures to resorts, lodges or tourism accommodation facilities that sleep 15 people or more.
- The construction of aircraft landing strips and runways.
- The construction of above ground cableways and funiculars.
- The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good.
- The construction of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles.
- The clearance of an area of 1ha or more of vegetation where 75% of the vegetative cover constitutes indigenous vegetation, except where such removal is required for:
    - The undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.
    - The undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No.544 of 2010
- The construction of facilities and infrastructure or structures of any size for any form of aquaculture *(this applies only inside a protected area, not within five kilometres of it)*.

- The construction of:
    - Jetties exceeding 10m^2 in size.
    - Slipways exceeding 10m^2 in size.
    - Buildings with a footprint exceeding 10m^2 in size.
    - Infrastructure covering 10m^2 or more.

  Where such construction occurs within a watercourse or within 32 metres of watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.
- The expansion of reservoirs for bulk water supply where the capacity will be increased by more than 250m^3.
- The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.
- The widening of a road by more than four metres or the lengthening of a road by more than one kilometre.
- The expansion of runways or aircraft landing strips where the expanded runways or aircraft landing strips will be longer than 1.4 kilometres in length.
- The expansion of above ground cableways and funiculars where the development footprint will be increased.
- The expansions of tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles, where the development footprint will be expanded.
- The expansions of facilities or infrastructure for the storage, or storage and handling of a dangerous good.
- The expansion of:
    - Jetties where the jetty will be expanded by 10m^2 in size or more.
    - Slipways where the slipway will be expanded by 10m^2 or more.
    - Buildings where the buildings will be expanded by 10m^2 or more in size.
    - Infrastructure where the infrastructure will be expanded by 10m^2 or more.

  Where such construction occurs within a watercourse or within 32 metres of watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.
- The expansion of facilities, infrastructure or structures of any size for any form of aquaculture *(this applies only inside a protected area, not within five kilometres of it)*.
- Phased activities for all activities listed in the Schedule and as it applies to a specific geographical area, which commenced on or after the effective date of the Schedule, where any phase off the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.

SPECIES LISTS

IMPORTANT SPECIES	
Taxon Name	**English Name**
Encephalartos ferox	Ferox cycad
Restio zuluensis	
Uvaria caffra	Small Cluster Pear
Glareola pratincola	Collared Pratincole, Red-winged Pratincole
Ephippiorhynchus senegalensis	Saddle-billed stork
Polemaetus bellicosus	Martial eagle
Neotis denhami	Denham's Bustard, Stanley's Bustard
Pelusios sinuatus	Serrated hinged terrapin
Varanus niloticus	Water monitor
Typhlops fornasinii	Fornasini's blind snake
Colotis pallene	Bushveld Orange Tip
Ypthima granulosa	Granular Ringlet
Teriomima zuluana	Zulu Buff
Euryphura achlys	Mottled-green Nymph
Circus ranivorus	African Marsh-Harrier
Sagittarius serpentarius	Secretarybird
Neotragus moschatus zuluensis	Suni
Redunca arundinum arundinum	Southern reedbuck
Canis adustus adustus	Side-striped jackal
Chamaeleo dilepis dilepis	Flap-neck chameleon
Varanus albigularis albigularis	Rock monitor
Acraea acrita acrita	Fiery Acraea
Charaxes protoclea azota	Flame-bordered Charaxes
Euphaedra neophron neophron	Gold-banded Forester
Nepheronia argia varia	Large Vagrant
Sarangesa seineri durbana	Dark Elfin
Spialia confusa confusa	Confusing Sandman
Deloneura millari millari	Millar's Buff
Pentila tropicalis tropicalis	Spotted Buff
Trichocarventus klapperichi amatongensis	Tonga Klapperich's flat bug
Trachylepis depressa	Eastern coastal skink
Kinixys zombensis	Bell's hinged tortoise
Meroles squamulosa	Common rough-scaled lizard

FAUNA

Taxon Name	English Name
Amphibians	
Phrynomantis bifasciatus	Banded rubber frog
Pyxicephalus edulis	Edible bullfrog

Birds	
Circus ranivorus	African Marsh-Harrier
Ephippiorhynchus senegalensis	Saddle-billed stork
Glareola pratincola	Collared Pratincole, Red-winged Pratincole
Neotis denhami	Denham's Bustard, Stanley's Bustard
Polemaetus bellicosus	Martial eagle
Sagittarius serpentarius	Secretarybird

Insects	
Acraea acrita acrita	Fiery Acraea
Acraea oncaea	Window Acraea
Acraea petraea	Blood-red Acraea
Amauris albimaculata albimaculata	Layman Friar
Amauris niavius dominicanus	Common Friar
Anthene kersteni	Kersten's Hairtail
Anthene lemnos lemnos	Large Hairtail
Anthene princeps princeps	Cupreous Hairtail
Appias epaphia contracta	Diverse White
Axiocerses tjoane	Common Scarlet
Belenois creona severina	African Common White
Belenois gidica abyssinica	African Veined White
Belenois thysa thysa	False Dotted Border
Bematistes aganice aganice	Common Wanderer
Bicyclus anynana anynana	Squinting Bush Brown
Bicyclus safitza safitza	Common Bush Brown
Borbo detecta	Rusty Swift
Borbo fatuellus fatuellus	Long-horned Swift
Borbo gemella	Twin Swift
Byblia anvatara acheloia	Common Joker
Cacyreus lingeus	Bush Bronze
Cacyreus marshalli	Common Geranium Bronze
Catopsilia florella	African Migrant
Charaxes brutus natalensis	White-barred Charaxes

Charaxes candiope	Green-veined Charaxes
Charaxes castor flavifasciatus	Giant Charaxes
Charaxes cithaeron cithaeron	Blue-spotted Charaxes
Charaxes ethalion ethalion	Satyr Charaxes
Charaxes jahlusa argynnides	Pearl-spotted Charaxes
Charaxes protoclea azota	Flame-bordered Charaxes
Charaxes varanes varanes	Pearl Charaxes
Charaxes zoolina zoolina	Club-tailed Charaxes
Cigaritis natalensis	Natal Bar
Coeliades keithloa keithloa	
Coeliades pisistratus	Two-pip Policeman
Colotis antevippe gavisa	Red Tip
Colotis euippe omphale	Smoky Orange Tip
Colotis pallene	Bushveld Orange Tip
Deloneura millari millari	Millar's Buff
Deudorix dariaves	Black-and-orange Playboy
Deudorix dinomenes dinomenes	
Deudorix diocles	Orange-barred Playboy
Dixeia spilleri	Spiller's Sulphur Small White
Eicochrysops hippocrates	White-tipped Blue
Eronia cleodora cleodora	Vine-leaf Vagrant
Euchrysops barkeri	Barker's Smoky Blue
Euchrysops malathana	Common Smoky Blue
Euphaedra neophron neophron	Gold-banded Forester
Eurema brigitta brigitta	Broad-bordered Grass Yellow
Eurema hecabe solifera	Common Grass Yellow
Euryphura achlys	Mottled-green Nymph
Eurytela dryope angulata	Golden Piper
Eurytela hiarbas angustata	Pied Piper
Euxanthe wakefieldi	Forest Queen
Gegenes niso niso	Common Hottentot Skipper
Graphium leonidas leonidas	Veined Swordtail
Hamanumida daedalus	Guinea-fowl
Hypolycaena buxtoni buxtoni	Buxton's Hairstreak
Hypolycaena philippus philippus	Purple-brown Hairstreak
Lampides boeticus	Lucerne Blue
Leptosia alcesta inalcesta	African Wood White
Leptotes pirithous pirithous	
Melanitis leda helena	Common Evening Brown
Mylothris agathina agathina	Common Dotted Border

Nepheronia argia varia	Large Vagrant
Neptis goochii	Streaked Sailer
Neptis saclava marpessa	Spotted Sailer
Netrobalane canopus	Buff-Tipped Skipper
Ornithacris cyanea	
Papilio dardanus cenea	Mocker Swallowtail
Papilio demodocus demodocus	Citrus Swallowtail
Pelopidas mathias	Black-banded Swift
Pentila tropicalis tropicalis	Spotted Buff
Phalanta phalantha aethiopica	African Leopard
Pinacopteryx eriphia eriphia	Zebra White
Platylesches moritili	Honey Hopper
Protogoniomorpha anacardii nebulosa	Clouded Mother-of-Pearl
Protogoniomorpha parhassus	Common Mother-of-Pearl
Pseudacraea boisduvalii trimenii	Boisduval's False Acrea
Sarangesa motozi	Forest Elfin
Sarangesa seineri durbana	Dark Elfin
Sevenia boisduvali boisduvali	Boisduval's Tree Nymph
Sevenia natalensis	Natal Tree Nymph
Spialia confusa confusa	Confusing Sandman
Spinotarsus grandis	
Telchinia cabira	Yellow-banded Acraea
Telchinia esebria	Dusky Acraea
Telchinia serena	Dancing Acraea
Teriomima zuluana	Zulu Buff
Trichocarventus klapperichi amatongensis	Tonga Klapperich's flat bug
Vanessa cardui	Painted Lady
Ypthima granulosa	Granular Ringlet

Mammals	
Canis adustus adustus	Side-striped jackal
Cephalophus natalensis natalensis	Red duiker
Equus quagga antiquorum	Plains Zebra
Kobus ellipsiprymnus ellipsiprymnus	Waterbuck
Neotragus moschatus zuluensis	Suni
Potamochoerus larvatus koiropotamus	Bushpig
Redunca arundinum arundinum	Southern reedbuck
Sylvicapra grimmia	Common duiker, Grey duiker

Reptiles	
Acanthocerus atricollis atricollis	Southern tree agama
Chamaeleo dilepis dilepis	Flap-neck chameleon
Hemidactylus mabouia	Moreau's tropical house gecko
Homopholis wahlbergii	Wahlberg's velvet gecko
Ichnotropis capensis	Cape rough-scaled lizard
Kinixys zombensis	Bell's hinged tortoise
Lycophidion capense capense	Cape wolf snake
Lygodactylus capensis capensis	Cape dwarf gecko
Meroles squamulosa	Common rough-scaled lizard
Pelusios sinuatus	Serrated hinged terrapin
Trachylepis depressa	Eastern coastal skink
Typhlops fornasinii	Fornasini's blind snake
Varanus albigularis albigularis	Rock monitor
Varanus niloticus	Water monitor

FLORA

Taxon Name	English Name
Encephalartos ferox	*Ferox cycad*
Restio zuluensis	
Uvaria caffra	*Small Cluster Pear*

PRO FORMA ANNUAL PLAN OF OPERATION

Notes of a management meeting for Sileza Nature Reserve held at …

office on …

Present:

Apologies:

CC:

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
LEGAL COMPLIANCE AND ENFORCEMENT					
Up to date legal document s.			Year 1	Regional Manager and Officer in Charge	
Implementation of relevant agreements.					
Creation of cooperative structures with local communities and law enforcement officials.			Year 2	Officer in Charge	
Regular patrols covering the full extent of the nature reserve.			Year 1 - On-going		
Prosecution of any offender caught committing an offence.					
STAKEHOLDER ENGAGEMENT					
A fully developed community liaison forum for Sileza Nature Reserve			Year 1 - on-going	Officer in Charge and Community Conservation Officer	
Quarterly meetings of the Sileza Nature Reserve community liaison forum.					
Easy communication between the nature reserve management and local communities.					
Relevant external organisations are kept in contact frequently in-order to empower the nature reserve management team			on-going		

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
BUFFER ZONE PROTECTION AND REGIONAL MANAGEMENT					
Adoption of environmentally appropriate land uses in IDPs and SDFs in the areas immediately surrounding the nature reserve.			Annually	Ezemvelo KZN Wildlife Planning Unit	
Retention of existing benign land uses in the areas immediately surrounding the nature reserve.					

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
ECO-TOURISM AND ENVIRONMENTAL INTERPRETATION AND EDUCATION					
An understanding of annual tourist numbers and a tourism market profile for the nature reserve.			Year 5	Ezemvelo KZN Wildlife Ecotourism and Marketing Unit	
A map outlining the tourism infrastructure of the nature reserve.					
The nature reserve will be fully marketed with the aid of local municipality programmes.			After the implementation of new tourism products	Ezemvelo Marketing Unit and Local Municipality.	
Provision of an environmental interpretation and education tour to each school in the neighbouring local communities.			Year 3	Officer in Charge and Community Conservation Officer	

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
CONSERVATION MANAGEMENT					
Adoption and implementation of the fire management plan.			Year 1	Officer in Charge and Ecological Advice Unit	
An up to date fire management plan for the nature reserve.					
Annual burns are aligned to burning objectives.					
Enable the nature reserve to have efficient firebreaks in place.			On-going	Officer in Charge	
Compliance with the National Veld and Forest Fires Act.					
Compliance with the Biodiversity Act.			Year 1	Officer in Charge, Ecological Advice Unit and Alien Plant Control Unit	
Efforts to prevent the emergence of invasive species in the nature reserve					
Continuous monitoring during field ranger patrols.					
The management of Bomas will be aligned to the invasive species plan.					
A detailed map depicting areas of soil erosion within the nature reserve.			Year 3	Officer in Charge	
Implementation of soil erosion control measures in areas in which plant cover is low, which are susceptible to erosion.					

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
CONSERVATION MANAGEMENT					
Creation of cooperative structures between Ezemvelo KZN Wildlife, local communities and law enforcement officials.			Year 2 - on-going	Officer in Charge and EWT	
Control of any alien animals found within the nature reserve.					
Secure Entry points and areas that may be soft targets of entry.					
Records of incidents and actions taken to address incident.					
Assistance from EWT regarding dog hunting prevention.					
Concise knowledge of the value of goods and services that Sileza Nature Reserve has to offer.			Year 4	Resource Use Ecologist	
An agreed upon approach to any extractive resource use.			If required	Officer in Charge and Resource Use Ecologist	
Approved resource use records					
No illegal collection of biological material or samples.					

Management target	2011/12 Progress	2012/13 goals	Completion date	Responsibility	Action
CONSERVATION MANAGEMENT					
An implemented strategy to manage wildlife present in the nature reserve.			Year 3	Officer in Charge and Ecological Advice	
Control population numbers of species that are exceeding identified carrying capacities.			On-going		
Effective procedures and relationships with neighbours in dealing with problem animal control.			Year 1	Officer in Charge	
Botanical inventory survey report on which to base management decisions.			On-going	Officer in Charge, Resource Use Ecologist and Ecological Advice	
Faunal inventory report on which to base management decisions.					
Surveillance and monitoring plans for key threatening processes.			Year 3	Officer in Charge and Ecological Advice Unit	
Monitoring plans for key rare and endangered species.					
Conservation targets are met.			On-going	Officer in Charge	
Maintenance of optimum population numbers of rare and endangered species.				Officer in Charge and ecological Advice Unit	
Monitoring of flagship species.					
Integration of nature reserve within NGO's species monitoring programmes.					

OPERATIONAL MANAGEMENT					
Adequate funding to achieve the objectives set out in the annual plan of operation.			Annually	Officer in Charge	
Funds to implement the ideal staff structure.					
Appointment of staff in all positions in the nature reserve.				Regional Manager: Ndumo Tembe Cluster	
Nature reserve is adequately staffed.					
Allocate staff in positions that are best suited towards them in-order for them to carry out their duties efficiently.					
Scheduled maintenance of the boundary fence.			On-going	Officer in Charge	
A report on the condition of the boundary fence and its level of maintenance.					
Regular scheduled maintenance of all facilities and infrastructure.					

FINANCIAL PLAN

1. Purpose and aim

The National Environmental Management: Protected Areas Act (No.57 of 2003) stipulates the requirement of a costing plan to be prepared for the approval of a Protected Area Management Plan by the MEC or Minister.

Management Effectiveness of protected areas relates directly to the availability of financial resources to achieve biodiversity conservation objectives. It is recognised that most protected areas do not have adequate financial resources to achieve their vision and stated objectives.

The Financial plan has been developed in the context of the management plan in the interests of proper planning and sustained conservation management of the Sileza Nature Reserve.

Certain management recommendations in the Management Plan which requires dedicated financial resources include:

- Upgrade of all building infrastructure.
- Repair of roads.
- Replace and upgrade 20 km of the SNR fence to secure the boundary of the protected area.
- Installation of signage directing tourists to the nature reserve.
- Installation of directional and interpretive signage within the nature reserve.
- The possible re-introduction of game species into the nature reserve (especially Suni).

2. Financial management of Sileza Nature Reserve

The financial objective for the reserve stipulates:

Provide adequate human resources, equipment, infrastructure and funding to enable the effective protection, development and management of Sileza Nature Reserve.

Current income generation activities include:

- Accommodation – SAPS camps located within reserve.

Current funding is not sufficient to effectively maintain the reserve and of particular concern is the security of fauna and management infrastructure and in particular the effective maintenance of the road and fence infrastructure. The table below provides a cost estimate of the requirements for the implementation of the management plan.

Sileza Nature Reserve - A Cost Estimate

INCOME (Based on analysis of last 3 years actual income)					
	Year 1	Year 2	Year 3	Year 4	Year 5
SAPS Accommodation fees					
Game sales					
PROJECTED INCOME					0

Ezemvelo provincial budget allocation (2014)					Currently taken off Tembe Elephant park Budget

EXPENSES (Projected operational requirement for critical activities)					
Road maintenance					
Fence maintenance					
Building maintenance					
Equipment maintenance					
Alien and Invasive Plant Control					
Fire management					
Erosion control and rehabilitation					
TOTAL					
TOTAL PAYROLL					
TOTAL EXPENSES (Critical Activities)					0

CAPITAL REQUIREMENT (Not included in annual operational requirement)					
Roads					
Buildings					
Fences					
TOTAL CAPITAL REQUIREMENT					0

Appendix I

MEMORANDUM OF AGREEMENT BETWEEN SOUTH AFRICAN POLICE SERVICES (SAPS) AND EZEMVELO KZN WILDLIFE