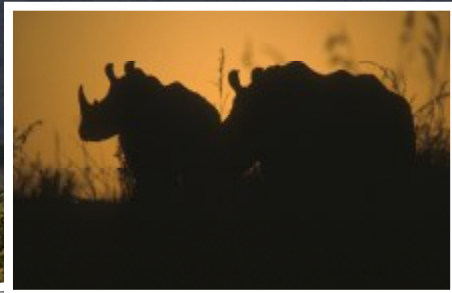




**EZEMVELO
KZN WILDLIFE**
Conservation, Partnerships & Ecotourism



ITHALA GAME RESERVE
Integrated
MANAGEMENT PLAN
2009 - 2013



Ithala Game Reserve

**KwaZulu-Natal
South Africa**

Integrated Management Plan: 2009-2013

Reviewed and edited by
Ezemvelo KwaZulu-Natal Wildlife Integrated Management Planning Unit

Based on the Draft Integrated Management Plan (2007 – 2012)
Compiled by Ecotourism Afrika Trust

Citation

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Preface

This Integrated Management Plan for the Ithala Game Reserve is the primary and overarching management document for the Reserve for the period 2009 to 2013. It forms the framework within which the Park will be managed and developed towards the achievement of its management objectives derived in collaboration with the Reserve's stakeholders during 2007 and 2009.

The protected area management planning process and the resultant planning documents (elaborated on in the next few pages), has been designed to meet the statutory requirements of the National Environmental Management: Protected Areas Act.

The protected area management planning process requires participation from the Reserve's stakeholders, the general public and specialists during the various stages of plan development and implementation. Although the Integrated Management Plan and its sub-components are five year planning documents, 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 Reserve's management objectives are operationalised and reflected through a Strategic Management Plan in the Reserve's operational budget over the next five years. A Business 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 Reserve over the next five years.

Ezemvelo KwaZulu-Natal Wildlife as the appointed Nature Conservation Authority for the KwaZulu-Natal Provincial Government hereby commits itself to the implementation of this plan.

Dr. Bandile Mkhize
Chief Executive Officer

Date:

Executive Summary and Purpose of Plan

This Integrated Management Plan (IMP) includes the management as well as developmental guidelines for the Ithala Game Reserve (IGR) inclusive of the Simdlangentsha Ithala Community Conservation Project (SICCP) area and additional adjacent areas, and is the primary and overarching management document for the IGR for the period 2009 to 2013. The IMP forms the framework within which the Reserve will be managed, aligned and developed in an endeavour to achieve the biodiversity conservation, ecotourism and partnership objectives as envisaged and set by the various stakeholders and refined by the Technical Task Team members during the consultative planning process.

The IMP is based on the Protected Area Reserve Management Planning Process, as required by the National Environmental Management Act (Act No.107 of 1998) and the National Environmental Management: Protected Areas Act (Act No. 57 of 2003), and can only be modified with Ezemvelo KZN Wildlife approval after consultation with all relevant stakeholders.

The IMP is based on the principles underlying sustainability, addressing biodiversity, natural and cultural resource management, ecotourism industry, benefit flow management and community involvement aspects by providing clarity regarding the attainment of key objectives and targets.

To effectively and efficiently manage the implementation of the IMP, a proposal regarding the establishment of a co-management structure, local board as advisory body, as well as institutional relationships, structuring and arrangements are made.

Guided by the Technical Task Team, the facilitators aimed at building understanding and support for conservation in the region through the alignment of the IMP with broader regional initiatives such as the Local Government's Integrated Development Plans for the Region.

Based on the principle of adaptive management, the IMP will be reviewed annually, providing timeous changes to the five year plan. Through the utilisation of the IMP as guide for the compilation of the Reserve's Strategic Management Plan and Operational Budget, it is envisaged that the IGR's management objectives can be operationalised.

As a document to guide the management of the IGR, based on the inputs of all stakeholders, the IMP also serves as the base document for monitoring both performance and compliance regarding the various management objectives of the IGR.

Recognising the important role the IGR plays in regional conservation initiatives, and the anchor role the Reserve plays in the success of ecotourism development, both current and proposed, Ezemvelo KZN Wildlife, as conservation authority commits itself to the implementation of this plan.

Protected Area Management Planning Process Framework for Protected Areas

The Integrated Management Plan, its components and authorisation

The **Integrated Management Plan (IMP)** is the overarching protected area integrated planning document that describes the administrative and legal framework, contextual background, public participation processes followed, vision / mission statements, management objectives, zonation as well as a management policy framework and guidelines, for a protected area, for a specific 5 year period. The **IMP** forms the framework within which all the other planning components, such as the **Conceptual Development Plan (CDP)**, **Strategic Management Plan (SMP)** and **Business Plan (BP)** are developed. The National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA) considers these plans to be components of the **IMP**.

The **Conceptual Development Plan (CDP)** is an integrated planning document and provides a strategic guideline for the development and maintenance of conservation management infrastructure and visitor facilities / activities within the constraints of the protected area receiving environment. This component will be developed further during the IMP's five-year period. To ensure operational effectiveness, protected areas may require specific Operational plans, programmes and procedures such as Fire management Plans, Wilderness Areas Management Plans, Elephant Management Plans etc, that support the **IMP** and **CDP**. These will be compiled where they do not already exist.

The **Strategic Management Plan (SMP)** is an operational management component that identifies the order of priority of IMP action projects, activities and tasks that need to be undertaken in the achievement of the protected area objectives and attaches key performance areas, responsibilities, timeframes, budgets and resources to each activity. This plan usually takes the form of a Microsoft Access database that 'actions' the Reserve's management objectives and any projects identified by the **IMP**, **CDP** and **Business Plan (BP)**. The **SMP** is a key planning document that also informs the Annual Budgeting Estimates and provides information for Annual Reports.

The **Business Plan (BP)** is primarily aimed at describing the manner in which the **IMP** and **CDP** are to be both financially resourced as well as manpower and capacity needs. It may address issues of operational efficiency and the optimisation of income generated opportunities in order to bridge any possible shortfalls between required operational expenditure and committed provincial government budget allocations. Five year expenditure estimates will inform the development of the **Business Plan (BP)**.

Once the **BP** has been approved, the **SMP** is finalised according to the committed five-year provincial budget allocations for the protected area and other expected financial income.

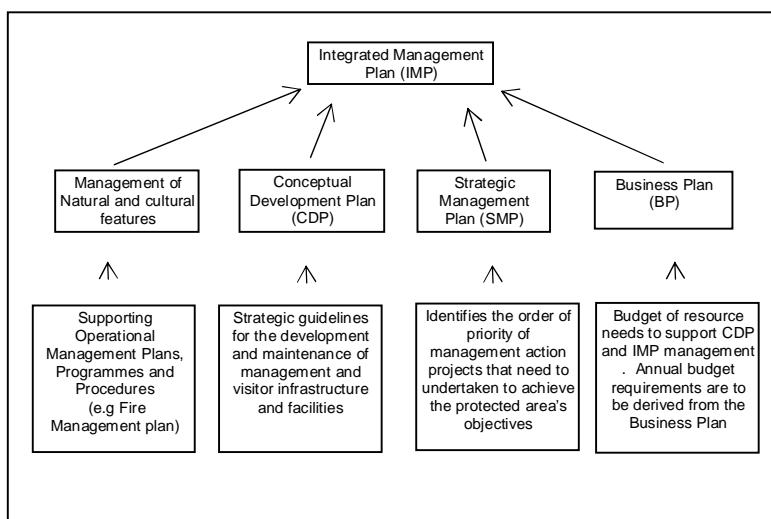


Figure 1: Core Components of the Integrated Management Plan Document

The process by which the **IMP** plans are developed is in accordance with the requirements of South Africa's environmental legislation, in particular the NEMPA, requiring public consultation and participation, as follows:

- The Protected Area Mission and Objectives contained in the **IMP** are derived in consultation at a Stakeholders' Workshop, the outcomes of which are advertised both regionally and provincially for comment in the next step.
- The **IMP** will be advertised provincially and regionally for public comment before being authorised.
- The **SMP** and **BP** will form the basis for regular progress reporting to the protected area Management Authority and its structures.

The **IMP** and its subsidiary plans are required to be authorised by the Provincial Minister for the Department of Agriculture, Environmental Affairs and Rural Development, in terms of the National Environmental Management: Protected Areas Act 57 of 2003. The IMP and any subsidiary plan is to be forwarded to the MEC on recommendation from the EKZNW Board.

IMP Planning & Review

The IMP requires both annual and five year revision cycles to ensure that the management objectives remain relevant and that management actions are continually improved. The figure below illustrates how the annual and five year planning and review cycles are to be integrated.

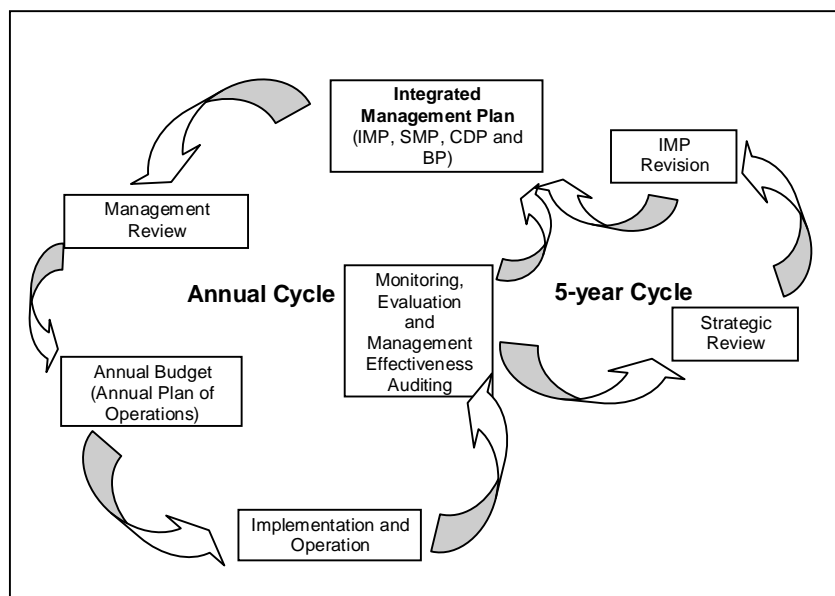


Figure 2: Integrated Management Plans: Aligning Annual and Five year Cycles

Definitions

Alien Species:

Means species or genotypes, which are not indigenous to Ithala Game Reserve and the surrounding area including hybrids and genetically altered organisms.

Biodiversity / Biological Diversity:

Means 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:

Means the KwaZulu-Natal Nature Conservation Board as defined by the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No.9 of 1997).

Buffer Zone:

Means an area surrounding Ithala Game Reserve that has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the Game 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) 1972¹, '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 palaeontological features are included under this definition.

Eco-cultural Tourism (ecotourism):

Means 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

Means 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:

Means 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]).

¹ *Convention concerning the protection of the World Cultural and Natural Heritage*. UNESCO. Adopted by the General Conference at its seventeenth session, Paris, 16 November 1972. Paris, France.

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; and
- 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.

Ecotourism:

Means natural heritage-based tourism.

Environmental Degradation:

Means 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.

Game Reserve

Means Ithala Game Reserve

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; and
- 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:

Means 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:

Means 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]).

Nature Conservation:

Means 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:

Means 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.

Partnership/s:

Means a co-operative and / or collaborative arrangement between the Game Reserve management / EKZNW and a third party that supports the achievement of the Game Reserve management objectives.

Protected Area:

- 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.

Ramsar³:

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, with 1 758 wetland sites, totalling 161 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. Over the years, however, the Convention has broadened its scope to cover **all aspects** of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.)

Stakeholders / Interested Parties⁴:

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).

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).

² UNESCO 1972 *Convention concerning the Protection of the World Cultural and Natural Heritage*. Adopted by the General Conference at its seventeenth session, Paris, 16 November 1972. UNESCO, Paris, France

³ <http://www.ramsar.org>

⁴ Defined in Guideline Document EIA Regulations, National Department of Environmental Affairs and Tourism, April 1998

Abbreviations

AMAFA	Amafa aKwaZulu-Natali (KwaZulu-Natal Provincial Heritage Agency)
BP	Business Plan (Component of EKZNW protected area management planning process)
CCA	Community Conservation Area
CDP	Concept Development Plan (Component of EKZNW protected area management planning process)
CRMP	Cultural Resource Management Plan
CMS	Co-management Structure
DAEA&RD	KwaZulu-Natal Provincial Department of Agriculture, Environmental Affairs and Rural Development
DWEA	National Department of water and Environmental Affairs
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo KZN Wildlife
FPA	Fire Protection Association in terms of the National Veld and Forest Fire Act, 1998 (Act No. 1 of 1998)
GIS	Geographical Information Systems
IDP	Municipal Integrated Development Plan
IGR	Ithala Game Reserve
IMP	Integrated Management Plan
IUCN	International Union for the Conservation of Nature
JMC	Joint Management Committee
LDP	Local Development Plan
MO	Management Objective
MOU	Memorandum of Understanding
NRPC	Ithala Game Reserve Planning Committee
PA	Protected Area
PAMC	Protected Area Management Committee / Technical Task Team
PPP	Public Private Partnership
ROC	EKZNW Regional Operations Committee
RoD	Record of Decision
ROS	Recreational Opportunity Spectrum
RLCC	Regional Land Claims Commission
SICCP	Simdlangentsha Ithala Community Conservation Project
SMP	Strategic Management Plan (Component of EKZNW protected area management planning process)
TFCA	Transfrontier Conservation Area
TBD	To Be Determined
ZAISP	Zululand Alien Invasive Species Programme

Commonly used Abbreviations for Specific Statutes (Legislation)

CARA	Conservation of Agricultural Resources Act, No. 43 of 1983
ECA	Environment Conservation Act (Act No. 73 of 1989)
KZNHRA	Kwa-Zulu Heritage Resources Act (Act No. 10 of 1997)
NEMA	National Environmental Management Act (Act No.107 of 1998)
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NWA	National Water Act (Act No. 36 of 1998)
PFMA	Public Finance Management Act (Act No. 1 of 1999)
PAA	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

1 PURPOSE AND SIGNIFICANCE OF THE ITHALA GAME RESERVE

The Ithala Game Reserve (IGR) largely encapsulates the area roamed by the most productive black and white rhino populations in southern Africa. Its history with regard to conservation in South Africa is significant. The reasons behind the original proclamation were primarily for conservation of key species and to retain aesthetic value by restoring detrimental man induced impact. This led to the dispossession of rights of land occupiers which has, through the Restitution of Land Rights Act (Act No. 22 of 1994) been redressed.

Full ownership rights have been restored to the claimant communities without human residential occupation nor changes in the current land use, and the claimants are fully supportive and aligned with the current national macro-programme. This is in line with the Cabinet Memo of 2001 where it is stated that "Title to conservation areas can be transferred to claimants in a manner that achieves a win-win situation for example where transfer of title is coupled with registered notarial deeds containing conditions of use".

As the competent conservation and tourism authority appointed by the State, Ezemvelo KZN Wildlife (EKZNW) will enter into a separate co-management Agreement with the Buthelezi/Zulu communities as owners for the joint management of the claimed land to achieve maximum compliance with the national and international laws and regulations governing conservation.

1.1 Purpose

The purpose of the IGR includes, but in no order of priority, the following:

- Protect and conserve endangered, rare and endemic species indigenous to the area as listed.
- Protect, conserve and restore the ecological integrity of the area.
- Safeguard the archaeological, historical, palaeontological and living cultural heritage of the area.
- Promote expansion of Ithala Game Reserve's ecological footprint as a regional anchor for biodiversity, business and benefit.
- Promote awareness and conserve representative examples of the natural beauty and outstanding aesthetic value of the area.
- Promote access by the public, to the area and its resources, both natural and cultural.
- Contribute to the achievement of Provincial and National conservation targets through protection of a representative portion of Northern Zululand Mistbelt Grassland.
- To provide a sophisticated protected area destination for the tourist industry in the Northern KwaZulu-Natal of South Africa.

1.2 Significance

Significant and sensitive attributes of the IGR, include:

- Biodiversity and natural heritage values:
 - Suitable habitat for black and white rhino populations results in high productivity.
 - Restoration ecology in relation to the re-establishment of natural systems.
 - Unique biodiversity associated with the altitudinal range in IGR.
 - Conserves and protects vulnerable *Protea comptonii* colonies.
- Cultural heritage values - The presence of a diverse multi-cultural and significant historical heritage associated with the Reserve, including:
 - The history of the various Traditional Authorities in the area.
 - The settlement history of the area.
 - Stories, myths and legends associated with the area.
 - History of Conservation and the role it has played in the region.

- Ecotourism significance:
 - Investment opportunities for entrepreneurs.
 - Improved quality of life for the local community.
 - The Reserve has the potential to provide diverse experiences for visitors in the same area, from the water activities in the Phongola / Bivane River to the in-depth game experiences based on rare and unique species which the Reserve offers.
 - Unique biodiversity assets as part of guest experience.
 - Contributes to local, regional and national economies through ecotourism and sustainable use of natural resources.
 - Recognition of conservation as a viable and sustainable land use option.
- Partnerships and benefits:
 - Employment opportunities for local people in a poor region of the province.
 - Key stakeholders in planning initiatives of Transfrontier Conservation Area (TFCA), district and local municipalities, AMAFA, private and communal neighbours.

Of vital importance to understanding the significance of IGR is Ezemvelo KZN Wildlife Protected Areas Ecosystem Services Report (**Appendix 2 Item 3**), which provides important information on the importance and value of the area to local populations.

2 ADMINISTRATIVE AND LEGAL FRAMEWORK

2.1 Institutional Arrangements

2.1.1 IGR Co-management Authority

Ezemvelo KwaZulu-Natal Wildlife is the designated Management Authority responsible and accountable for Ithala Game Reserve (IGR). In terms of Section 38(2) of the National Environment Management: Protected Areas, 2003 [Act No.57 of 2003] (NEMPAA). Going forward, this section requires that the provincial MEC assign the management of the Protected Area to a Management Authority.

Action Project 2.1.1 (i): Seek assignment from the MEC by re-appointing EKZNW as the management authority for IGR in terms of Section 38(2) of NEMPAA.

The IGR Management Authority is responsible for reporting on the management of IGR to the relevant claimant trusts and to the designated KwaZulu-Natal Provincial Member of the Executive Committee and the Premier thus ensuring co-ordination of those matters that may affect IGR through the relevant provincial departments, District and Local Municipalities.

To successfully manage the sustainable utilisation of the IGR it is imperative that an effective institutional arrangement be established to ensure the active involvement of all role-players, in an attempt to attain the objectives.

Responsibilities to be addressed in the co-management agreement include:

- Controlling all access to the reserve
- Ensuring that access is equitable
- Ensuring that resource utilisation is environmentally, socially and economically acceptable and viable.
- Evaluating proposed concessions against ecological, social, economic and operational imperatives.
- Monitoring compliance with the conditions of allocated concessions.
- Management of Public Private Partnerships (PPP) compliant to Treasury Regulations
- The establishment of a Development Trust/ Foundation, with representation from the surrounding communities, Government Authorities and select individuals.
- Monitoring benefit flow on a regular basis.
- Measuring the benefits of the reserve on the surrounding environment.
- Reporting on the successes and failures of the reserve as a tool for community beneficiation.

An institutional arrangement which addresses the relationship between EKZNW, as resource managers, and neighbours, the industry and Government, is required. No single agreement can suffice thus the proposed relationship is divided into a Co-management Agreement between EKZNW and the Buthelezi/Zulu Communal Property Association or Trust (still to be formed), as the owners of the land.

Action Project 2.1.1 (ii): Institute a co-management agreement between EKZNW and the land claimants to put in place a process which will enable the formation of a co-management structure for IGR.

Objectives of a co-management agreement may be:

- To contribute to attaining the objectives set for IGR as well as those of EKZNW.
- To develop environmental education programmes.
- To enhance field guide training and capacitation.
- To contribute and develop environmental conservation programmes.
- To facilitate game acquisitions
- To enhance the tourism potential of IGR

Action Project 2.1.1 (iii): Establish a co-management structure as an independent legal body responsible for all projects or initiatives within these communities.

2.2 Legislation Guiding the Administration of Ithala Game Reserve.

It is important to note that Ithala Game Reserve is a protected area in terms of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003 [NEMPAA]). In terms of this Act, any conflicts with other legislation must be dealt with in accordance with Section 7 of NEMPAA. In essence it stipulates that - where a provision of NEMPAA specifically concerns the management or development of protected areas, and there is conflict with other national legislation, the relevant section of NEMPAA prevails.

The operational administration and management of the Game Reserve is subject to the following key statutes – it is acknowledged that this list is not exhaustive. Managers must familiarize themselves with the purpose and contents of these statutes as well as their subsequent amendments and regulations. Many of these statutes can be downloaded from the following SA Government Documents internet website:

Natural and Cultural Heritage / Resource Management and Development:

- Animals Protection Act, 1962 (Act No. 71 of 1962).
- Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965).
- Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).
- Constitution of the Republic of South Africa, 1997 (Act No. 108 of 1997).
- Criminal Procedure Act, 1977 (Act No. 51 of 1977).
- Environment Conservation Act, 1989 (Act No. 73 of 1989).
- Forest Act, 1984 (Act No. 122 of 1984).
- Game Theft Act, 1991 (Act No 105 of 1991).
- KwaZulu Animal Protection Act, 1987 (Act No. 4 of 1987)
- KwaZulu Nature Conservation Act, 1992 (Act No. 29 of 1992).
- KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008).
- KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997).
- National Environmental Management Act, 1998 (Act No. 107 of 1998).
- National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
- National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).
- National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).
- National Forests Act, 1998 (Act No. 84 of 1998).
- National Heritage Resources Act, 1999 (Act No. 25 of 1999).
- National Water Act, 1998 (Act No. 36 of 1998).
- National Water Amendment Act, 1999 (Act No. 45 of 1999)
- National Veld and Forest Fire Act, 1998 (Act No.101 of 1998).
- Nature Conservation Ordinance, 1974 (Act No. 15 of 1974)
- AMAFA aKwaZulu-Natali / Heritage KwaZulu Natal: Kwazulu-Natal Heritage Act (Act No. 10 of 1997)
- Traditional Healers Act (Act No. 10 of 2004)

General Management:

- Development Facilitation Act, 1995 (Act No. 67 of 1995).
- Disaster Management Act, 2002 (Act No. 57 of 2002).
- Fencing Act, 1963 (Act No. 13 of 1963)
- Firearms Control Act, 2000 (Act No. 60 of 2000)
- Fire Brigade Services Act, 1987 (Act No. 99 of 1987).
- KwaZulu-Natal Planning and Development Act, 1998 (Act No. 5 of 1998).
- Intergovernmental Relations Framework Act, 2005 (Act No.13 of 2005).
- Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000).
- Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998).
- Natal Town Planning Ordinance, 1949 (Act No. 27 of 1949).
- National Building Standards Act, 1977 (Act No. 103 of 1977).
- National Road Traffic Act, 1996 (Act No. 93 of 1996).
- Occupational Health and Safety Act No, 1993 (Act No. 85 of 1993).
- Restitution of Land Rights Act, 1994 (Act No. 22 of 1994).
- State Land Disposal Act, 1961(Act No. 48 of 1961).
- Water Services Act, 1997 (Act No. 108 of 1997).

Financial Management:

- Public Finance Management Act, 1999 (Act No. 1 of 1999).

Human Resource Management.

- Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997).
- Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993).
- Employment Equity Act, 1998 (Act No. 55 of 1998).
- Labour Relations Act, 1995 (Act No. 66 of 1995).
- Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).
- Pension Funds Act, 1956 (Act No. 24 of 1956).
- Skills Development Act, 1998 (Act No. 97 of 1998).
- Skills Development Levies Act, 1999 (Act No. 9 of 1999).
- Unemployment Insurance Act, 2001 (Act No. 63 of 2001).

Nature Reserve / Game Reserve / Park Regulations

EKZNW protected area regulations are enforced in accordance with Section 15 of the Nature Conservation Ordinance, 1974 (Act No. 15 of 1974) read together with the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997).

2.3 Regional Planning Context and Principles

IGR is a core conservation area forming part of the KZN protected area network. As with all EKZNW protected areas, the intention is to continually improve management effectiveness of IGR in line with the levels adopted for all protected area within the EKZNW protected area network.

Strategically positioned within the Zululand District Municipality, the IGR forms the anchor for numerous conservation initiatives. Through the alignment of planning initiatives on an international, national, district and local level it is envisaged that the IGR will be able to play a catalytic role in integrated development.

In accordance with the Local Government: Municipal Demarcation Act (Act No. 27 of 1998) and the Local Government: Municipal Structures Act (Act No. 117 of 1998), the IGR has been demarcated into the Zululand District Municipality and three Local Municipalities, as follows:

- uPhongolo Local Municipality [KZ262];
- Abaqulusi Local Municipality [KZ263]; and
- eDumbe Local Municipality [KZ261].

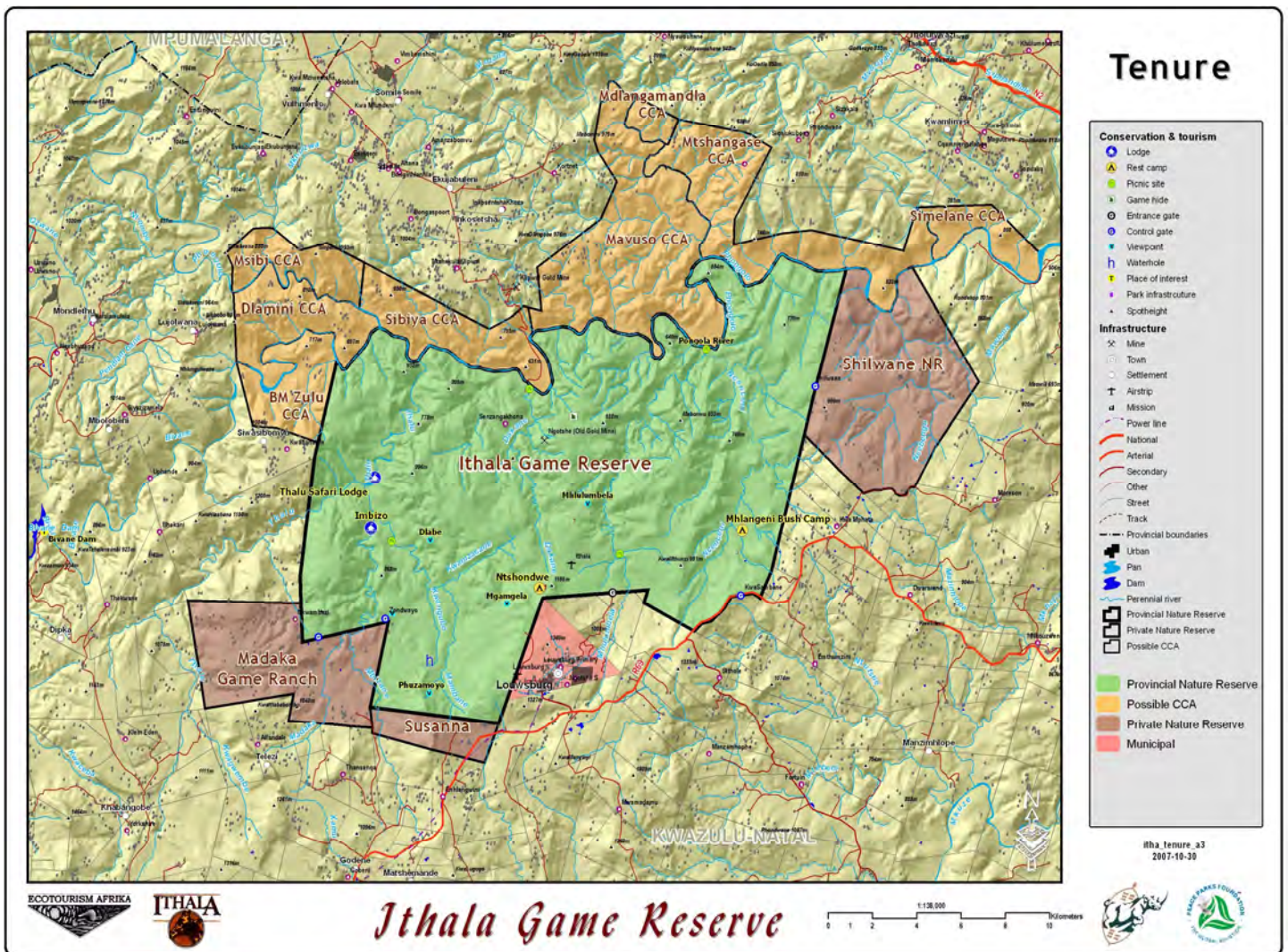
Through the integrated planning procedure, as well as participation in other planning initiatives, the IMP has been aligned with regional biosphere initiatives and the district and local government Integrated Development Plans (IDP's). This will assist in developing an effective buffer zone around IGR. The Game Reserve Manager in collaboration with the designated EKZNW officials will be tasked to make the relevant inputs whenever these municipalities' Integrated Development Plans and Spatial Development Frameworks are reviewed and updated.

Action Project 2.3 (i): Management in collaboration with other relevant EKZNW officials is mandated with active participation in the review processes of the municipal Integrated Development Plans (IDP's) and Spatial Development Frameworks (SDF's) in order to ensure an effective buffer zone surrounding IGR through an alignment of appropriate land use adjacent to the Game Reserve and to ensure municipal service delivery.

2.4 Proclamation Status of IGR

In July 1972 the then Natal Parks Board bought 8 488 ha of land north west of Louwsburg. This area, consisting of the farms – Doornpan, Eldorado, Jammerdal and Doornkraal, was proclaimed as a nature reserve in March 1973 by Proclamation No. 36 of 1973. Over the next few years five additional areas of land were incorporated, (**Appendix 2, Item 7**):

- Proclamation No. 157 dated 12 September 1974 [Breda No. 261 2815ha; Wonderfontein No. 486 2986ha; Vergelegen No. 373 1977ha; Doornpan No. 117 117ha].
- Proclamation No. 31 dated 13 March 1975 [Lot 616 Louwsburg Township 223ha].
- Proclamation No. 61 dated 5 May 1977 [Ongeduld No. 393 1699ha; Craig Adam No. 534 2852ha].
- Proclamation No. 158 dated 6 December 1979 [Bergvliet No. 452 1679ha; Geluk No. 521 1725ha; Ongegund No. 393 1698ha].
- Proclamation No. 1982 dated 18 November 1982 [Langverwacht No. 495ha; Onverwacht No. 395ha].



Map 1: Tenure

2.5 Re-defining Reserve Boundaries, Consolidation and Proclamation

The proclaimed status of the IGR, and unproclaimed status of the Simdlangentsha Ithala Community Conservation Project (SICCP) and surrounding areas, is not conducive to operational efficiency and complicates the legal processes associated with management.

Community Conservation Areas (CCA's) have been recommended and approved by the Traditional Authorities, with recommendations for co-management as part of a wider conservation initiative, and several private conservation initiatives contiguous to IGR have similar contributions necessitating co-management agreements.

Action Project 2.5 (i): Management to establish co-management agreements between EKZNW, adjoining CCA's, private nature reserves and game ranches. *Note: the purpose is to ensure effective management of a larger extended conservation area that also forms an effective buffer to the core IGR area.*

2.6 Local Agreements, Leases, Servitude Arrangements and MoU's

The formal documentation and maintenance of all local agreements, leases, servitude arrangements and MoU's concerning the authorised use of IGR area by beneficiaries other than EKZNW will be undertaken to promote transparency and good governance. All such agreements will be scrutinized by the Manager: EKZNW Legal Services for direction, prior to any EKZNW member signing such documents.

The IGR Manager will be familiar with the content of such servitude rights, conditions and agreements and will ensure that there is compliance with the conditions contained therein. Copies of all documentation will also be filed manually and digitally at the IGR management and regional management offices for easy reference. These copies will be updated in accordance with any authorised amendments.

Sentech, Eskom and Telkom all maintain infrastructure within the Game Reserve, these agreements will be updated.

Action Project 2.6 (i): As a matter of priority, review all formal and informal local agreements, MoU's, leases, servitude arrangements etc. pertaining to IGR and document and update, maintain and monitor these authorised agreements and ensure compliance with all conditions and rights in law. All informal and revised agreements are to be formalised and approval sought from the Board.

2.7 Broadening Conservation Land Use Management in Areas Surrounding IGR

Opportunities may arise that will enable the establishment of new formal protected areas or other conservation management areas on land bordering or in vicinity of IGR in collaboration and co-operation with the relevant communities and landowners. This is likely to contribute to the EKZNW Proposed Expansion of the Formal Protected Areas Network in KZN and SICCP and Shilwane targets through more effective natural and cultural heritage conservation. Indirectly, new tourism opportunities could also develop with the resulting socio-economic benefits.

The staff of the IGR, as well as the Traditional Authorities and local government will be sensitised to the expansion opportunities and engage with the relevant stakeholders, interested and affected parties. Appropriate and formalised agreements will be established to manage these relationships.

Priority areas regarding the broadening of the ecological footprint include:

- The formalisation of an agreement with the CCA's; and
- The formalisation of co-management agreements with private neighbours

All EKZNW officials associated with IGR will remain sensitive to these opportunities and ready to engage with the relevant role-players, assisting them with the most appropriate options for establishing conservation areas. This may be in the form of conservancies, private, community or local authority protected areas, contractual protected areas, public open space or even incorporation of land into IGR and in so doing increasing the extent of core protected areas within KZN and increasing protected area representivity. Alignment with the municipal IDP's will also be actively sought to ensure appropriate land use on the borders of IGR.

Action Project 2.7 (i): Annually explore and investigate opportunities and engage with the KZN Biodiversity Stewardship Programme, to broaden conservation land use in and around IGR in accordance with EKZNW Protected Area Expansion Plan.

3 BACKGROUND

3.1 *Origins of the Name of the Game Reserve*

IGR draws its name from the Thalu River which flows through the Game Reserve and from the word “Ithala” which means “hidden shelf where valuables are stored”.

3.2 *Location and Extent of the Game Reserve*

The IGR is the only formally proclaimed protected area in central-northern KwaZulu Natal, and is characterised by a large altitudinal variation, resulting in environmental niches due to geological and climatological factors.

IGR covers an area of 29 653ha and lies, between the town of Louwsburg and the Phongolo River. The Reserve is approximately 50km from Vryheid and 70km from the town of Phongolo.

Neighbours include commercial landowners on the eastern and western boundaries, Traditional Authority areas on the northern boundary and commercial landowners and the town of Louwsburg on the southern boundary.

3.3 *History of Conservation*

Ithala is one of the youngest game parks in KwaZulu-Natal. The then Natal Parks Board started buying up farms to establish this Reserve in 1972. Much of the land had to be rehabilitated due to extensive poor agricultural practices. There were also two gold mines (now abandoned) in this area. In the late 1800's this land was given by King Dinizulu to white farmers who farmed and hunted there. It was these farming activities that caused much of the soil erosion and these properties were used as “labour Farms” under the Apartheid system. Due to their low productivity, landowners sold their farms to the province for the formation of a game reserve. Importantly the Natal Provincial Administration at the time resolved to establish a game reserve in this northern scenic region of the province to provide a major wildlife destination for tourists. With the exception of lion, all the big game species have been re-introduced and all of the reserve's diverse habitats are now well stocked with appropriate animals. Most of the original species have been re-established.

3.4 *Description*

3.4.1 Climate and Weather

The large altitudinal variation of the Reserve, as well as local topography, creates distinctive patterns in the rainfall, with localised rain shadows, and areas of increased drainage. The mean annual precipitation of IGR varies from 750 to 850mm per annum.

The area experiences hot summer temperatures with summer rainfall and dry, colder winters especially at higher altitudes.

3.4.2 Topography

Situated in a complex landscape, characterised by altitudinal variation, flat plateaus, scarps, cliffs, and deeply incised valleys, IGR's topography, linked to its climate and weather creates numerous different habitats and environments.

The altitude at the highest point in the southern section of the reserve is 1393m a.s.l and at its lowest point along the Pongola River in the north is 407m a.s.l. The mean distance between these two points is approximately 16 kilometres.

3.4.3 Geology

IGR contains the ancient Mazaan system, overlain by the most recent Karoo systems with their intrusions of dolerite and granite. The geology of IGR contributes significantly to the biodiversity of the Reserve, as a result of the relatively large altitudinal variation, variation in soil depth, clay content, and rainfall. The Reserve is dominated by Ngotshe Mountain which consists of a dolerite cap. Below this cap of rock lie layers of softer, highly erodible soils, resulting in deeply incised valleys. The lower layers of the Reserve are dominated by igneous rock creating inselbergs and rocky outcrops.

3.4.4 Geomorphology

The underlying geology, as well as complex topography and hydrology of IGR, has resulted in deeply incised valleys emanating from Ngotshe Mountain separated by long narrow plains with rivers flowing northwards to join the west-east flowing Pongola River. The soil depth of the IGR is relatively shallow, with a soil clay content of 15 – 55%. The steep slope linked with relatively high rainfall results in areas of erodibility.

3.4.5 Hydrology

The Reserve falls into the Bivane / Phongolo catchment system, which is an important water source for the Pongola sugar farming industry downstream, the water supply to Mkhuze town and to the Pongolapoort Dam. The catchment is characterised by low winter and good summer flows.

3.4.6 Flora

Action Project 3.4.6 (i): Update the vegetation map of IGR and implement appropriate management actions to maintain and counteract any negative impacts.

The following vegetation types are present in IGR (Mucina and Rutherford 2005):

NAME	BIOME
Delagoa Lowveld	Savanna
Zululand Lowveld	Savanna
Paulpietersburg Moist Grassland	Grassland
KaNgwane Montane Grassland	Grassland
Granite Lowveld Bushveld	Savanna
Ithala Quartzite Sourveld	Grassland
Northern Zululand Sourveld	Savanna
Swaziland Sour Bushveld	Savanna
Income Sandy Grassland	Grassland
Wakkerstroom Montane Grassland	Grassland
Northern Zululand Mistbelt Grassland	Grassland

The conservation status of these vegetation types is vulnerable with two classified as less threatened, namely Ithala Quartzite Sourveld and Wakkerstroom Montane Grassland. (See **Appendix 5, Map 2**)

The most threatened vegetation type found in IGR is the Northern Zululand Mistbelt Grassland, of which only 0.0662 % of the total provincial target is afforded protection by IGR, followed by:

- Ithala Quartzite Sourveld (0.138%);
- Delagoa Lowveld (0.223%);
- Paulpietersburg Moist Grassland (0.273%);
- Wakkerstroom Montane Grassland (0.316%);
- Swaziland Sour Bushveld (0.353%);
- Income Sandy Grassland (0.495%);
- Northern Zululand Sourveld (0.506%);
- Zululand Lowveld (0.723%); and,
- Granite Lowveld Bushveld (1.626%).

3.4.6.1 Priority Species

Approximately 700 plant species have been recorded in IGR. This includes 15 Red Data Book species. It is critical that the central EKZNW Biodiversity Database be updated with this information. (See **Section 4.5**)

Action Project 3.4.6 (ii): Update the EKZNW Biodiversity Database with the priority plant species status and records.

3.4.7 Fauna

Species checklists will be updated as data becomes available. A fixed protocol for compiling and maintaining these checklists will be developed to ensure that they provide accurate, comparable and contemporary baseline data for management and scientific purposes. It is critical that the Central EKZNW Biodiversity Database be updated with this new information.

Action Project 3.4.7 (i): Update the EKZNW Biodiversity Database with the IGR animal species checklist records.

3.4.8 Invertebrates

According to the EKZNW Biodiversity Database approximately 268 species of invertebrates have been recorded for IGR, eight of which are endemic to KZN.

Due to the critical role that invertebrates play in ecosystem function monitoring and surveys will continue.

Action Project 3.4.8 (i): Continue surveys and monitoring of invertebrate fauna found on IGR especially rare and endemic species.

3.4.9 Fish

At present nine fish species, two of which are Red Data Book species, have been recorded. It is necessary that the presence and status of these species be confirmed.

Action Project 3.4.9 (i): Confirm the presence and status of fish species occurring in IGR.

3.4.10 Herpetofauna (Reptiles and Amphibians)

The EKZNW Biological database notes that 83 species are present of which three are Red Data Book species.

Action Project 3.4.10 (i): Confirm the status of the Red Data Book herpetofauna occurring in IGR.

3.4.11 Avifauna (Birds)

The IGR is designated as an Important Bird Area (IBA ZA042) by Birdlife International. Southern Bald Ibis, Blue Crane, Brown-headed Parrot, Four-coloured Bush-shrike and Black-bellied Glossy are some of the bird species recorded

Thus far 323 species of birds have been recorded in IGR and 23 are listed as Red Data Book species.

This diversity can be attributed to the reserve's ecotonal nature and the variety of habitats it supports together with sound ecological management practices. The riverine forest provides habitat for many of the more secretive, river-dependent species such as White-backed Night Heron and Half-collared Kingfisher. The mountainous cliffs hold a colony of Southern Bald Ibis. Several large raptor species that are rare outside South Africa's large parks occur here, including White-backed Vulture, Lappet-faced Vulture, Martial Eagle and Tawny Eagle. Denham's Bustard, White-bellied Bustard and African Grass Owl occur in the grassland areas in small numbers. The thicket and forest areas support Brown-headed Parrot and Four-coloured Bush-shrike, both East African Coast specials. Projects such as the re-introduction of Red-Billed Oxpeckers also contribute to this diversity.

Action Project 3.4.11 (i): Evaluate and assess the significance of IGR in terms of its contribution toward the conservation of bird species, especially threatened species.

3.4.12 Mammals

The reserve contains populations of elephant, white rhino, black rhino, tsessebe, oribi, white-tailed mouse, serval, leopard and reedbuck which are all classified as priorities for biodiversity conservation. Other large mammals that occur in the reserve include giraffe, kudu, eland, buffalo, grey duiker, bushbuck, nyala, steenbok, klipspringer, blue wildebeest, impala, zebra, spotted hyaena, blackbacked jackal, mountain reedbuck and brown hyena.

The IGR checklist notes that 38 mammal species (including 4 Red Data Book species) have been recorded on the reserve.

A large number of fauna species that are rare or endangered or have previously been found in northern KwaZulu-Natal are present in the IGR.

3.4.13 Cultural Heritage

Ithala Game Reserve has been relatively well surveyed by archaeologists of the Natal Museum and officials from Amafa. In 1989, Gavin Whitelaw and Mike Moon conducted a detailed survey in the Game Reserve and produced a report (Whitelaw 1989). IGR was again visited by Natal Museum staff in 2004 when a team surveyed a San rock art site reported in 1982. Areas adjacent to IGR have also been relatively well surveyed during 1996 and 1997 by Gavin Anderson (Anderson 1996, 1997).

There are 23 sites within the borders of the IGR and 17 sites adjacent to the Game Reserve. (Whitelaw 1989, 1994) The majority of these, i.e. eight within the IGR and three adjacent, belong to historical-era Nguni homesteads. They are usually indicated by stone walling, and the presence of potsherd fragments and or the remains of lower and upper grinders. Some of the livestock pens delineated by the stone walling are in rectangular shape rather than the more traditional circular shape.

Six older Later Iron Age homestead settlements have also been located. It is possible that these belong to the historical Ndwandwe paramountcy that dominated this area in the early 19th century. Interesting is the occurrence of a pre-colonial mine that most probably also belongs to the early nineteenth century. A series of pits about 3-10m in diameter and approximately 1.5m deep have been dug along a band of banded iron stone. This was most probably mined for iron ore (Whitelaw 1989). Prehistoric iron mines are known from elsewhere in Zululand but most of these occur further south. No smelting sites are known

One Early Stone Age site with tools that belong to the Acheulian period (dated approximately 300 000 – 1.7 million years ago) has been located outside of IGR. These sites typically occur close to water and were most probably occupied by early hominins such as *Homo erectus* or *Homo ergaster*. Four Middle Stone Age sites have been recorded inside IGR and six in adjacent areas. Most of these sites are open-air scatters exposed by donga and sheet erosion. Tools consisting of blades, cores, flakes, and sometimes hammer stones are typically made of quartzite and lydianite. Middle Stone Age sites were occupied by the first anatomically modern people (i.e. *Homo sapiens sapiens*) and most probably dates back to approximately 40 000 – 200 000 years ago.

Later Stone Age sites, associated with San hunter-gatherers and their immediate ancestors, have also been located inside IGR and adjacent areas (Anderson 1996, 1997, Whitelaw 1989, 1994). These date back to approximately 30 000 years ago. It is not certain when the San left the area. Three Later Stone Age sites have been recorded inside IGR and three in adjacent areas. Two of the sites inside the Game Reserve are open-air scatter sites with typical Later Stone Age flakes, cores, scrapes, and blades. Most of these were made from quartz, quartzite and hornfels. The second category of Later Stone Age site consists of small shelters with cave deposits. These sites are more important from an archaeological perspective as the tools and associated archaeological material may still occur in context and can also be dated more accurately.

One Later Stone Age shelter that also contains Bushman (San) rock paintings has been located inside the reserve and two in adjacent areas. The iconographic content of the paintings consist of typical fine line human, antelope, and therianthrop designs. Some finger smears and finger lines have also been observed but these may have been made by later Bantu-speaking visitors to the shelters. Most of the depictions are painted in red monochrome. None of the rock art has been dated but they most probably are not older than 2 000 years.

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3.4.14 Socio-Economic Context

The local communities are characterised by a low employment rate. There appears to be a high level of subsistence agriculture. It is further estimated that only a small percentage of the population in the area are functionally literate. High population growth rates and increasing trends in unemployment result in increasing levels of poverty. Consequently, with a staff compliment of 117, the reserve provides a significant number of employment opportunities in the conservation and tourism sectors where employment rates are generally low. Future nature based tourism development in IGR and its surrounds will have an important role to play in addressing issues of livelihood and local economic development in this deprived region of KZN.

3.4.15 Socio-Cultural History of the Area

Ithala Game Reserve is situated in the area that was dominated by the Ndwandwe chiefdom in the beginning of the 19th century. Our knowledge of this region in the late 18th and early 19th centuries derives primarily from a corpus of oral traditions recorded a century or more after the events which they purport to describe (Bryant 1965; Webb & Wright 1979). There is comparatively little evidence on the nature of socio-political organisation before the emergence of the Zulu kingdom in the late 1810's and early 1820's. However, some information can be extracted either from the oral traditions or from the shreds of documentary evidence which exist. There is enough to suggest that in the mid-eighteenth century the Nguni-speaking farmers of the greater IGR area lived in numerous, small-scale political units which varied in size, in population and in political structure. In the beginning of the 19th century they developed from chiefdoms to aggregations of chiefdoms, or paramuncies, in which the dominant chief's power was to a greater extent based on the organisation and deployment of physical force. This process of political centralisation started in the region around Magudu, to the immediate east of the Game Reserve, and saw the emergence of an aggressively expanding Ndwandwe chiefdom. It appears that this process was stimulated by international ivory trade along the east coast of Africa (Wright and Hamilton 1989). By the 1810's rivalry started to develop between the Ndwandwe paramuncy and another developing political force to their immediate south the Mthethwa.

The Ndwandwe started to expand southwards across the Mkhuze towards the Black Mfolozi River, and the Mthethwa pushed inland up the valley of the White Mfolozi. Of the two, the Ndwandwe was the more centralised and militarized state, with its ruling house under Zwide kaLanga, enlarging the territory under its control by means of ferocious conquest (Omer-Cooper 1975). By about the 1816, the Mthethwa and Ndwandwe were facing each other across a frontier that stretched from near the mouth of the Mfolozi to the present day Vryheid area. The following year, the confrontation between them came to a head when the Ndwandwe launched an attack on the Mthethwa, defeated their main army, and captured and killed their king Dingiswayo. The Ndwandwe were now poised to dominate the whole region from the Phongola to the Thukela. However, in the south there remained one final obstacle to be overcome. This was the budding Zulu state, whose chief, Shaka kaSenzangakhona, had come to power with Mthethwa assistance and, as a tributary of Dingiswayo, had been encouraged by the Mthethwa chief to create a firm regional basis of resistance to the Ndwandwe.

When in about 1818, the Ndwandwe made their expected attack on the Zulu Shaka's force was strong enough to beat the invaders off. After the withdrawal of the Ndwandwe, the Zulu leadership rapidly set about increasing the size of the army at its disposal and bringing it under central control. A second attack by the Ndwandwe on the Zulu was successfully parried, and when, in about 1819, Zwide launched a third expedition, the Zulu leadership felt secure enough to meet it head-on. In a pitched battle on the banks of the Mhlathuze River, the result of which could easily have gone the other way, the Ndwandwe were defeated. The Zulu at once counter-attacked, overran the Ndwandwe territory, including the area covered by the present-day Ithala Game Reserve, and drove Zwide and the remnants of his forces north-west over the Phongolo. Overnight the Zulu had become the predominant power in this region and the area covered by the present-day Ithala Game Reserve became part of the larger Zulu Kingdom. However, the Ndwandwe continued to view this newly conquered territory as their original homeland. In 1826, two years before the assassination of King Shaka, the Ndwandwe attempted again to invade this area. However, in the ensuing battle, fought at Ndololwane north of the upper Phongolo River, the Ndwandwe were finally routed and the area remained part of the Zulu Kingdom until the British annexation of the area in 1879 (ibid).

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3.4.16 **Eco-cultural Tourism**

Despite having numerous sites of cultural significance and eco-cultural tourism value, very little use of these resources has been made and may form the basis of comprehensive Public Private Partnerships (PPP's).

Action Project 3.4.16 (i): Develop and implement an eco-cultural tourism plan for IGR.

3.5 **Developed Infrastructure**

IGR has a network of roads, ranging from tar to gravel, as well as several small camps, campsite, a lodge, conference facilities, staff accommodation, gates, picnic sites and park management infrastructure. Surrounding the Reserve are tar roads, settlements, towns, mines etc. which could intrude into the Reserve from a tourism experience.

The eastern portion of the Reserve is least developed, while the western portion has extensive tourism and Reserve management infrastructure

The necessary appropriate standard of infrastructure will be developed and maintained to support the effective management of IGR and promote eco-cultural tourism to the reserve. Future development will be detailed in the IGR Concept Development Plan.

The existing infrastructure is categorised as follows:

3.5.1 **Eco-cultural Tourism Infrastructure**

Eco-cultural tourism infrastructure in the Park consists of:

- 68 chalets - 166 beds
- Lodge sleeping 6 people
- Camping accommodates a maximum of 20 people
- Separate bush camps which accommodate 4, 8 & 10 people respectively
- A conference facility with a setting of up to 120 people with two break away room accommodating up to 18 people each, depending on the type of set up.
- Shop
- Children's playground
- A licensed restaurant and a ladies bar
- A coffee shop which serves light meals between 10h00 and 18h00
- A bird hide overlooking the water pond in form of the Crock deck
- 2 picnic sites equipped with ablution blocks and braai facilities.
- 5 view sites / look out points.
- A soccer field
- 4x Self guided trails
- Fuel pump station

3.5.2 Management Infrastructure

Management infrastructure is located at:

Ntshondwe Camp, Thalu Outpost, KwaSambane Outpost, Mvunyane Gate
And consists of:

- Three Administration offices
- Three Workshops
- Housekeeping and maintenance
- Mvunyane Gate – 3 accommodation units & gate house
- Thalu Outpost – 4 houses, 4 bachelor units, 9 rondavels & 2 single quarter accommodation blocks
- Ntshondwe – 3 houses, 3 single quarter accommodation units & 4 bachelor units
- KwaSambane – 1 house, 2 bachelor units, 1 single quarter accommodation unit & 3 double accommodation units
- 1 House located in Ngubhu Basin
- 5 Picket camps encompassing 14 accommodation units
- Research accommodation:
 - Communal lounge and kitchen.
 - Ablution facilities.

3.5.3 Bulk Infrastructure:

Bulk infrastructure consists of:

- Approximately 84 km of roads and 2 x 4x4 guided track @ 38km stretch (Bivane and Ncence
- One sewerage treatment plant
- One water treatment plant.
- Three helipads
- Airstrip 1,7km

3.5.4 Conservation Infrastructure

Other conservation infrastructure outside the developed centres consists of:

- 60km of boundary fence; 2,2m high with 3 strand electric fence (35km of which is working)

3.5.5 Water Supply Infrastructure

All water supply infrastructure will be appropriately screened to reduce its detrimental aesthetic impact on the landscape. All water supply infrastructure will be indicated on the reserve map.

Action Project 3.5.5 (i): Map all water supply infrastructure in IGR.
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4 VISION, MISSION, MANAGEMENT OBJECTIVES AND MANAGEMENT TARGETS

4.1 Introduction

Ezemvelo KwaZulu-Natal Wildlife has a legislative mandate which rests the custodianship of biodiversity conservation within the organisation. In alignment with this mandate, EKZNW has adopted a Five Year Strategic Plan and Performance Plan for 2009-2014 (**Appendix 2, Item 1**) which has identified the following corporate Vision, Mission, Goals and Core Values (see Text Box below):

EKZN WILDLIFE STRATEGIC VISION, MISSION, GOALS AND CORE VALUES	
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	
<ol style="list-style-type: none">1. To conserve indigenous biodiversity in KwaZulu-Natal both within and outside of protected areas.2. To be a sustainable, well resourced and capacitated biodiversity conservation and ecotourism organisation.3. To foster the value of biodiversity conservation with stakeholders.4. To be an efficient, effective and compliant organisation with good governance.5. 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.

In an effort to ensure that the resources of the IGR are protected, used, developed, conserved, managed and controlled in a sustainable and appropriate manner, and to ensure that the access to and use of the Reserve is equitable, EKZNW commissioned the compilation of an Integrated Management Plan (IMP) for the IGR.

The aim of the IGR IMP is to provide a broad policy framework, setting out key objectives, defining responsibilities and operational guidelines for sustainable management and development of the conservation resource.

The purpose of the IMP for the Reserve is to ensure that objectives of the IGR are aligned with the vision and mission of EKZNW, based on the organisation's guiding principles and values:

- **Vision:** To be a world renowned leader in the practice of biodiversity conservation and protected areas management in KwaZulu-Natal.
- **Mission:** To ensure effective management and sustainable use of resources, biodiversity and protected areas in collaboration with the community.

As a planning tool, EKZNW as an institution responsible for managing the access and use of the Reserve, will use this plan for decision-making purposes, as well as an awareness tool for staff, neighbours and visitors as to the vision, mission and operational guidelines of the Reserve.

The vision, mission, and management objectives for IGR were set by the broad stakeholders and extensively discussed and consulted by the sector groups, based on the Integrated Management Planning Process. (**Appendix 2, Item 8:** Ithala Game Reserve Public Participation Report 2010).

4.2 Vision of Ithala Game Reserve

The Vision of the Ithala Game Reserve is:

“To contribute to sound resource management, biodiversity conservation and cultural heritage protection while providing visitors and neighbours with access to the resources through ecotourism, partnerships and sustainable resource utilisation; and to form the core of a consolidated conservation area.”

4.3 Mission of Ithala Game Reserve

The Mission of the Management of Ithala Game Reserve is:

“A commitment to sustainably managing and conserving the natural and cultural resources of the Ithala Game Reserve, based on sound environmental principles, that benefit both the visitor and neighbouring community in an equitable manner.”

EKZNW and the IGR Management envisage the conservation of the IGR through sustainability being attained between resource utilisation, host community beneficiation, and industry participation, based on clear and acceptable public policy.

4.4 Management Objectives

To attain the vision, mission and objectives of the Reserve, as well as the mission of EKZNW the key objectives are acknowledged as:

- 1) The **conservation** of key biodiversity features, biophysical processes, landscapes, abiotic, **cultural** and archaeological resources;
- 2) The formation of functional **partnerships** to integrate the IGR with regional development plans and other initiatives which underwrite the vision of IGR;
- 3) The provision of socio-economic **benefits** to the Reserve's neighbours and to contribute to the local economy and the efforts of conservation in a sustainable manner based on sound business principles (EKZNW Business Plan); and
- 4) The provision of **ecotourism** business opportunities in the natural and cultural environment of IGR.

The fifteen management objectives derived at the broad stakeholder workshops are clustered within four distinct management functions viz. Biodiversity, Cultural, Partnerships (benefits) and Business.

The protected area objectives relating to each of these clusters are as follows:

Biodiversity

- Maintain viable populations of black rhino and white rhino as priority species.
- Conserve vulnerable *Protea comptinii* colonies.
- Conserve the northern Zululand mistbelt grassland.
- Restore detrimental man induced impact for efficient, effective and sustainable biodiversity conservation.
- Protect rare and endemic species indigenous to the area as listed.
- Conserve refugia for specifically named communities or assemblages not of specified conservation concern as per provincial targets.

Cultural Heritage

- Safeguard the archaeological, historical, palaeontological and living cultural heritage of the area.
- Minimise threats to sense of place (retain the aesthetic value of the area).
- Facilitate access to cultural heritage sites (graves, archaeological sites, sites of special significance).

Business

- Promote conservation as a viable and sustainable land use option.
- Contribute to the local, regional and national economy through eco-tourism and consumptive and non-consumptive sustainable use of natural resources.
- Provide a better experience by capitalising of the unique biodiversity and cultural assets.

Partnerships

- Ensure participation of local stakeholders through integrated, shared, cooperative working relationships and agreements.
- Participate as a key stakeholder in planning initiatives that specifically refer to the promotion of overall protected area objectives specifically the following:
 - District and local municipalities
 - AMAFA
 - Private and communal initiatives
 - Local Board
- Serve as an anchor for conservation and regional economic empowerment through cooperative co-management agreements.

See **Figure 3** below for a description of the integration of the IGR vision, mission and objectives with IGR management targets.

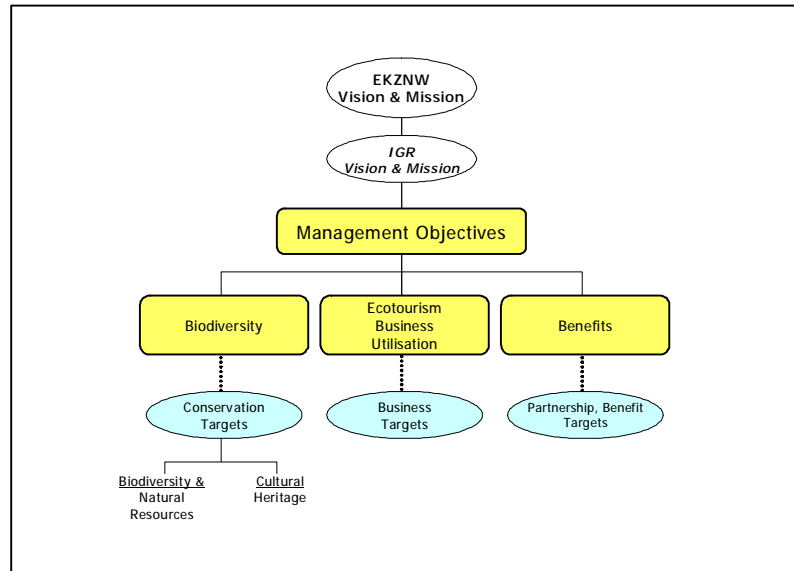


Figure 3: Integration of Management Targets

Through a ranking and prioritising process (see **Appendix 4**), the following prioritised list of objectives for the IGR was set: [see also **Section 8**].

- 1) Ensure participation of local stakeholders through integrated, shared, cooperative working relationships and agreements.
- 2) Maintain viable populations of black rhino and white rhino as priority species.
- 3) To conserve vulnerable *Protea comptinii* colonies.
- 4) To conserve the Northern Zululand Mistbelt Grassland [Veld type 8].
- 5) Minimise threats to sense of place (retain the aesthetic value of the area).
- 6) To restore detrimental human induced impact for efficient, effective and sustainable biodiversity conservation.
- 7) Protect rare and endemic species indigenous to the area as listed.
- 8) Safeguard the archaeological, historical, palaeontological and living cultural heritage of the area.
- 9) Participate as a key stakeholder in planning initiatives that specifically refer to the promotion of overall Protected Area objectives.
- 10) Serve as an anchor for conservation and regional economic empowerment through cooperative co-management agreements.
- 11) Promote conservation as a viable and sustainable land use option
- 12) Contribute to the local, regional and national economy through eco-tourism and consumptive and non-consumptive sustainable use of natural resources.
- 13) Provide a better experience by capitalising on the unique biodiversity and cultural assets.
- 14) Conserve refugia for specifically named communities or assemblages not of specified conservation concern as per provincial targets.
- 15) Facilitate access to cultural heritage sites (graves, archeological sites, sites of special activities).

4.5 Management Targets

Conservation targets for biodiversity are not easily set and indeed, conservation managers, scientists, decision makers and politicians have been reluctant to formalise and agree to targets. In reality our understanding of “how much is enough”, in what spatial configuration this should be, what the most critical processes are for the maintenance of biodiversity and how one can conserve these is poor, and the debate and research around this topic will continue for some time to come. This information will be continuously updated over time as our knowledge of area, connectivity and other process requirements improves for the conservation of ecosystems, communities and species. However, management has to take place despite these deficiencies so it is necessary to make best use of available information, stating the assumptions and limitations, and to see conservation targets as a set of working hypotheses around which conservation planning and evaluation can take place. Another advantage of developing strategies around targets is that this process serves to highlight the critical knowledge deficits thus guiding future research and monitoring priorities.

Targets have been set for the objectives within the four management clusters. Where targets have not been set management programmes (action projects) will be developed to determine achievable targets.

The targets are described within a table that details the management objective, describes the elements of concern regarding the objective, details the key attributes linked to the element of concern. It further describes which indicators are used to confirm those key attributes. The target is based on best available information and the current rating allows evaluation of the target against current trends.

Action Project 4.5 (i): Of critical importance is to establish and agree on the various conservation targets set for various species found in IGR.

Action Project 4.5 (ii): Develop conservation and monitoring strategies for all species for which conservation targets have been set.

4.5.1 Biodiversity Targets

Biodiversity targets for the IGR are:

Table 1: Biodiversity Targets

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
Maintain viable populations of black and white rhino						
1	2	Decline in black rhino population productivity	Decline in black rhino habitat	<ul style="list-style-type: none"> • Decrease in condition • Diet shift/ as a result of elephant and/or other browsers • Home range shift including exiting the Reserve • Decrease in productivity of females • Mortalities • Increase in carcasses • Increase in animals not being seen on a regular basis 	5% Productivity	4.25% Productivity

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
			Population security	<ul style="list-style-type: none"> Increase in security related incidents Increase in the number of poaching related mortalities Increase in carcasses Increase in animals not being seen on a regular basis 	Zero Incidents	Zero incidents
			Rhinocidal elephants	Increase in the number of incidents directly attributed to elephants	Zero incidents	Good – 1 incident in 2007
1	2	Decline in white rhino population productivity	Decline in white rhino habitat	<ul style="list-style-type: none"> Decrease in condition Home range shift including exiting the Reserve Decrease in productivity females Mortalities Increase in carcasses Increase in animals not being seen on a regular basis 	5% Population productivity	4.4% Productivity
			Population security	<ul style="list-style-type: none"> Increase in security related incidents Increase in the number of poaching related mortalities Increase in carcasses Increase in animals not being seen on a regular basis 	Zero incidents	Very Good
			Rhinocidal elephants	Increase in the number of incidents directly attributed to elephants	Zero incidents	Good – 1 incident in 2004
To conserve vulnerable <i>Protea comptonii</i> colonies						
2	3	Colony integrity	Loss of individual plants	No recruitment	6 Colonies – 2 in Madaka Game Ranch	4 Colonies
		Number of colonies	Loss of colonies	<ul style="list-style-type: none"> No recruitment Colony extinct 	6 Colonies – 2 in Madaka Game Ranch	4 Colonies
To conserve Northern Zululand Mistbelt Grassland						
3	4	<ul style="list-style-type: none"> Inability to effectively manage the veld type in the reserve resulting in the decrease in the integrity of the veld type. Failure to implement co- 	<ul style="list-style-type: none"> Alien plant invasion, incorrect burning Porous fence No firebreaks Unwilling neighbours 	<ul style="list-style-type: none"> Uncontrolled fires entering the Reserve Number of cattle in the Reserve Number of alien plant species encroaching on the veld type No co-management agreement 	Increase hectares under protection by 707 ha.	Provincial target 43173 ha; currently under protection 604 ha of which 88.25% occurs in IGR.

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
		management agreement				
To restore detrimental man induced impact for efficient, effective and sustainable biodiversity conservation						
4	6	Persistence and/or spread of aliens	No alien plant control	Increase in alien species infestation	0%	TBD
		Difficulty in rehabilitation of croplands	Known methods not effective No funding for expert recommendations	<ul style="list-style-type: none"> No monitoring of croplands No change in structure of croplands No new methods discovered 	TBD	TBD
		Increased degradation of existing erosion sites	Spread of existing erosion due to animal movement and water run off from roads	<ul style="list-style-type: none"> Increase in erosion site extent New erosion sites 	TBD	TBD
Protect rare and endemic species indigenous to the area, as listed						
5	7	Decline in rare and endemic species: <ul style="list-style-type: none"> Tsesebe <i>Warburgia salutaris</i> <i>Eugenia simmii</i> Oribi Lappet-faced vulture Blue crane 	<ul style="list-style-type: none"> Population health Colony integrity Habitat integrity Habitat integrity Damage or destruction of existing and potential nest sites Damage or destruction of existing and potential breeding habitat 	Decline in; <ul style="list-style-type: none"> Number of individuals Number of colonies Number of colonies Habitat integrity Existing or potential nesting sites ie large trees Existing or potential breeding habitat 	<ul style="list-style-type: none"> 100 – 120 Individuals No loss of colonies TBA TBA Prevent loss of current nest site Prevent degradation of appropriate habitat 	<ul style="list-style-type: none"> ± 100 Individuals 2 Colonies TBA 1 Individual 1 Nest site 2 Breeding areas
Conserve refugia for specifically named communities or assemblages not of specified conservation concern as per provincial targets						
6	14	Undesired impact on identified refugia	Integrity of identified refugia	Damage to plant communities or assemblages	TBD	TBD

4.5.2 Cultural Targets

Table 2: Cultural Targets

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
Safeguard the archaeological, historical, palaeontological and living cultural heritage of the area						
1	8	Damage or degradation of archaeological sites	Condition of sites and/ or artefacts	<ul style="list-style-type: none"> Damaged artefacts Damage to actual sites/structures 	No damage or degradation	Fair although no specific protection takes place at the moment
Minimise threats to sense of place (retain the aesthetic value of the area)						
2	5	Avoid new, inappropriate visual or auditory intrusion to the Reserve landscape	<ul style="list-style-type: none"> Inappropriate structures Noise pollution Light pollution Air pollution Water pollution 	<ul style="list-style-type: none"> Increase in; inappropriate structures noise pollution light pollution Increase in air pollution Increase in water pollution 	No threat to sense of place	Good – RoDs mandatory for every approved development

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
Facilitate access to cultural heritage sites (graves, archaeological sites, sites of special significance)						
3	15	Degradation and or loss of significance of the site or artefact due to uncontrolled access	Significance and/ or existing state of the site	<ul style="list-style-type: none"> Damage to site or artefacts Theft of artefacts 	Allow for appropriate access to specified sites in line with CRMP recommendations TBD	No access to any sites pending completion of CRMP

4.5.3 Partnership and Benefit Targets

Table 3: Partnership and Benefit Targets

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
Ensure participation of local stakeholders through integrated, shared, cooperative working relationships and agreements						
1	1	Failure to ensure effective working relationships with local stakeholders	<ul style="list-style-type: none"> Participation in liaison or co-management fora Capacitation of claimants to understand the co-management agreement, structure, business ability and conservation importance of the IGR Appropriate compromise by local stakeholders or EKZNW as necessary Understanding by all parties of content of co-management agreements 	<ul style="list-style-type: none"> Lack of participation Lack of understanding and unwillingness to learn Refusal to compromise by either party Lack of understanding of co-management agreement content Increase in complaints, arguments and conflict between local stakeholders and EKZNW Lack of information being passed to grass roots level 	<ul style="list-style-type: none"> Co-management agreement in place Communication strategy in place 	Poor – no co-management agreements in place, no communication strategy developed
Participate as a key stakeholder in planning initiatives that specifically refer to the promotion of overall protected area objectives specifically the following: <ul style="list-style-type: none"> District and local municipalities AMAFA Private and communal initiatives Local board 						
2	9	Lack of participation and being disregarded as a key stakeholder in planning initiatives associated with the Reserve	<ul style="list-style-type: none"> Contribution to municipal IDPs Liaison with AMAFA Continuation of Local Board meetings Facilitate EKZNW input to private and communal initiatives associated with the Reserve 	<ul style="list-style-type: none"> Reserve ignored by municipalities as a key stakeholder Local Board fails No CRMP No establishment of private or communal conservation initiatives 	<ul style="list-style-type: none"> IDP meetings Local Board meetings Key stakeholder meetings TBD 	<ul style="list-style-type: none"> 2 IDP meetings 5 Local Board meetings 16 Key stakeholder meetings
Serve as an anchor for conservation and regional economic empowerment through cooperative co-management agreements						
3	10	Failure to increase the ecological footprint of the	<ul style="list-style-type: none"> Exploring Reserve expansion 	An unwillingness on the part of like minded neighbours to enter	To look to include the following	Poor – has not started

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTES	INDICATOR	TARGET	CURRENT RATING
		Reserve through co-management and/ or commercialisation	<ul style="list-style-type: none"> opportunities with like minded neighbours Investigating commercialisation options for the expanded footprint Entering into suitable ecological and/ or commercial co-management agreements 	into suitable co-management agreements	areas; <ul style="list-style-type: none"> SICCP – 16308 ha Madaka Game Ranch – 1750 ha Susanna – 707ha Shilwan e – 1040 ha 	

4.5.4 Business Targets

Table 4: Business Targets

RESERVE OBJECTIVE	RANKING	ELEMENT OF CONCERN	KEY ATTRIBUTE	INDICATOR	TARGET	CURRENT RATING
Promote conservation as a viable and sustainable land use option						
1	11	Conservation management no longer viable or sustainable	<ul style="list-style-type: none"> Status of animal populations Number of successful tourism ventures in the Reserve Sustainability of natural resources for utilisation Retain environmental character of Reserve 	<ul style="list-style-type: none"> Decline in animal numbers Unprofitable tourism ventures Incorrect management of resource sustainability Discernable decline in environmental character 	Conservation self sustainable	TBD
Contribute to the local, regional and national economy through eco-tourism and consumptive and non-consumptive sustainable use of natural resources						
2	12	Failure to contribute positively to local, regional and national economies through eco-tourism and sustainable resource use	Potential profitability, investment and economic attractiveness of the Reserve	<ul style="list-style-type: none"> No profitability Lack of investment Unsustainable consumptive utilisation Breach of contractual obligations 	TBD	TBD
Provide a better experience by capitalising on the unique biodiversity and cultural assets						
3	13	Not capitalising on unique biodiversity and cultural assets of the Reserve	<ul style="list-style-type: none"> Significant and diverse cultural heritage assets Unique biodiversity assets Scenic beauty of the Reserve 	Not taking pertinent advantage of biodiversity and cultural assets	TBD	TBD

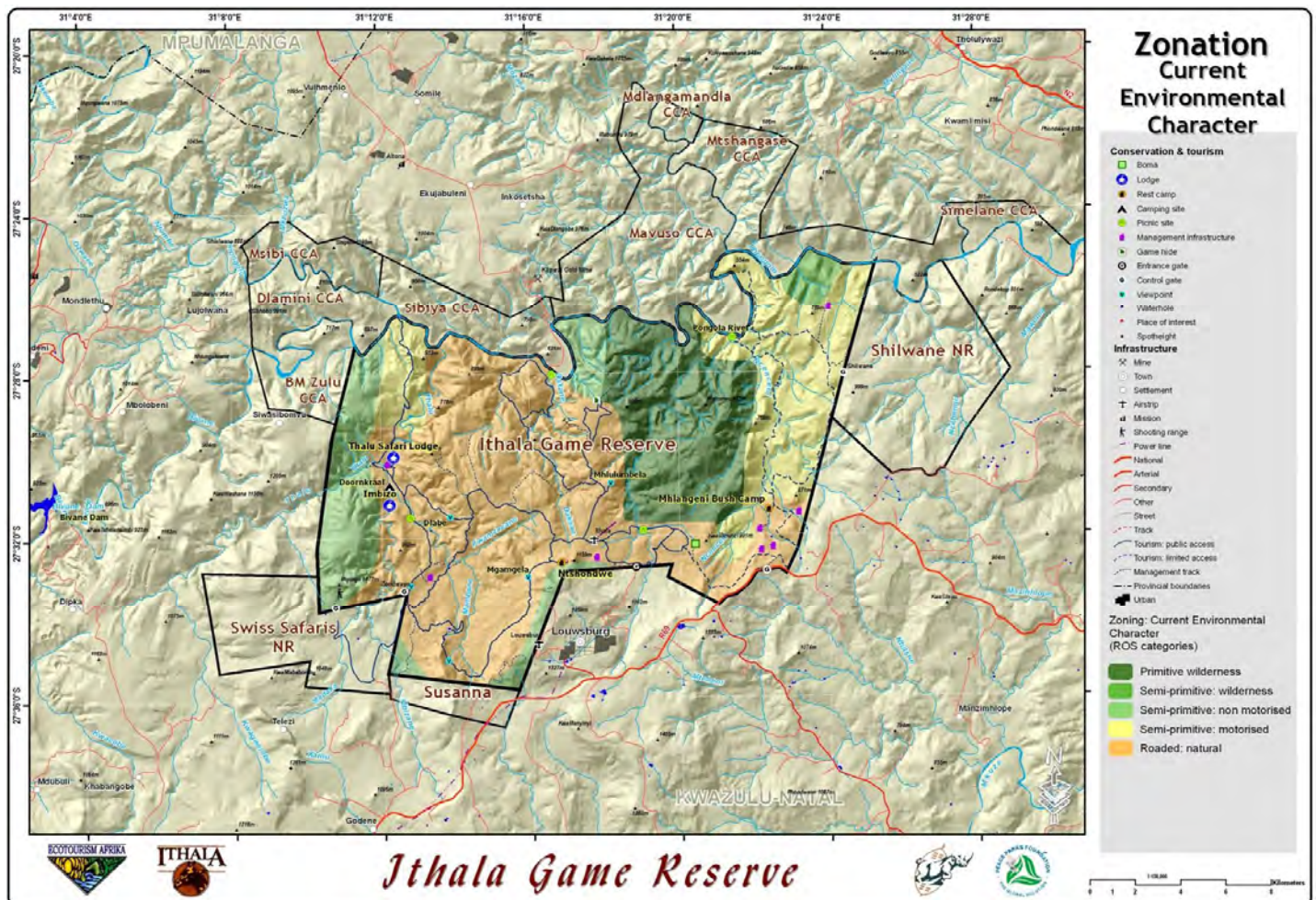
5 CONCEPT DEVELOPMENT PLAN

5.1 Zonation

Ascertaining the current environmental character of a protected area provides clear guidelines for decision-making regarding the impact of proposed development and management interventions on the aesthetic, visual and audio characteristics of the reserve.

By combining these factors into a zonation map, based on the United States Forestry Services Recreational Opportunity Spectrum System (ROS) it is possible to provide a summary of the environmental character of the reserve.

Based on all these factors a zonation map summarizing the Current Environmental Character (**Map 3**) was prepared. Most of the Reserve is zoned Routed Natural, with small portions being Semi-primitive Motorised, as well as Semi-primitive Non-motorised. Only one portion of the Reserve can be deemed Primitive Wilderness due to its inaccessibility and isolation, while a very small portion along the north-eastern edge of the Reserve is characterised as Semi-primitive Wilderness.



Map 3: Zonation- Current Environmental Character.

Refer to **Appendix 5, Map 4: Future Desired State**.

5.2 Concept Development Plan

In an effort to sustainably unlock the ecotourism potential of the Reserve the following critical aspects were addressed:

- Access;
- Utilisation;
- Development; and
- Infrastructure.

Decisions regarding these interventions were based on:

- Audio-visual sensitivity;
- Habitat sensitivity;
- Landscape sensitivity
- Cultural sensitivity; and
- Species specific sensitivities

Audio-visual sensitivity is influenced by aspects such as:

- Vegetation height and density– the ability to ‘hide’ infrastructure and development amongst plants;
- Slope – flat services are less visible than slopes;
- Skylines and ridges – development along skylines and ridges is more visual than in valleys; and
- Landscape complexity – it is easier to hide development and infrastructure in complex landscapes than on open flat surfaces.

These audio-visual sensitivity indices were combined into a single combined index highlighting areas where the impact of developments and infrastructure can be ascertained.

Biophysical sensitivity is a combination of:

- Habitat value – an index of biodiversity value; and
- Landscape sensitivity – an index of environmental resilience.

The visual sensitivity indices further influenced decisions regarding access, use, development and infrastructure as did the cultural sensitivity index combining tangible and intangible resources such as places of cultural significance ruins; old kraals; villages etc.

Based on these sensitivity indices decisions regarding access, use, development and infrastructure were made, culminating in a proposed Master Plan (**Appendix 5, Map 5**) for the Reserve, which resulted in a zonation for the future desired state (**Appendix 5, Map 4**).

5.3 Master Plan

The Master Plan highlights public and concession entrances, public and concession use zones, development cores, and requisite infrastructure. Utilizing information garnered from the Master Plan the changes to the environmental character of the Reserve could be ascertained, both within and on areas immediately adjacent to the Reserve.

No significant changes to the character of the Reserve were made, yet the zonation of the Reserve does influence the zonation of the areas adjacent to the Reserve, within the expanded ecological footprint as discussed earlier in the document.

5.3.1 Access

Three public entrances will be established, the first being the existing entrance gate via Louwsburg, the second being a northern access via the Klipwal road and the third being an access gate traversing Madaka Game Ranch to gain access to the Reserve.

Two limited public entrances (concessions) will be established, the first at KwaSambane, utilising the existing gate and the second from the west accessing the Dlamini CCA from Idube town. (See **Appendix 5, Map 5**).

5.3.2 Utilisation

The majority of the IGR is set aside for public use based on the existing tourism infrastructure, zonation and management objectives.

Two broad concession areas will be established, the first being on the eastern side utilising the limited infrastructure and wilderness zones for the development of a tourism product which differs from that already offered to the public.

Both the Bivane and Pongola Rivers offer excellent opportunities for canoeing and rafting and have thus been identified as use zones for a river concession.

Action Project 5.3.2 (i): Promote the establishment of a canoeing and rafting concession to allow use of the Pongola River in IGR.

5.3.3 Development Cores, Nodes and Sites

Six PPP opportunities have been identified and include:

- KwaSambane concession;
- Ntshondwe;
- Phongolo River Rest Camp;
- Bivane Confluence;
- Rafting operation; and
- Hunting concession.

The KwaSambane concession, as a limited access node could include areas adjacent to the core Reserve, specifically areas within the SICCP area, which can serve as part of the wilderness trail zone.

Ntshondwe, as a business will consist of the existing camp, conference centre and related facilities, as well as two bush camps, a campsite and picnic sites.

The Phongolo River Rest Camp will be located on the SICCP area and serve as a northern entrance to the Reserve.

The Bivane Confluence camp or lodge will be situated on communal land agreed to by the Dlamini Traditional Authority within an area to be included in the protected area.

A rafting operation will be established and will start below the Bivane Dam, utilising the Bivane Gorge, as well as the Pongola River as area of operation. Wilderness style camping along the Bivane River will be allowed due to the inaccessibility of the Gorge, while various camp agreements between the rafting operator and concessionaires will be encouraged for the Pongola River section.

An area of IGR will be identified, zoned and proclaimed as a control hunting area where hunting as a form of consumptive utilisation will take place in a safe and sustainable manner in the IGR. Annual quotas will be determined according to the population growth of the various huntable species. Hunting will take place in the form of trophy hunting and/or sport hunting.

Surplus game will either be sold as part of live game sales or culled and processed via the rural abattoir.

Action Project 5.3.3 (i): Implement the six PPP opportunities identified for IGR. Relevant agreements, development plans and operating procedures between parties will be agreed to and implemented.

5.3.4 Infrastructure

Requisite infrastructure to unlock the economic potential in and around IGR includes the upgrade of three access routes, one from the north based on the Klipwal – Belgrade road network, from the south via Madaka Game Ranch, and one from the west based on the Hartland loop. An appropriate tourism river crossing over the Pongola River is required to provide tourism access to the general public area of the Reserve. This could be a low level drift, pedestrian bridge or bridge.

Action Project 5.3.4 (i): Upgrade the three access routes and develop an appropriate tourism river crossing over the Pongola River according to the CDP for IGR.

6 OPERATIONAL MANAGEMENT POLICY FRAMEWORK AND GUIDING PRINCIPLES

6.1 *Local Community Involvement*

Management will work collaboratively with institutions and adjacent landowners / stakeholders to improve communication as well as conservation management in and around the Reserve for the benefit of all. Neighbour relations and partnerships are guided by EKZNW Board Policies (**Appendix 2, Item 2**).

Action Project 6.1 (i): Compile and implement co-management agreement in line with the conditions on the Land Settlement Agreement and within the applicable framework and policies established for these agreements by EKZNW.

Action Project 6.1 (ii): Capacitation of claimants to understand the co-management agreement, structure, business ability and conservation importance of IGR.

Action Project 6.1 (iii): Develop and implement a neighbour relations communication strategy.

6.1.1 Local Board

Community participation in the Reserve is realised, mainly, through a Local Board which is established in terms of Chapter 5 of the KZNNCMA. EKZNW Board Policies (**Appendix 2, Item 2**) provides an operational relationship framework Reserve.

6.1.2 Land Claims

All land claims against IGR have been resolved. Currently Management and respective land claimants are working on specific co-management agreements.

Action Project 6.1.2 (i): Finalise and implement co-management agreements between EKZNW and claimant communities.

6.1.3 Informal Participation

Local community involvement will only take place through the IGR Local Board.

Informal communication between the general public / stakeholders and reserve management will be encouraged at all times within practical limits (Open door policy).

6.2 Security and Safety

EKZNW recognises that illegal activities within and around IGR can be a severe threat to the integrity of its natural and cultural heritage, its water storage and supply infrastructure, as well as the safety of IGR users, neighbouring communities and the attainment of its stated Mission and Management Objectives.

Reserve management will therefore initiate and institutionalise a security strategy that ensures co-ordinated participation in all possible local, regional security forums and networks while optimising security in and around IGR. This strategy will ensure sufficient capacity to deal with conservation-related illegal activities in IGR and contribute to a network of provincial, national and international law enforcement intelligence.

Action Project 6.2 (i): Develop an integrated security strategy for the Reserve that ensures collaboration with all relevant institutions.

6.3 Natural Resource Management

6.3.1 Introduction

The management philosophy is one of adaptive management. This includes implementing management actions according to the stated objectives, policies and operational plans, monitoring progress and adapting the management strategy accordingly. This is done using a participatory, team approach and making use of the best scientific understanding in collaboration with partners and stakeholders. The principle of sustainable use of natural resources is implicit in the philosophy.

Natural resource management aims to conserve biodiversity 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 will attempt to simulate their effects; otherwise management intervention in the system will be minimised. In particular, the function of sustained water delivery is paramount.

Fire is a key ecological process influencing biodiversity in IGR. Although it is not possible to reconstruct the 'natural' fire regime, it is generally accepted that the natural frequency, intensity, seasonality and spread of fire through the landscape has been changed as has the ability of species to respond (especially game due to man made obstructions e. g. fences) to the disturbance caused by fire.

Given the above, the objective is to actively manage for a shifting mosaic of vegetation patches with high basal cover but different ages and sizes - thereby creating a diversity of habitats that should ensure the conservation of the biodiversity representative of the area. This approach will also provide the best insurance policy for the majority of organisms for which habitat requirements and response to fire are unknown. The mosaic is achieved through controlling the spread of fire in the landscape and the conditions under which fires are ignited.

The other key interventions required to conserve biodiversity are the control of invasive species and man-induced soil erosion, as well as wildlife management and minimising illegal activities (e.g. illegal hunting and plant collecting).

Action Project 6.3.1 (i): Implement EKZNW IEM Policy and education of landowners on the IEM process and legislation.

6.3.2 Fire Management

The Reserve Management shall convene and chair a **Fire Workshop** in June each year. This workshop shall include Conservation Partnerships and Ecological Advice staff, and invited experts where appropriate.

At this Fire Workshop the burns of the previous fire season (planned and unplanned) will be reviewed and, based on the **Reserve Fire Management Plan**, management units will be scheduled for burns in the upcoming fire season and recorded as the **Annual Burning Plan** for implementation. In preparation for the Fire Workshop all fire returns must be with Ecological Advice by 30 November each year to allow for digital capture and analysis of the data.

The **Fire Management Plan** is to be based on the IGR management objectives and guided by 'best practice' linked to scientific understanding, legal context and risk management.

Action Project 6.3.2 (i): Develop an IGR **Fire Management Plan** to outline: Fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required.

IGR is obligated in terms of the National Veld and Forest Fire Act to be a member of the local Fire Protection Association (FPA). In this regard Park Management will actively champion the establishment and maintenance of FPA's on and bordering IGR in order to gain the full legal advantages of being a member of the FPA and to promote, where possible, fire management regimes surrounding IGR that would benefit the conservation of biodiversity and ecological processes.

6.3.3 Alien Species Control and Management

Alien species are regarded as species or genotypes that are not indigenous to the IGR area including hybrids and genetically altered organisms.

The requirements of NEMBA (Sections 76 and 77) in terms of **invasive species** and the relevant legal obligations of protected area management authorities must be noted. The following is the IGR strategy to deal with alien and alien invasive species in Reserve.

6.3.3.1 Alien Flora

Alien plant species have been planted or have established themselves within IGR over time. They can, to varying degrees impact negatively on water production, the natural environment and biodiversity as well as the natural landscape character of the Reserve. Their control and management is considered a management priority.

Wherever possible and appropriate these plants will be removed from IGR.

The following management guidelines apply:

Alien Plant Introductions

Introductions of alien plants to IGR will not take place except for non-invasive vegetables, garden plants, fruit trees, or herbs (for domestic consumption) planted within staff accommodation plots or non-invasive pot plants used indoors for decorative purposes, provided these plants in no way impact negatively on the ecological processes or disrupt normal animal behaviour patterns (e.g. fruit trees and baboons / monkeys).

Only plants indigenous to the IGR surrounds will be used outdoors in landscaping projects within the demarcated development zones.

Existing Non-invasive Alien Plants

A phased 3-year plan to address the existence and spread of non-invasive alien plants (including grasses) that already exist within IGR be developed. Where required, this plan will also address the re-planting of relevant areas with indigenous plants for horticultural purposes. If considered appropriate by the PAMC, certain non-invasive alien plants will be demarcated and retained for horticultural or cultural-historical purposes. They will not be replaced should they die, unless recommended by management for cultural-historical reasons. All seedlings of demarcated alien plants will be removed annually.

Declared Alien Weeds and Invasive Plants

Alien plants declared **weeds and invader plants** under section 29 of CARA (Act No. 43 1983), or any other legislation are a serious threat to the ecological functioning of natural systems as well as groundwater storage and water production from catchments. They will be controlled in terms of the relevant CARA regulations. An ongoing time-bound programme to effectively control these alien weeds and invader plants within the IGR and up to 1km beyond (buffer area) the Reserve boundary will be developed in collaboration with neighbours and the relevant municipalities.

State poverty relief programs such as 'Landcare', 'Working for Water', 'Working on Fire' and 'Working for Wetlands' will be used to full effect to complement the Reserve budget for this management task.

IGR management will be accountable for all invasive alien plant clearing and therefore will strictly supervise control operations to ensure that the correct methodologies are used and to avoid environmental damage.

Action Project 6.3.3.1 (ii): Implement an ongoing alien plant control as directed by the Zululand Alien Invasive Species Program (ZAISP).
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Action Project 6.3.3.1 (iii): Continue current monitoring of croplands including using current external experts and to implement these recommendations.
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6.3.3.2 Alien Fauna

Alien animal species can threaten the ecological, genetic or natural aesthetic integrity of the Reserve and can be vectors for the spread of diseases. Their control and management are considered a management priority. Wherever possible and appropriate these animals must be removed from the IGR.

Mallard ducks, alien wild ungulates, 'domesticated' guinea fowl and feral species are all potential threats and could be found in the Reserve sporadically. They will be destroyed as soon as possible after their presence is detected (humanely as practically possible and with due regard for the tourist experience).

The following management guidelines apply:

Alien Animal Introductions

Introductions of alien animals to IGR will not take place except:

- as part of culture-based, community-based or management projects approved by the PAMC or
- for domestic animals and livestock (incl. donkeys and horses) kept for official management purposes or privately by staff according to specific rules for each management centre / protected area.

It is critically important that these exceptions do not negatively influence the integrity and sustainability of the Reserve's biodiversity and ecological processes. Management will therefore monitor the impact of these animals on the natural systems of IGR.

A new, standardised and equitable IGR policy for keeping domestic animals and livestock is required and must also include procedures to deal in a consistent manner with alien animals that stray into IGR. This policy will, *inter alia* clearly address:

- Threats to biodiversity conservation as a priority.
- Reducing the numbers of such animals to an absolute minimum.
- Designating areas where these animals will be kept. They will not be allowed to roam or feed in the nature reserve (except for official patrol horses when on patrol) or interfere in any way with tourists.
- The proper and hygienic care of these animals.
- Minimum standards (aesthetic acceptability, sizes, neatness and cleanliness) of facilities housing these animals e.g. stable, camps cages etc.

6.3.4 Catchment and River Management

The Reserve forms a major part of the mountain catchment area for the Phongolo River.

In order to ensure a sustained flow of good quality water from this catchment it is essential that throughout the catchment (both in and outside IGR) :

- A good vegetative canopy and basal cover is maintained so as to sustain the flow of water and reduce sediments arising from accelerated soil loss.
- Strict pollution control and waste management standards will be applied (especially in the Reserve).
- Natural wetlands in the catchment are maintained and monitored and any damaged wetlands rehabilitated.
- Invasive alien plants are removed and controlled.
- Aquifer and surface water quality and quantity is monitored and data is kept on IGR files.

6.3.5 Soil Erosion Control

Gradual natural soil erosion processes will be allowed to continue unless this is a threat to the achievement of the Reserve's management objectives. However, in the case of human-induced and / or aggravated erosion, appropriate remedial management action will be undertaken. Potential human impacts must be avoided through appropriate planning and maintenance of infrastructure.

Human-induced soil erosion in IGR is primarily the result of historical overgrazing practices, the presence of invasive alien vegetation, vehicle tracks and roads as well as the creation of paths by livestock prior to the establishment of the Reserve. Old quarry sites / borrow pits and areas that have been cleared of invasive alien vegetation need rehabilitation plans primarily to prevent soil erosion.

Extensive sites of potential or aggravated soil erosion will be mapped, and the rehabilitation prioritised annually.

Rehabilitation of soil erosion sites will follow the guidelines presented by Coetzee (2005) and the EKZNW Track and Trail Maintenance Manual.

Action Project 6.3.5 (i): Map all extensive or potential human-induced / aggravated soil erosion sites and annually monitor the condition of these sites in order to prioritise rehabilitation work. Control will be implemented on a priority / budget based level.

Reference:

Coetzee, K. 2005. *Caring for Natural Rangelands*. University of KwaZulu-Natal Press, Scottville, South Africa.

6.3.6 Wildlife Management

The primary objective of wildlife management at IGR will be to maintain, within the ecological carrying capacity of the Reserves, viable indigenous wildlife populations that historically occurred in the area and are suited to the particular habitats found in IGR.

Most wildlife populations presently existing in IGR are self-regulatory because of territorial behaviour, predator-prey relationships, food availability etc. However, due to the lack of large carnivores in the system, the monitoring and management of herbivores needs to be managed. Where possible, a minimal intervention management strategy will be followed. Exceptions would be the specific strategies identified in terms of the National Norms and Standards for the management of specific species in accordance with NEMBA and / or this IMP and / or additional actions recommended by the PAMC. The latter interventions will only be considered for the following purposes:

- Ø safeguarding populations of Rare and Endangered species;
- Ø achieving IGR's Management Objectives and set Conservation Targets;
- Ø complying with IGR's IMP Management Guidelines;
- Ø the maintenance of populations of wildlife species to avoid the over-utilisation of the available natural resources;
- Ø research and monitoring purposes;
- Ø translocation to other state or private protected areas;

Animals that have been injured and are highly unlikely to survive will be destroyed on the authority of the IGR Manager. The Reserve Manager will, however ensure that all relevant information is recorded and the relevant data / specimens / material provided is provide to the Ecological Advice component staff responsible for processing and recording such information. A copy of these records will be maintained in the reserve office record system. The by-products such as meat and horns will be disposed of according to tariffs and procedures determined by EKZNW and in accordance with the relevant legislation.

The Reserve Manager will implement the EKZNW rhino strategy as it applies to IGR without negatively affecting the productivity of the current Black and White rhino populations found on IGR. Partnerships with neighbours on the northern boundary of the Reserve will be set up to ensure that the boundary is properly fenced.

Action Project 6.3.6 (i): Sustain current black and white rhino monitoring, security and funding so that EKZNW can continue to monitor and research current populations and maintain and improve standards that have been set to ensure healthy population productivity.

Action Project 6.3.6 (ii): Tsessebe: Obtain information required to implement specific species management. These species will be managed in line with Working Group recommendations.

Action Project 6.3.6 (iii): Oribi: Information required to determine viability and implement specific species management plan in line with the Oribi Working Group recommendations.

Action Project 6.3.6 (iv): Continue monitoring of all animal populations present on IGR.

Action Project 6.3.6 (v): Investigate alternative or improved game count methods for populations of game animals found on IGR.

Action Project 6.3.6 (vi): Compile and implement a recovery and species specific conservation strategy for all Red Data species found in IGR.

6.3.6.1 Introductions of Indigenous Wildlife Species into IGR.

The introduction of indigenous species into the Reserve will be considered in terms of EKZNW Board Policies (**Appendix 4, Item 2**) and taking into account their natural distribution range, genetic compatibility, social behaviour characteristics, impacts on existing populations, habitat requirements, practical management and possible interaction with human communities adjacent to IGR.

The introduction of **any** species (individual or group) will be done in collaboration with the responsible Ecological Advice staff, with the approval of the PAMC. The introduction will be adequately documented. A species introduction policy for IGR will be prepared for the effective application of this policy guideline.

6.3.6.2 Game Population Management

Ongoing game population management will not be aimed at maximising game production but rather at maintaining a diversity of species without negatively affecting vegetative diversity and cover. The objective of this management is therefore not production orientated but to control numbers as far as possible within the ecological carrying capacity of the Reserve. Ungulate game species (plains game) populations that are not strongly territorial will be subject to a population management programme as their population numbers have the potential to increase to unsustainable numbers within the confines of IGR. This could result in overgrazing and trampling of the vegetation and eventually accelerated soil erosion and biodiversity losses. To guide game population management, it is therefore necessary to develop a IGR Game Management Policy Guideline document that is reviewed and recommended by the IGR PAMC.

Black and White Rhino will be managed in accordance with the EKZNW Board Policies (**Appendix 2, Item 2**).

Game removal from IGR will only be undertaken by means of:

- Ø Live Capture;
- Ø Culling Programmes.
- Ø Professional Hunting.

6.3.6.3 Problem Animal Management (Damage Causing Animals)

Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour may be destroyed humanely or captured and removed from IGR. This also applies to animals that escape or leave and return periodically and cause damage outside IGR.

To minimize the need to control problem animals, pro-active and preventative measures (e.g. fencing) should be considered a priority, while affected public, 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 will be with due regard for possible public criticism.

All human / wildlife conflict matters relating to problem animal management (damage causing animals) will be dealt with in terms of the **NEMBA Norms and Standards for Management of Human and Wildlife Conflict in SA**. This is applicable to animals within and outside of the Nature Reserve.

The IGR Conservation Manager will ensure that all complaints and incidents reported are investigated by the relevant IGR staff and or District Conservation Officer (DCO) as soon as possible. Complaint details, investigation findings and remedial action taken will be recorded in the prescribed Damage Causing Animals Complaints Register kept on station. Investigations and incident reporting will be carried out in accordance EKZNW Board Policies (**Appendix 2, Item 2**).

6.3.6.4 Bird Management

These species have specific conservation significance, prescribing to a Provincial or National strategy or they have a specific monitoring and/or recovery plans to prevent the decline of these Red Data species in the IGR. Information that is lacking will need to be obtained for it is required prior to determining appropriate management actions which will need additional funding.

These species will be managed in line with Working Group recommendations.

Support and understanding from neighbours of the importance of conserving Red Data species is vital if such conservation efforts are to be successful.

Action Project 6.3.6.4 (i): Lappet faced Vulture: Protect current nest sites and continue to manage predator simulation program to encourage vultures to take up residence and breed in IGR. These species will be managed in line with Working Group recommendations.

Action Project 6.3.6.4 (ii): Blue Crane: Protection and management procedures for established sites and habitat management to maintain numbers of breeding pairs and hopefully increase number.

6.3.7 Flora Management

Of particular conservation and management importance are the colonies of *Protea comptonii* found in IGR and on the Madaka community area. This plant is a localised and endemic plant of global importance. It is the only population in KwaZulu-Natal and one of only two populations worldwide currently under conservation. It is important that management of the Game Reserve is aware of the protection needed for this species so that no individual plants are lost and an increase population is seen.

Action Project 6.3.7 (i): Implement the existing recovery, management and monitoring plan in respect of the *Protea comptonii* colonies inside IGR and ensure that effective management of the se colonies continues.

Action Project 6.3.7 (ii): Institute a co-management agreement in respect of Madaka's *Protea comptonii* colonies outside the reserve and to ensure that effective monitoring of these colonies continues.

Action Project 6.3.7 (iii): Maintain colony integrity of Pepper-bark Tree (*Warburgia salutaris*) which is a Red Data species and will be managed inline with Working Group recommendations.

Action Project 6.3.7 (iv): *Eugenia simmii* and other endangered and endemic plants: Obtain information on status. Depending on status develop and implement a specific species management procedure. Will be managed in line with Working Group recommendations.

The most threatened vegetation type found on IGR is the Northern Zululand Mistbelt Grassland. This is a grassland of National and Provincial importance. There is no conservation strategy (recovery plan) at present. It is therefore important to appropriately protect and manage the portion of this grassland that already occurs inside the Reserve

Action Project 6.3.7 (v): Compile and implement an ecological co-management agreement for the protection of Northern Zululand Mistbelt Grassland found on IGR and surrounding areas who have landowners willing to conserve this habitat in order to increase the area under formal protection. Prepare an annual audit of the conservation of these grasslands in terms of the national targets.

Action Project 6.3.7 (vi): Prepare, update and monitor various awareness programmes with regards to the protection of Northern Zululand Mistbelt Grassland.

6.3.8 Control over Illegal Use of Natural Resources

Illegal utilisation of IGR's natural resources is not quantified and is considered a threat that has the potential to increase significantly if not adequately controlled.

It is policy to maintain an ongoing vigilance through cost-effective surveillance, monitoring programmes and reaction capabilities. Direct illegal use of natural resources will be dealt with by IGR management while high risk criminal activities will be monitored and communicated to the relevant security forces as part of a broader co-operative security strategy.

To assist in maintaining the Reserve's ecological integrity and safeguarding staff and visitors, it is essential that the effectiveness of the field ranger component and their deployment is regularly and critically assessed. A well maintained statistical incident register will be an effective tool for such assessments.

The main effort towards resolving illegal utilisation of natural resources by neighbouring communities for purposes of subsistence will be to create understanding and awareness through pro-active education amongst these communities. Management will prosecute those people that illegally utilise natural resources for commercial or other purposes in accordance with the legislation.

6.4 Cultural Resource Management

Management of the cultural heritage is guided by the National Heritage Resources Act and as well as the Amafa / EKZNW Co-operative Conservation Management of Cultural Heritage Agreement (signed July 2005) and will aim to promote the conservation and public appreciation of the cultural heritage found in IGR. EKZNW Board Policies (**Appendix 2, Item 2**) also provides guidelines in terms of monuments and memorials.

There is a critical need to develop a comprehensive cultural heritage management plan for IGR that would meet national requirements. This plan will cover rock art, Iron Age, and Stone Age, historical sites as well as palaeontological features and living heritage sites.

The cultural heritage of the IGR is non-renewable and importantly may shed further light on the socio-cultural history of the area. These resources are fragile and therefore the Cultural Heritage Management Plan will, in addition, address institutional specialist capacity to guide cultural heritage management on IGR.

Action Project 6.4 (i): Develop a comprehensive Cultural Heritage Inventory and Management Plan for IGR in collaboration with SAHRA and Amafa. Institutional capacity will also be addressed by this plan.

Action Project 6.4 (ii): Develop a staff training program to identify cultural heritage resources and complete an inventory of heritage sites within the Reserve.

Action Project 6.4 (iii): Monitor cultural heritage sites to determine the impact of use by people.

6.5 Resource Utilisation

EKZNW will consider requests for extractive use of plant, animal and abiotic resources provided that such resource use is sustainable, controlled and the natural or cultural heritage conservation management objectives of IGR are not compromised. Furthermore, the resource use must not degrade the aesthetic landscape character of IGR and management will have adequate capacity to ensure effective control over the resource utilisation without compromising its essential functions.

IGR has numerous ecotourism opportunities; these will be linked to the reserve objectives.

Action Project 6.5 (i): Prepare a sustainable resource use plan that contributes to the local and regional economy through consumptive and non-consumptive sustainable use of natural resources.

Action Project 6.5 (ii): Monitor level of vegetative utilisation in IGR.

6.5.1 Plants and Animals

Extractive resource use will be considered within the framework of, amongst others, EKZNW Board Policies (**Appendix 2, Item 2**).

The PAMC will evaluate applications with due consideration of:

- any applicable land restitution or other agreements,
- the precautionary principle
- ecological and social acceptability,
- impact on the aesthetic character of the landscape,
- impact on eco-cultural tourism,
- sustainable and wise use of the resource,
- benefit to neighbouring communities,
- equitable access to the resource,
- that any benefit transaction is acceptable within the PFMA framework,
- that the harvesting operations are effectively controlled and monitored,
- a written agreement stipulating resource price and /or conditions of harvest, and
- viable alternatives.

6.5.2 Bioprospecting

Requests to collect biological material / samples from IGR will only be considered by the PAMC in accordance with, amongst others EKZNW Board Policies (**Appendix 2, Item 2**) from *bone fide* South African research institutions until national (NEMBA) and provincial legislation governing bioprospecting is in place.

Bioprospecting activities within the Reserve will be closely monitored and regulated in terms of present environmental legislation.

6.5.3 Abiotic Resources

The extraction of abiotic resources from the protected area will not be permitted unless it has direct bearing on achievement of the IGR management objectives and any application for extraction will be reviewed according to applicable legislation.

6.6 *Eco-Cultural Tourism and Marketing*

Eco-cultural tourism and marketing will be considered within the framework of, amongst others EKZNW Board Policies (**Appendix 2, Item 2**) with regard to **Commercial Operations**.

EKZNW has the mandate to sustainably develop the IGR within the framework of its approved IMP and Concept Development Plan CDP. This will be undertaken to fully realise its eco-cultural tourism and associated income-generating potential, while respecting and giving access to the Reserve's natural and cultural heritage features.

To fulfil this mandate, and in accordance with NEMPAA, EKZNW will initiate the compilation of a CDP. It will address future new development as well as the upgrading and maintenance of all existing infrastructure including tourist facilities

The CDP will be guided by the framework of the IGR Mission, Management Objectives, Zonation and Management Policy Guidelines as adopted and approved for this IMP. The approach adopted in the compilation of the CDP will involve an objective and integrated assessment of the Nature Reserve in terms of its natural and cultural heritage sensitivities, management and bulk infrastructure, its particular sense of place and its visitor infrastructure and facilities

EKZNW will strive to provide a quality eco-cultural tourism experience for visitors to the IGR. A range of appropriate facilities and services will be provided for the use of visitors to IGR. While some of these will serve recreational and social needs, emphasis will be placed on facilities and services that enrich the visitor's understanding and appreciation of the Reserve.

In order for IGR to realise its full income-generating potential:

- The quality and standard of facilities will be maintained at a high level.
- Professional standard tourism service delivery will be provided.
- Its tourism opportunities will be competitively and effectively marketed.
- Cultural heritage tourism will require emphasis.
- A partnership strategy, that takes full advantage of appropriate opportunities for outsourcing (joint venture or otherwise) needs to be put in place while linkages will be sought with other regional tourism initiatives.
- A visitor orientation and interpretation strategy will be developed and implemented.

The above policies and values will be supported by a IGR Eco-cultural Tourism Development and Marketing Strategy that will be compiled and approved.

Management and staff will promote conservation as a viable land use option.

Action Project 6.6 (i): Prepare a dedicated sustainable resource use plan and monitor aspects such as income, litres of water per hectare conserved or bundles of thatch of kilograms per hectare. From this compile and promote an annual performance report.

6.7 Environmental Interpretation, Awareness and Education

Environmental interpretation, awareness and education of IGR's natural and cultural resources will be aimed at creating an awareness, understanding and appreciation of the value of these resources among the general public and visitors to the Reserve.

An environmental awareness and education programme will be developed to pro-actively engage, inform and benefit the Reserve's range of neighbouring communities and visitors. EKZNW Board Policies (**Appendix 2, Item 2**) for Environmental Education and Neighbour Relations apply.

Programmes will not only be primarily aimed at children, but provision will be made for developing various programmes, applicable to a wide spectrum of ages and education levels.

Programmes for groups and communities from other areas will be accommodated on request whenever possible. The Kids and Parks Programme requires school groups visiting the Reserve, to submit a lesson plan before the visit to qualify for a concession.

Where and whenever possible members of the local community (e.g. community tour guides) should be empowered and used to run appropriate environmental education tours.

Action Project 6.7 (i): Develop a IGR environmental awareness education programme specifically for surrounding neighbouring communities and the general public interest groups.

An interpretation programme using signage, displays and information media will be developed to effectively direct and inform visitors in respect of appropriate natural and cultural features of the area. The format of these signs will be standardised and trail marking must be a priority.

An investigation to identify synergies in the needs of various government or other institutions in the area to develop awareness programmes (e.g. social education of the youth) will be undertaken and if feasible, to combine environmental awareness education with these other programmes. In this way, it will be possible to combine resources to reach a wider target audience.

6.8 Research

The natural heritage, the functioning of the ecosystems and the cultural heritage that IGR was declared to conserve are presently inadequately understood. Research is necessary to provide such information that will assist in ensuring that the natural and cultural heritage management objectives of IGR are realised.

Priority will be given to research that will provide information and understanding that is of direct benefit to IGR and will guide management interventions required to achieve the protected area's conservation targets as well as natural and cultural heritage management objectives in the most cost-effective manner. Opportunities will, however, be considered and provided for both applied *and* theoretical research of local, provincial or national importance.

Long term research and monitoring (e.g. Black Rhino research and monitoring) is necessary as a result of the dynamic and stochastic nature of the ecosystem and to ascertain whether management actions are having their desired affect in terms of achieving conservation targets as well as natural and cultural heritage management objectives.

- Ø Partnerships and agreements with appropriate academic and research institutions will be promoted to stimulate and encourage the desired research in IGR.

A copy of all publications will be lodged within the Reserve the Regional Office as well as the Head Office library.

6.8.1 Monitoring and Evaluation

Baseline data collection, monitoring and evaluation are essential in order to determine whether conservation targets, natural and cultural heritage management objectives as well as eco-cultural tourism objectives and targets are being achieved, and to ascertain the effectiveness of management interventions. Much of this information is required in order to meet the legal reporting requirements of the NEMBA and NEMPAA.

Due to (a) the stochastic (random behaviour) nature of the environment, (b) the effects of long-term climate cycles and change, and (c) the length of time for treatment effects to manifest themselves, it is desirable and necessary to implement long term baseline collection and monitoring programmes. It is also important to monitor and record all management interventions and the biophysical environment in order to understand the causes for any biological and environmental changes.

Any existing monitoring programs will be maintained unless there is a specific decision recorded in writing by the PAMC to terminate a particular monitoring programme.

The **Ecological Advice component** is responsible for:

- Designing all biodiversity monitoring and baseline collection programmes (including the data capture and storage procedures) and ensuring that these will provide data of the right precision and accuracy, and at the right frequency, in order to guide management decision making and to allow for reporting at the required frequency.
- Biodiversity data collection, secure storage, analysis, reporting and regular feedback to management.
- Undertaking advanced scientific monitoring and data collection.

The **Biodiversity Conservation Management component** is responsible for:

- The accurate collection of biological baseline data, monitoring and data storage.
- Monitoring the use of natural areas by visitors through Limits of Acceptable Change criteria.
- Monitoring cultural sites as outlined in approved and implemented cultural heritage management plans in collaboration with Amafa SAHRA as the case may be.
- Monitoring energy and water use by conservation management facilities.
- Monitoring development or land use change in the Reserve and in its buffer zone for compliance with set environmental conditions linked to authorisation.
- Monitoring compliance by outside parties with conditions as specified in agreements, contracts etc. in collaboration (where practical and as agreed) with the Ecotourism and Marketing component.

The **Ecotourism and Marketing (Commercial Operations) component** is responsible for:

- Monitoring eco-cultural tourism statistics and revenue generation and reporting against revenue targets.
- Monitoring energy and water use by eco-cultural tourism and associated management facilities.
- Monitoring compliance by outside parties with conditions as specified in agreements, contracts etc. in collaboration (where practical and as agreed) with the Biodiversity Conservation Management component.

Action Project 6.8.1 (i): Implement the recommendations made by the Protected Area Management Effectiveness Program.

6.9 Infrastructure

EKZNW has the mandate to maintain, remove, expand or develop infrastructure within IGR for natural and cultural heritage management as well as eco-cultural tourism purposes. However, development projects will only be undertaken if they are:

- Ø Aligned with the Nature Reserve's Zonation and Management Guidelines.
- Ø Listed as an approved Action Projects either in this IMP or in the Reserve's Concept Development Plan (CDP).
- Ø Recommended for implementation by management and approved by the EKZNW Board's Development Committee.
- Ø Development is compliant with the relevant NEMA regulations and other applicable legal requirements, particularly regarding Environmental and Heritage Impact Assessments.

Infrastructure development outside IGR or on its periphery should always be considered as a preferred option, where practical, to reduce the amount of infrastructure and its resultant impacts on the environment within the Reserve.

IGR management is responsible for infrastructure within the Reserve and will at all times ensure that it is maintained in a safe, sound, clean, serviceable and aesthetically acceptable condition. Tourist accommodation, campgrounds and other facilities will at all times be maintained to appropriate world-class standards regarding appearance, cleanliness and serviceability.

Utility service providers (e.g. Telkom, Eskom), concessionaires or other groupings that may, through agreements develop, use and /or maintain infrastructure within IGR must be closely monitored by management to ensure that they abide by conditions contained in the relevant agreements. Management will ensure that their activities do not negatively impact on the achievement of the natural and cultural heritage management objectives as well as landscape character of IGR and that they maintain the same values as expressed above.

All structures will as far as possible be harmonised with the surrounding environment and landscape character through appropriate siting, use of colour, building materials, landscaping and screening.

To create a sound foundation for future planning, all infrastructure will be listed on a maintained database and their positions plotted with GPS points on an associated IGR Infrastructure Map. Furthermore, it would be useful to objectively assess the desirability and effectiveness of this infrastructure with a view to reducing the impact of these structures on the IGR environment and landscape.

Action Project 6.9 (i): Develop and maintain a Reserve Infrastructure database and map.

In compliance with NEMPAA and in order to initiate the development of new infrastructure as well as the strategic maintenance of existing infrastructure, EKZNW will initiate the compilation of a Conceptual Development Plan (CDP). The CDP will address the future development, improvement and maintenance of all infrastructure including eco-cultural tourism facilities.

The CDP will be guided by the framework of the IGR Mission, Management Objectives, Zonation and Management Policy Guidelines as adopted and approved for this IMP. The approach adopted in the compilation of the CDP must involve an objective and integrated assessment of the Reserve in terms of its natural and cultural heritage sensitivities, management and bulk infrastructure, its particular sense of place and its visitor infrastructure and facilities.

6.9.1 Entrance Points and Gates

All road entrance points to the Reserve will be under the control of the IGR management, certain functions may, however be outsourced. It is important that the entrance gates be secure at all times to discourage illegal entry to IGR.

6.9.2 Boundary Fence

Internal fencing, except for necessary fencing surrounding infrastructure and enclosure plots, will be kept to a minimum. Old, superfluous internal fencing will be removed.

The Reserve is fenced according to at least the minimum specifications. The purpose of the fence is to protect surrounding communities and reduce potential land conflict resulting from different land use practices. An ongoing maintenance program will be developed, resourced and implemented to minimise on replacement costs.

Action Project 6.9.2 (i): Develop and implement an ongoing boundary fence maintenance program.

6.9.3 Roads, Tracks and Paths

Roads and tracks will be kept to a minimum to maintain the natural character of the landscape as far as possible and to avoid unnecessary negative impacts on the natural and cultural heritage of IGR. In terms of this management guideline, a critical evaluation of the existing road / track and footpath network will be undertaken to identify any that need to be closed or re-aligned. Any section that is approved for closure will be rehabilitated according to a documented rehabilitation programme.

Proposed development of new roads / tracks and footpaths or their closure will be aligned with the Zonation specified in this IMP and will follow the appropriate legal and other procedures after recommendation from the PAMC.

Management will ensure that the existing vehicle road / tracks and footpaths on IGR are effectively maintained to the appropriate standards in order to support the relevant use and avoid soil erosion as well as other negative impacts on the environment.

Roads and tracks that are heavily used by vehicles or sections prone to accelerated soil erosion will be tarred, paved, concreted or upgraded to 'all-weather' gravel roads that have been treated with a dust repellent (sealer).

Action Project 6.9.3 (i): All vehicle roads and tracks will be evaluated for the suitability of their alignment and recommendations made for new vehicle roads and tracks, repair or closure (with rehabilitation measures) of existing ones.

6.9.4 Staff Accommodation

Where essential for the efficient functioning of IGR management will consider the provision and maintenance of staff accommodation, according to Corporate Norms and Standards. Accommodation must meet standards as set by EKZNW's Technical Division and any development or maintenance in this regard will form part of the CDP.

6.9.5 Offices, Workshops and other Infrastructure

IGR management will ensure that all infrastructure within the Nature Reserve, is always maintained in a clean, neat and functional state and that these work areas meet Occupational Health and Safety Act standards.

All service areas (e.g. workshops, waste management and storage areas) will be effectively screened from public view.

Management will also be responsible for ensuring that any facility for keeping animals encamped or in captivity on IGR are legally compliant or maintained at generally accepted standards for keeping and caring for such animals.

6.9.6 Services

Reserve management will ensure that wherever possible, service infrastructure such as electricity, telephone, water supply *etc.* be located appropriately in the landscape or effectively screened to minimise their aesthetic and / or other environmental impacts. Reserve management will ensure that such infrastructure is maintained in a safe, serviceable and aesthetically acceptable condition by the relevant service providers.

6.9.7 Radio Communication and other Communication Equipment

IGR management requires a two-way radio system for efficient management. Any radio repeater stations or similar communication towers will comply with EIA conditions.

6.9.8 Waste Management

6.9.8.1 Domestic Solid Waste

All domestic waste will be sorted for recycling and will be removed from IGR to authorised companies or municipal waste management sites. The use of organic waste for compost purposes may be permitted but will be subject to strict conditional approval on the recommendation of the IGR PAMC. All historical waste sites in IGR will be rehabilitated.

Solid waste management procedures will be closely monitored by management to prevent pollution and other adverse impacts, especially of the water resources. All waste receptacles (for staff or the public) will be animal-proof (especially against baboons and monkeys) and maintained as such.

Action Project 6.9.8.1 (i): Develop an integrated waste management plan for IGR.

Action Project 6.9.8.1 (ii): Develop, install and maintain effective standardized solid waste receptacles for IGR that are animal and baboon / monkey-proof.

6.9.8.2 Sewage

It is important that EKZNW sets an example and complies with new legal standards regarding the processing of sewage. All sewage systems will be investigated and their compliance verified. New systems will be installed where there is non-compliance.

Existing infrastructure at IGR has septic tank / French drain sewage systems that can possibly be contaminating ground and surface water. These systems will be replaced with more environmentally friendly systems available in the market as funding permits. Septic tank / French drain systems will not be installed at future small developments.

Action Project: 6.9.8.2 (i): All sewage systems in IGR will be investigated for legal compliance. A phased development plan to upgrade existing systems and septic tank / French drain systems will be put in place as funding permits.

6.9.9 Aircraft Landing Fields

As a matter of general policy, no further construction of airstrips will be permitted inside IGR. The three helipads and 1.7 kilometre airstrip will be maintained and managed according to the minimum aviation standards set by the Civil Aviation Authority of South Africa.

Action Project 6.9.9 (i): Determine the legal requirements set by the CAA of South Africa for airstrips and helicopter landing pads in IGR and maintain according to the minimum aviation standards.

6.9.10 Staff and Visitor Safety

All requirements of the Occupational Health and Safety Act and other applicable legal requirements will be met to provide for the safety of staff and visitors in and around infrastructure installations at IGR (e.g. fire and electricity).

Reserve management will maintain a secure entry controls system and maintain a high level of internal security in order that visitors and their belongings can be safe and secure.

All Reserve staff will receive the appropriate training regarding all health and safety aspect and will receive refresher course training as required on a regular basis.

7 IMP REVIEW AND AMENDMENT PROCEDURES

7.1 Five-Yearly Review and Amendment Procedures

This IGR IMP will be reviewed every five years to revise and amend the IMP for the following five years, namely 2014-2018. If deemed appropriate by the PAMC, the review can take place sooner.

The EKZNW Management Planning Steering Committee in collaboration with the Co-ordinator: Management Planning will give guidance on the extent of public / stakeholder participation required before submitting the amended / updated IMP for approval to the MEC / Minister. The extent of the public / stakeholder participation (apart from that undertaken with the Local Board will depend on the nature and extent of amendments recommended by the relevant PAMC.

7.2 Annual Review and Amendment Procedures

The PAMC will convene annually between to monitor and evaluate IMP progress, plan and, if necessary, recommend the re-prioritisation of management activities for the next year. The PAMC will, as record of these meetings, submit a report to the EKZNW Management Planning Co-ordination Unit which contains the following:

- 4 Any recommended **minor amendments or corrections** to the IMP that do not affect the substance of the Mission, Management Objectives, Zonation, Management Policy Framework and Guiding Principles;
- 4 The result of an annual evaluation by the PAMC of the Management Effectiveness Level achieved for IGR This will be calculated using the World Bank Protected Area Management Effectiveness Evaluation Tool (Stolton *et al*, 2007);
- 4 The cumulative number of Action Projects per Management Objective that have been completed, activated or not activated; as well as
- 4 An indication of progress towards achieving Conservation Targets set in the IMP.

The PAMC will also be responsible for the recommendation of any policies, projects and plans that are developed as a result of the implementation of this IMP or other *ad hoc* projects *etc.* not covered by the IMP that have operational, financial and human resource or ecological implications (*e.g.* research projects that have not been identified according to IMP guidelines, or *ad hoc* funding received for the development of unplanned recreational facilities).

Any proposed significant amendments that are deemed necessary / urgent and that are likely to result in the amendment of the Mission, Management Objectives, Management Policy Framework and Guiding Principles contained in the IGR IMP will be supported by the PAMC, the Integrated Management Planning Steering Committee and BCOMM before being subjected to the appropriate public /stakeholder participation process and before BCOMM recommends that the proposed amended IMP is submitted for authorisation through the EKZNW Board to the MEC / Minister.

The EKZNW Management Planning Co-ordinator will ensure that any minor or significant IMP amendments that are appropriately approved, are duly noted / recorded and that a new digital 'master copy' (Word) version is generated and archived with the EKZNW Management Planning Co-ordination Unit as well as ensuring that updated 'read only' copies are distributed to the relevant Head Office sections and Regional General Manager who will ensure that the updated 'read only' digital and / or hard copies are distributed to all staff requiring these. The EKZNW Management Planning Co-ordinator will furthermore be responsible to ensure that website / intranet copies are updated at the same time.

Reference:

Stolton, S., Hockings, M., Dudley, N., MacKinnon, K., Whitten, T. and Leverington, F. 2007. *Management Effectiveness Tracking Tool: Reporting Progress at Protected Area Sites: Second edition.* World Bank and WWF Forest Alliance.

8 PROJECTS FOR ACTION CORRELATED WITH MANAGEMENT OBJECTIVES

8.1 List of IMP Action Projects

Table 5 below lists the Action Projects identified in the IMP. The Action Project number in round brackets corresponds to the relevant paragraph in the text of the IMP. The number in square brackets represents the Action Project in the individual tables correlated to the individual Management Objectives for IGR in **Section 8.2** below.

It is important to note that these IMP Action Projects are not be interpreted in isolation but are to be interpreted and operationalised within the context of the associated narrative that precedes the articulation of the Action Project in the relevant paragraph.

While the tables below indicate the list of identified Action Projects that support the achievement of the specific objectives, it must be recognised that a number of other actions relating to ongoing protected area management, take place. Such actions would relate particularly to security, maintenance (buildings, roads, fences, veld management, etc) and relationships with stakeholders. It is important that they be detailed and included when developing budgets and business strategies.

Management Objectives:

- The conservation of key biodiversity features, biophysical processes, landscapes, abiotic, historical, cultural and archaeological resources (Conservation)
- The formation of functional partnerships to integrate the IGR with regional development plans, and other initiatives which underwrite the vision of IGR (Partnerships);
- The provision of socio-economic benefits to the Reserve's neighbours and to contribute to the local economy and the efforts of conservation in a sustainable manner based on sound business principles (Benefits); and
- The provision of ecotourism business opportunities in the natural and cultural environment of IGR (Business).

Table 5: List of IMP Action Projects

No.	IMP Action Project No.	Project Description
1	6.1 (i)	Compile and implement co-management agreement in line with the conditions on the Land Settlement Agreement and within the applicable framework and policies established for these agreements by EKZNW.
2	6.1 (ii)	Capacitation of claimants to understand the co-management agreement, structure, business ability and conservation importance of IGR
3	2.1.1 (i) [6.1(iii)]	Seek assignment from the MEC by re-appointing EKZNW as the management authority for IGR in terms of Section 38(2) of NEMPAA
4	6.1 (iii) [6.1 (iv)]	Develop and implement a neighbour relations communication strategy
5	6.3.6 (i) [6.2 a (i)]	Sustain current black rhino monitoring and research programmes while linking with related programmes appropriate to the reserve.
6	[6.2 a (ii)]	Secure funding to ensure that EKZNW can continue to monitor the population and maintain the standards that have been established.
7	[6.2 a (iii)]	Security and monitoring protocols to be implemented or improved to ensure safety of black rhino in IGR.
8	6.3.6 (i)	Sustain current white rhino monitoring and research programmes while linking with related

	[6.2 b (i)]	programmes appropriate to the reserve.
9	[6.2 b (ii)]	Secure funding to ensure that EKZNW can continue to monitor the population and maintain the standards that have been established.
10	[6.2 b (iii)]	Security and monitoring protocols to be implemented or improved to ensure safety of white rhino in IGR.
11	6.3.7 (i) [6.3 (i)]	Implement the existing recovery and monitoring plan(s) in respect of the <i>Protea comptonii</i> colonies inside IGR and ensure that effective management of these colonies continues.
12	6.3.7 (ii) [6.3 (ii)]	Institute a co-management agreement in respect of Madaka's <i>Protea comptonii</i> colonies outside the reserve and ensure that effective monitoring of these colonies continues
13	6.3.7 (v) [6.4 (i)]	Annual audit of the conservation of these grasslands in terms of the national targets. Consider outcomes in terms of management actions.
14	6.3.7 (vi) [6.4 (ii)]	Compile a management strategy for these grasslands in IGR.
15	[6.4 (iii)]	Negotiate and compile an ecological co-management agreement with willing neighbours who have this grassland on their property to increase area under protection.
16	[6.4 (iv)]	Compile and implement joint management plan for these grasslands.
17	[6.4 (v)]	Prepare, update and monitor various awareness programmes.
18	6.3.1 (i) [6.5 (i)]	Implement EKZNW IEM Policy.
19	6.9.8.1 (i) [6.5 (ii)]	Develop an integrated waste management plan for IGR, including standardised solid waste receptacles and sewage systems for legal compliance.
20	[6.5 (iii)]	Awareness or education of landowners on the IEM process and legislation.
21	6.3.3.1 (ii) [6.6 (i)]	Implement ongoing alien plant control as directed by the Zululand Invasive Alien Species Program (ZIASP).
22	6.3.3.1 (iii) [6.6 (ii)]	Continue current monitoring of croplands including using current external experts and implement recommendations.
23	6.3.5 (i) [6.6 (iii)]	Obtain relevant funding to implement actions (iv) – (vi)
24	[6.6 (iv)]	Determine extent of degradation in respect of erosion control.
25	[6.6 (v)]	Compile restoration strategy for erosion control.
26	[6.6 (vi)]	Implement the restoration strategy regarding erosion control.
27	6.3.7 (iii) [6.7 (i)]	<i>Warburgia salutaris</i> : Monitor and maintain colony integrity.
28	6.3.6 (ii) [6.7 (ii)]	Tsessebe: Obtain information required to implement specific species management.
29	6.3.6.4 (i) [6.7 (iii)]	Raptors (including vultures): Monitor and protect current nest sites and continue to manage scavenger support programme to encourage raptors to take up residence and breed in IGR.
30	6.3.6.4 (ii) 6.7 (iv)]	Blue Crane: Protection and management procedures for established sites and habitat management to maintain numbers of breeding pairs and hopefully increase number. Includes annual ringing of chicks.
31	6.3.6 (iii) [6.7 (v)]	Oribi: Information required to determine viability and implement specific species management plan in line with the Oribi Working Group recommendations.
32	6.3.7 (iv) [6.7 (vi)]	<i>Haworthia limifolia</i> : Develop and implement a specific species management plan.
33	[6.7 (vii)]	A full justified rare species list for the reserve needs to be compiled and guide / inform provincial / national targets.
34	6.3.6 (vi) [6.7 (viii)]	Compile and implement a recovery and species specific conservation strategy for all priority species found in IGR as identified by relevant Biodiversity Division staff.
35	6.4 (ii) [6.8 (i)]	Develop a staff training program to identify cultural heritage resources.
36	6.4 (ii) [6.8 (ii)]	Complete an inventory of heritage sites within the reserve.
37	6.4 (i) [6.8 (iii)]	Develop a comprehensive Cultural Heritage Inventory and Management Plan for IGR in collaboration with SAHRA and Amafa.
38	[6.9 (i)]	Obtain policies and procedures from EKZNW Executive.
39	2.3 (i) [6.9 (ii)]	IGR management in collaboration with other relevant EKZNW officials is mandated with active review of planning initiatives, e.g. municipal IDPs.
40	5.3.4 (i) [6.9 (iii)]	Seek municipal support to upgrade the three access routes to IGR identified in the CDP.

41	[6.9 (iv)]	Create awareness within these stakeholders of the relevance of the PA.
42	[6.9 (v)]	Consolidate the Planning initiatives that can be implemented.
43	[6.10 (i)]	Clarify the ecological footprint around IGR with the view to expansion.
44	2.7 (i) [6.10 (ii)]	Identify co-management partners and benefits in collaboration with EKZNW Biodiversity Stewardship Programme.
45	2.5 (i) [6.10 (iii)]	Establish co-management agreements between EKZNW, adjoining CCA's, private nature reserves and game ranches.
46	[6.10 (iv)]	Prepare a strategic plan for commercialisation of the reserve.
47	5.3.3 (i) [6.10 (v)]	Implement the six PPP opportunities identified in the CDP.
48	6.7 (i) [6.11 (i)]	Develop an IGR environmental awareness education programme specifically for neighbouring communities and general public interest groups.
49	6.6 (i) [6.11 (ii)]	Monitor aspects such as income, litres of water per hectare conserved or bundles of thatch or kilograms per hectare.
50	6.6 (1) [6.11 (iii)]	Compile and promote an annual performance report.
51	6.3.6 (iv) [6.12 (i)]	Continue monitoring of all animal populations present on IGR.
52	[6.12 (ii)]	Prepare an overall eco-tourism master plan.
53	6.3.6 (v) [6.12 (iii)]	Investigate alternative or improved game count methods.
54	[6.12 (iv)]	Apply for funding.
55	6.5 (ii) [6.12 (v)]	Monitor level of vegetative utilisation in IGR.
56	[6.12 (vi)]	Compile balance sheet.
57	[6.13 (i)]	Identify the natural aspects which occur in the reserve which could be considered unique.
58	3.4.16 (i) [6.13 (ii)]	Identify natural and cultural sites that are appropriate for use and incorporate into eco-tourism plan and CRMP.
59	5.3.2 (i) [6.13 (iii)]	Identify the appropriate activities that the reserve could provide which are associated with these features, both natural and cultural (e.g. canoeing and rafting concession)
60	[6.13 (iv)]	Staff training programme to ensure effective understanding and interpretation.
61	[6.13 (v)]	Establish and obtain funding for a maintenance programme.
62	[6.14 (i)]	Identify appropriate refugia
63	[6.14 (ii)]	Monitor refugia to ensure that no negative impact is occurring.
64	[6.14 (iii)]	Implement appropriate management actions to counteract any negative impact.
65	[6.15 (i)]	Train associated staff / guides in the proper procedure associated with these sites.
66	6.4 (iii) [6.15 (iv)]	Monitor that these sites are not adversely affected by this access.

8.2 Alignment of IMP Action Projects with Prioritised Management Objectives

To attain the vision and mission of the IGR, as set in **Section 4** of this document, four broad key management objectives were identified namely:

- 1) The **conservation** of key biodiversity features, biophysical processes, landscapes, abiotic, historical, **cultural** and archaeological resources;
- 2) The formation of functional **partnerships** to integrate the IGR with regional development plans and other initiatives which underwrite the vision of IGR;
- 3) The provision of socio-economic **benefits** to the Reserve's neighbours and to contribute to the local economy and the efforts of conservation in a sustainable manner based on sound business principles (EKZMW Business Plan); and
- 4) The provision of **ecotourism** business opportunities in the natural and cultural environment of IGR.

To achieve the objectives for IGR, management interventions were set [see tables below] for each objective, providing a platform from which to populate the process based management system. The rationale for ranking, requisite management support, programmes (management actions) and performance indicators are provided for each Reserve objective.

8.2.1 Participation of Local Stakeholders

Table 6: Participation of Local Stakeholders

ITEM	DESCRIPTION
Category	Benefit Objective
Ranking	1
Management Objective	Ensure participation of local stakeholders through integrated, shared, cooperative working relationships and agreements.
Rationale	Implement a co-management agreement, in line with the conditions of the Land settlement agreement and within the applicable framework and policies, established for these agreements by EKZMW. Ranked 1 because failure to implement affective working relationships with neighbours and land owners will negatively impact on achieving every other Reserve objective.
Management Support	<ul style="list-style-type: none"> - Clarity from Regional Land Claims Commission (RLCC) regarding land claims in respect of effective operational approach post settlement. - Support and finalisation from EKZMW executive management regarding co-management policies and agreements to be implemented. - Co-management structure (Institutionalisation).
Programmes	<ul style="list-style-type: none"> - Action Project 6.1 (i): Compile and implement co-management agreement in line with the conditions on the Land Settlement Agreement and within the applicable framework and policies established for these agreements by EKZMW. - Action Project 6.1 (ii): Capacitation of claimants to understand the co-management agreement, structure, business ability and conservation importance of the IGR. - Action Project 6.1 (iii): Seek assignment from the MEC to re-appoint EKZMW as the management authority for IGR in terms of Section 38 (2) of NEMPAA. - Action Project 6.1 (iv): Develop and implement a neighbour relations communication strategy.
Performance Indicator	<ul style="list-style-type: none"> - Co-management agreement with claimants. - Successful co-management practices with claimants. - An implemented neighbour relations and communication strategy.

8.2.2 Black and White Rhino Conservation

Table 7a: Black Rhino Conservation

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	2
Management Objective	Maintain viable populations of black rhino as priority species.
Rationale	Implementing the EKZNW rhino strategy as it applies to IGR without negatively affecting productivity. Ranked 2 because conservation of black rhino was one of the primary reasons for the proclamation of the Reserve and due to its status as a species it is IGR's number 1 biodiversity objective.
Management Support	<ul style="list-style-type: none"> - Partnerships with neighbours on the northern boundary of the Reserve need to be set up to ensure that the boundary is properly fenced. - Security and monitoring protocols to be implemented or improved to ensure the safety of black rhino. - Research programmes to be identified to assist in improved management of black rhino specific to the IGR.
Programmes	<ul style="list-style-type: none"> - Action Project 6.2a(i): Sustain current black rhino monitoring and research programmes while linking with related programmes, appropriate to the Reserve. - Action Project 6.2a(ii): Funding to ensure that EKZNW can continue to monitor the population and maintain the standards that have been established. - Action Project 6.2a(iii): Security and monitoring protocols to be implemented or improved to ensure safety of black rhino in the Reserve.
Performance Indicator	Population productivity.

Table 7b: White Rhino Conservation

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	2
Management Objective	Maintain viable populations of white rhino as priority species.
Rationale	Implementing the EKZNW rhino strategy as it applies to IGR without negatively affecting productivity. It is ranked 2 with black rhino as the highest biodiversity objective as the Reserve was specifically proclaimed to protect both black and white rhino.
Management Support	<ul style="list-style-type: none"> - Partnerships with neighbours on the northern boundary of the Reserve need to be set up to ensure that the boundary is properly fenced. - Security and monitoring protocols to be implemented or improved to ensure the safety of white rhino. - Research programmes to be identified to assist in improved management of white rhino, specific to the IGR.
Programmes	<ul style="list-style-type: none"> - Action Project 6.2b(i): Funding to ensure that EKZNW can continue to monitor the population and maintain the standards that have been established. Although white rhino monitoring is not ranked as highly as black rhino the fact is that IGR has a completely known rhino population which has allowed for effective management and the status as a known population should not be lost. - Action Project 6.2b(ii): Sustain current white rhino monitoring and research programmes while linking with related programmes, appropriate to the Reserve. - Action Project 6.2b(iii): Security and monitoring protocols to be implemented or improved to ensure safety of white rhino in the Reserve
Performance Indicator	Population productivity.

8.2.3 *Protea comptonii* Conservation

Table 8: *Protea comptonii* Conservation

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	3
Management Objective	To conserve vulnerable <i>Protea comptonii</i> colonies.
Rationale	It is a localised endemic plant of Global importance. It is the only population in KZN. One of only 2 populations in the world under conservation, maybe a separate evolutionary unit. Ranked 3 because of its localised and global conservation status.
Management Support	<ul style="list-style-type: none"> – Establishment of a management agreement with Madaka Game Reserve (two colonies) neighbouring the IGR, to ensure effective management and protection of the colonies. – Monitoring protocols to be continued.
Programmes	<ul style="list-style-type: none"> – Action Project 6.3(i): Implement the existing recovery and monitoring plan(s) in respect of the colonies inside IGR and ensure that effective management of these colonies continues. – Action Project 6.3(ii): Institute a co-management agreement in respect of Madaka's colonies outside the Reserve and ensure that effective monitoring of these colonies continues.
Performance Indicator	<ul style="list-style-type: none"> – No loss of individual plants. – An increase in the number of individual plants in a colony.

8.2.4 Northern Zululand Mistbelt Grassland Conservation

Table 9: Northern Zululand Mistbelt Grassland Conservation

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	4
Management Objective	The conservation of Northern Zululand Mistbelt Grasslands.
Rationale	This is a grassland of National and Provincial importance. There is no conservation strategy (recovery plan) at present (June 2007). It is therefore important to appropriately protect and manage the portion of this grassland that already occurs inside the Reserve.
Management Support	<ul style="list-style-type: none"> – Case studies. – Awareness programmes. – Capacitation of neighbours to understand the importance of conserving these grasslands. – Guidance in terms of establishment of ecological co-management agreements. – Need/require final provincial conservation targets specific to this grassland – Need/require clarity on the form of Zululand Mistbelt Grassland the IGR management is protecting.
Programmes	<ul style="list-style-type: none"> – Action Project 6.4(i): Annual audit of the conservation of these grasslands in terms of the national targets. Consider outcomes in terms of management actions. – Action Project 6.4(ii): Compile a management strategy for this grassland in IGR. – Action Project 6.4(iii): Negotiate and compile ecological co-management agreement with willing neighbours who have this grassland on their property to increase area under protection. – Action Project 6.4(iv): Compile and implement joint management plan for these grasslands. – Action Project 6.4(v): Prepare, update and monitor various awareness programmes.
Performance Indicator	<ul style="list-style-type: none"> – Co-management agreements completed. – Percentage of National targets met. – Increase in the number of hectares of grassland under formal protection.

8.2.5 Sense of Place Protection

Table 10: Sense of Place Protection

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	5
Management Objective	Minimise threats to sense of place (retain the aesthetic value of the area).
Rationale	To ensure that sense of place is not threatened by inappropriate activities and development. Part of the reason for establishing the Reserve was the existing natural beauty of the area. Ranked 5 to ensure that no irreversible impact or damage takes place.
Management Support	<ul style="list-style-type: none"> - Implementation of EKZNW's Integrated Environmental Management (IEM) policy. - Guidance from EKZNW Planning and IEM experts. - Understanding on the part of landowners that IEM cannot be compromised in favour of inappropriate development.
Programmes	<ul style="list-style-type: none"> - Action Project 6.5(i): Implementation of EKZNW IEM policy. - Action Project 6.5(ii): Develop an integrated waste management plan for IGR including standardise solid waste receptacles, and sewage systems for legal compliance. - Action Project 6.5(iii): Awareness or education of landowners on the IEM process and legislation.
Performance Indicator	<ul style="list-style-type: none"> - Negative change to current environmental character. - RoD for every development.

8.2.6 Restoration Ecology

Table 11: Restoration Ecology

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	6
Management Objective	Restoration ecology focussing on (1) Erosion control; (2) Cropland restoration; and (3) Alien plant removal.
Rationale	<ul style="list-style-type: none"> - To restore detrimental man-induced changes for efficient, effective and sustainable conservation, by focusing on the above objectives. - To implement expert recommendations and to restore as far as possible in respect of erosion control and cropland restoration. - To implement control on a priority/budget based level. - To implement priority control focusing on follow-ups whilst increasing actual hectares of initial removal of alien plants. <p>Although it is a stated reason for the proclamation of the Reserve, it is ranked 6 because it is of lesser biodiversity importance than the forgoing objectives, which are species or community specific and global or national importance, or complying with national legislation.</p>
Management Support	<ul style="list-style-type: none"> - Relevant funding. - Continue to monitor croplands to determine any changes or improvement.
Programmes	<ul style="list-style-type: none"> - Action Project 6.6(i): To implement ongoing alien plant control as directed by the Zululand Alien Invasive Species Programme (ZAISP). - Action Project 6.6(ii): To continue the current monitoring of croplands including using current external experts and implement recommendations. - Action Project 6.6(iii): Obtain relevant funding to implement Actions (iv) to (vi). - Action Project 6.6(iv): Determine extent of degradation in respect of erosion control. - Action Project 6.6(v): Compile restoration strategy for erosion control. - Action Project 6.6(vi): Implement restoration strategy regarding erosion control.
Performance Indicator	<ul style="list-style-type: none"> - Hectares of alien plants cleared vs total hectares of infestation. - Hectares of croplands restored. - Number of erosion sites restored.

8.2.7 Red Data Species Conservation

Table 12: Red Data Species Conservation

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	7
Management Objective	Protect rare and endemic species indigenous to the area as listed.
Rationale	<p>These species have specific conservation significance, prescribing to a Provincial or National strategy or they have a specific monitoring and/or recovery plan. To prevent the decline of red data species in the IGR.</p> <p>Ranked 7 because the relevance of these red data species in Ithala is lower in comparison to the above species specific or veld type objectives. None of them form part of the original proclamation.</p>
Management Support	<ul style="list-style-type: none"> - Obtaining information that is lacking and required prior to determining appropriate management actions which will require funding. - Information to determine viability of certain species to implement species specific management in line with Working Group recommendations, as relevant. - Support and understanding from neighbours of the importance of conserving red data species.
Programmes	<ul style="list-style-type: none"> - Action Project 6.7(i): <i>Warburgia salutaris</i>: Monitor and maintain colony integrity. - Action Project 6.7(ii): Tsessebe: Obtain information required to implement specific species management. - Action Project 6.7(iii): Raptors (including vultures): Monitor and protect current nest sites and continue to manage scavenger support programme to encourage raptors to take up residence and breed. - Action Project 6.7(iv): Blue crane: Protection and management procedures for established sites and habitat management to maintain numbers of breeding pairs and hopefully increase number. Includes annual ringing of chicks. - Action Project 6.7(v): Oribi: Information required to determine viability and implement specific species management plan in line with the Oribi Working Group recommendations. - Action Project 6.7(vi): <i>Haworthia limifolia</i>: Develop and implement a specific species management plan. - Action Project 6.7(vii): A full justified rare species list for the Reserve needs to be compiled and guide/inform Provincial and or National targets. - Action Project 6.7(viii): Compile and implement a recovery and species specific conservation strategy for all priority species in IGR as identified by relevant Biodiversity Division staff.
Performance Indicator	<ul style="list-style-type: none"> - Performance will be indicated in relation to the number of nests, colonies, individual animals and breeding sites. - Implementation of conservation strategy. - Contribution to National or provincial targets.

8.2.8 Cultural Heritage Management

Table 13: Cultural Heritage Management

ITEM	DESCRIPTION
Category	Conservation: Cultural Objective
Ranking	8
Management Objective	Safeguard the archaeological, historical, palaeontological and living cultural heritage of the area.
Rationale	To implement a management plan in line with Amafa recommendations and legislation. Strong contribution to Provincial conservation of cultural heritage dating back 5000 years to middle Stone Age. Important during Zulu wars and long history of colonial settlement.
Management Support	<ul style="list-style-type: none"> - Sufficient funding and resources in terms of site protection and interpretation. - Support from Amafa in respect of completing a management plan for the IGR.
Programmes	<ul style="list-style-type: none"> - Action Project 6.8(i). Staff training programme to identify cultural heritage resources. - Action Project 6.8(ii). Complete an inventory of heritage sites in the Reserve. - Action Project 6.8(iii): Develop a comprehensive cultural heritage inventory and management plan for IGR in collaboration with SAHRA and Amafa.
Performance Indicator	<ul style="list-style-type: none"> - Database of all cultural heritage sites. - CRMP. - Staff training course.

8.2.9 Participating in Planning Initiatives

Table 14: Participating in Planning Initiatives

ITEM	DESCRIPTION
Category	Partnerships Objective
Ranking	9
Management Objective	Participate as a key stakeholder in planning initiatives that refer to the promotion of overall Protected Area (PA) objectives.
Rationale	The need to form effective partnerships with the above bodies will allow for increased understanding of the PA objectives and improved ability to meet a number of these objectives. Ranked 9 because it is a partnership objective and not a specific reserve management objective.
Management Support	<ul style="list-style-type: none"> - An awareness campaign. - Clarity from executive regarding policy, programmes and procedures in respect of planning initiatives.
Programmes	<ul style="list-style-type: none"> - Action Project 6.9(i): Obtain policies and procedures from EKZNW executive. - Action Project 6.9(ii): IGR management in collaboration with other relevant EKZNW officials is mandated with active review of planning initiatives (e.g. municipal IDPs). - Action Project 6.9 (iii): Seek municipal support to upgrade three access routes to IGR identified in the CDP. - Action Project 6.9(iv): Create awareness within these stakeholders of the relevance of the PA. - Action Project 6.9(v): Consolidate the planning into actions that can be implemented.
Performance Indicator	<ul style="list-style-type: none"> - Number of planning initiatives involving IGR. - Number of planning initiatives that move to implementation.

8.2.10 Co-management

Table 15: Co-management

ITEM	DESCRIPTION
Category	Partnerships and Business Objectives
Ranking	10
Management Objective	Serve as an anchor for conservation and regional economic empowerment through co-management agreements.
Rationale	Currently IGR already serves as an anchor for regional conservation and tourism development. To consolidate this position it is important to formalise relationships with neighbours. Ranked 10 because it makes the existence of the reserve more meaningful to the communities in adjacent areas. These benefits cannot outweigh the high biodiversity and cultural conservation value of the IGR.
Management Support	<ul style="list-style-type: none"> - Clarity regarding policies pertaining to co-management, support and guidance on the part of EKZNW and RLCC in terms of setting up co-management agreements. - Appropriate expertise to setup effective co-management agreements, taking cognisance of advice from management staff. - Require appropriate funding to procure the expertise.
Programmes	<ul style="list-style-type: none"> - Action Project 6.10(i): Clarify the ecological footprint around IGR with the view to expansion. - Action Project 6.10(ii): Identify co-management partners and benefits in collaboration with EKZNW Biodiversity Stewardship Programme. - Action Project 6.10 (iii): Establish co-management agreements between EKZNW and adjoining CCAs, private nature reserves and game ranches. - Action Project 6.10(iv): Prepare a Strategic Plan for Commercialisation for the Reserve. - Action Project 6.10 (v): Implement six PPP opportunities identified in CDP.
Performance Indicator	<ul style="list-style-type: none"> - Number of successful appropriate co-management agreements established. - Strategic Plan finalised.

8.2.11 Promotion of Conservation

Table 16: Promotion of Conservation as Viable Land Option

ITEM	DESCRIPTION
Category	Benefit Objective
Ranking	11
Management Objective	Promote conservation as a viable land use option.
Rationale	IGR has environmental services, tourism and biomass production. Investments generated.
Management Support	<ul style="list-style-type: none"> - An annual report published indicating the benefit that IGR has provided as a conservation land user. - Marketing and promotion of this report.
Programmes	<ul style="list-style-type: none"> - Action Project 6.11 (i): Develop an IGR environmental awareness educational programme specifically for neighbouring communities and general public interest groups. - Action Project 6.11 (ii): Monitor aspects such as income, litres of water per hectare conserved or bundles of thatch or kilograms per hectare. - Action Project 6.11 (iii): Compile and promote annual performance report.
Performance Indicator	<ul style="list-style-type: none"> - Number of investments. - Annual reports.

8.2.12 Resource Use

Table 17: Resource Use

ITEM	DESCRIPTION
Category	Benefit and Business Objectives
Ranking	12
Management Objective	Contribute to the local, regional and national economy through eco-tourism and consumptive and non-consumptive sustainable use of natural resources.
Rationale	IGR has numerous ecotourism opportunities, these needs to be linked to the reserve objectives. Ranked number 12 because essentially the sustainable exploitation of these natural resources is outweighed by their protection first.
Management Support	<ul style="list-style-type: none"> - A sustainable resource use plan. - An overall ecotourism master plan and an approved Concept Development Plan. - Require guidance and policies associated with hunting in protected areas. - Continued monitoring of animal populations which requires continued funding. - Monitoring of the level of vegetative utilisation to ensure sustainability.
Programmes	<ul style="list-style-type: none"> - Action Project 6.12(i): Continued monitoring of animal population. - Action Project 6.12(ii): Prepare an overall ecotourism master plan. - Action Project 6.12(iii): Investigate alternative or improved game count methods. - Action Project 6.12(iv): Apply for funding. - Action Project 6.12(v): Monitor level of vegetative utilisation. - Action Project 6.12(vi): Compile balance sheet.
Performance Indicator	<ul style="list-style-type: none"> - Balance sheet. - Fauna and flora trends. - Ecotourism master plan. - Sustainable resource use plan. - Compliance with contractual obligations.

8.2.13 Guest Experience

Table 18: Guest Experience

ITEM	DESCRIPTION
Category	Benefit and Business Objectives
Ranking	13
Management Objective	Provide a better experience by capitalising on the unique biodiversity and cultural assets.
Rationale	This would aid in encouraging or attracting visitors to the Reserve making the existence of IGR more meaningful to adjacent communities, potentially increasing the direct benefit that would flow from increased and more satisfied tourists. Ranked 13 because capitalising on the asset should not necessarily negatively impact it.
Management Support	<ul style="list-style-type: none"> - Approval from DEVCO to implement recommended activities. - May require funding to allow for these activities to be established. - Approval in terms of cultural assets for activities associated with specific sites. - Funding for maintenance program. - Staff training program.
Programmes	<ul style="list-style-type: none"> - Action Project 6.13(i): Identify the natural aspects which occur in the Reserve that could be considered unique. - Action Project 6.13(ii): Identify natural and cultural sites that are appropriate for use and incorporate into ecotourism plan and CRMP. - Action Project 6.13(iii): Identify the appropriate activities that the Reserve could provide and which are associated with these features, both cultural and natural (e.g. canoeing and rafting concession). - Action Project 6.13(iv): Staff training program to ensure effective understanding and interpretation. - Action Project 6.13(v): Establish and obtain funding for a maintenance program.
Performance Indicator	<ul style="list-style-type: none"> - Increase in the number of satisfied tourists. - Number of complaints. - Encounter rates (of draw card features). - Number of activities offered related to features.

8.2.14 Conservation of Refugia

Table 19: Conservation of Refugia

ITEM	DESCRIPTION
Category	Conservation: Biodiversity Objective
Ranking	14
Management Objective	Conserve refugia for specifically named communities or assemblages not of specified conservation concern as per provincial targets.
Rationale	A need to focus on retaining a minimal viable unit for re-colonisation and expansion following shifts in temporal and spatial dynamics. If this point is reached it is a last resort and indicates an inability to manage ecosystem processes at this scale. This will ensure that the key components of the local biodiversity persist.
Management Support	<ul style="list-style-type: none"> - Funding for Action Projects and in particular an accurate vegetation map. - External expertise to identify and indicate which refugia to protect. - Support from executive to implement management actions if these refugia are threatened. - Guidelines regarding national and provincial targets.
Programmes	<ul style="list-style-type: none"> - Action Project 6.14(i): Identify appropriate refugia. - Action Project 6.14(ii): Monitor the refugia to ensure that no negative impact is occurring. - Action Project 6.14(iii): Implement appropriate management actions to counteract any negative impact.
Performance Indicator	Size and status of refugia.

8.2.15 Access to Cultural Heritage Sites

Table 20: Access to Cultural Heritage Sites

ITEM	DESCRIPTION
Category	Conservation: Cultural Objective
Ranking	15
Management Objective	Facilitate access to cultural heritage sites (graves, archeological sites, sites of special activities).
Rationale	Part of vision of the reserve and the values of the organisation. The cultural heritage sites are already protected and this objective is merely to allow for appropriate access to some of these sites.
Management Support	<ul style="list-style-type: none"> – Clarity regarding policies on access to cultural sites. – A complete CRMP from AMAFA.
Programmes	Action Project 6.15(i): Train associated staff or guides in the proper procedure associated with these sites. Action Project 6.15(ii): Monitor that these sites are not adversely affected by this access.
Performance Indicator	<ul style="list-style-type: none"> – Incorporated into CRMP (refer Action Project 6.13(ii)). – Maintaining integrity of sites. – Training.

8.2.16 Actions not Linked to Management Objectives:

1. Review all formal and informal local agreements, MOUs, leases and servitude arrangements, etc. pertaining to IGR and document and update, maintain and monitor these authorised agreements, and ensure compliance with all conditions and rights in law. All informal and revised agreements are to be formalised and approval sought from the Board.
2. Map all water supply infrastructure in IGR.
3. Develop an integrated security strategy for the Reserve that ensures collaboration with all relevant institutions.
4. Update the IGR Fire Management Plan to outline: fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required.
5. Develop and implement an ongoing fence maintenance programme.
6. Develop an ongoing vehicle, road and track maintenance and management programme.
7. Determine the legal requirements set by the CAA of SA for airstrips and helipads in IGR and maintain according to minimum aviation standards.
8. Implement the recommendations made by the Protected Area Management Effectiveness Program.

9 PERFORMANCE REVIEW ON AN ANNUAL BASIS

9.1 *Annual Financial Plan*

An annual financial plan will be submitted for approval to the Zululand Regional Operations Committee. The annual key deliverables will be prioritised in accordance with the approved budget and guided by the strategic direction of the IMP.

9.2 *Strategic Management Plan (5-year)*

The proposed annual key deliverables may be subjected to review and reprioritised as they respond to higher level strategic imperatives. It may occur that certain objectives may be superseded in order to achieve these corporate goals and targets.

9.3 *Financial Accounting System*

It is accepted that all fiscal management will be guided by the PFMA and the EKZNW Financial Policy and Procedure directives. Funding sources not generated internally will be accounted for in the prescribed process as determined by the donor source.

9.4 *Reporting*

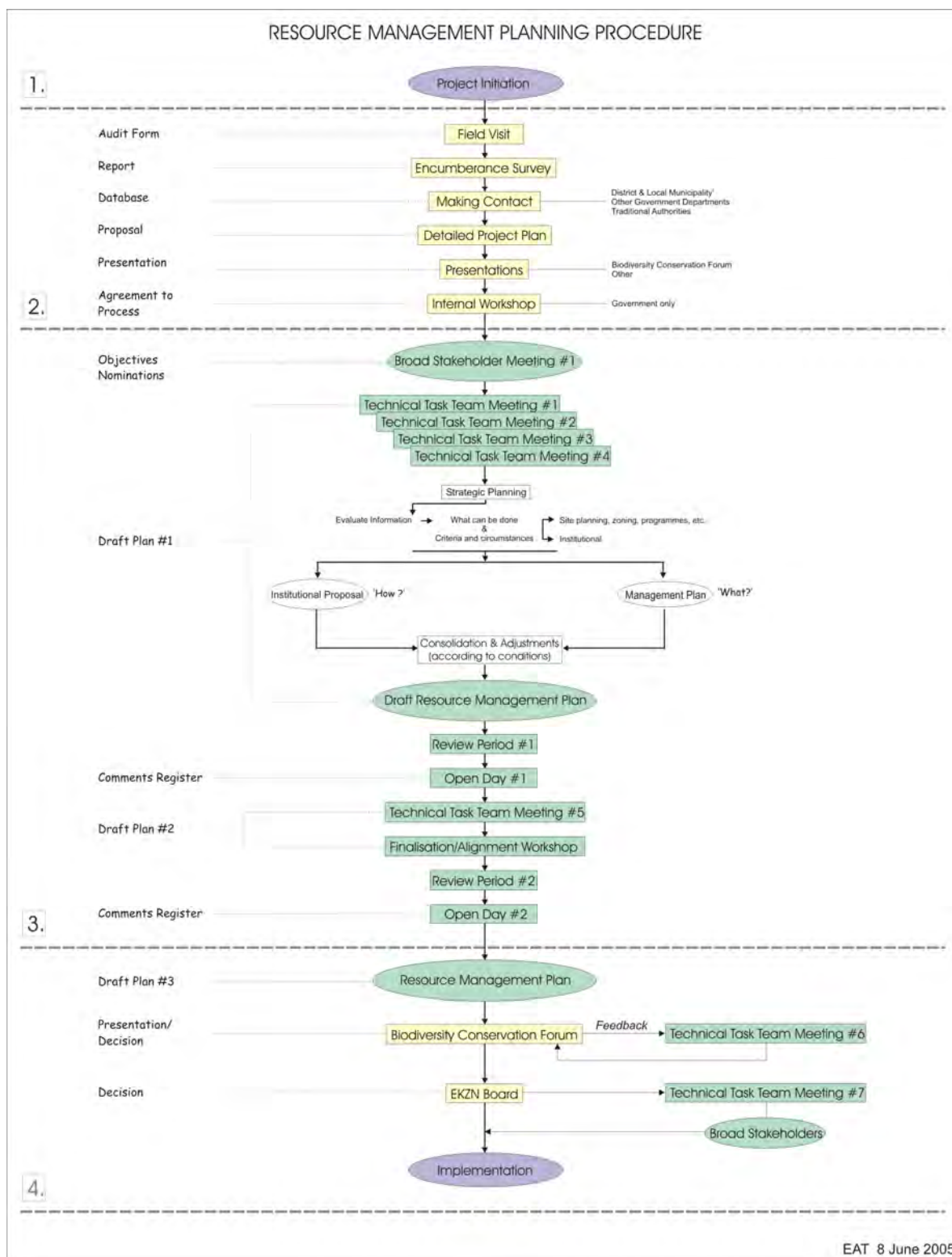
Annual and quarterly fiscal reports will be submitted as directed by the Zululand Regional Operations Committee.

9.5 *Protected Area Management Effectiveness Assessment*

A rapid PA Management Effectiveness Assessment is undertaken every four years based on the WWF/World Bank Management Effectiveness Tracking Tool (METT). This information feeds ultimately into the KZN State of Biodiversity report. An annual PA Management Effectiveness Assessment is being proposed which will be undertaken at a finer level of detail than the four-yearly assessment and will be coordinated by regional PA management staff.

Appendix 1:

RESOURCE MANAGEMENT PLANNING PROCESS



Appendix 2

LIST OF UNPUBLISHED SUPPORTING DOCUMENTATION

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

Item

1. EKZNW Corporate Strategic Plan and Performance Plan for 2009 - 2014.
2. EKZNW Corporate Policies (Norms & Standards) listed in **Table 21**.
3. Ezemvelo KZN Wildlife Protected Areas Ecosystem Services
4. EKZNW Biodiversity Database Checklists for NGR.
5. Amafa / EKZNW Co-operative Conservation Management of Cultural Heritage Agreement (signed July 2005).
6. IGR Archaeological Survey Preliminary Report, October 2006
7. Proclamations of IGR
8. Ithala Game Reserve Public Participation Report, January 2010.

Table 21 below lists the EKZNW Corporate Policies (Norms & Standards) referenced from intranet that are most relevant to EKZNW PA management. It is, however, the responsibility of all management and other personnel associated with the management of protected areas to ensure that they familiarise themselves and comply with the most recent versions of all EKZNW Board Approved Policies.

<u>EKZNW CORPORATE POLICIES (NORMS & STANDARDS)</u>	
Policy File No.	CORPORATE AFFAIRS
B 2	Ø Access to Ezemvelo KZN Wildlife Areas and Employment.
B 5	Ø Outsourcing of Functions and Services
B 7	Ø Monuments, Memorials and Names of Protected Areas under the control of EKZNW.
B 8	Ø Restricted use of Board Theatres, Halls and Conference Facilities etc.
B 9	Ø Code of Ethics / Conduct.
B 10	Ø Photography in Board Protected Areas.
B 13	Ø Mission Statement
B 14	Ø Access to Information.
Policy File No.	INTERNAL AUDIT
C 5	Ø Management Control
	BIODIVERSITY CONSERVATION OPERATIONS
	1. NATURAL RESOURCE SUSTAINABILITY
Policy File No.	Threatened Species and Ecosystems
D 1.1	Ø Disposal of Black Rhino.
D 1.2	Ø Disposal of Surplus White Rhino.
D 1.3	Ø Strategy for the Management of Southern White Rhino in KwaZulu-Natal.
D 1.4	Ø Strategy for the Biological Management of Black Rhino in KwaZulu-Natal.
D 1.5	Ø Rhinoceros Products.
D 1.6	Ø Crocodilians
D 1.7	Ø Cycads.
D 1.8	Ø Disposal of Threatened Species.
Policy File No.	Exotic and Invasive Species
D 1.9	Ø Release of Alien Species.
D 1.10	Ø Control Measures for Red-billed Quelea.
D 1.12	Ø Grass Carp.
D 1.13	Ø Establishment of Alien Plantations.
	Ø
Policy File No.	Migratory Species

D 1.14	Ø Black Wildebeest and Blue Wildebeest Hybridization and Conservation.
D 1.15	Ø Permit authorising the collection of Biological Material within Board Areas.
2. CONSERVATION EFFECTIVENESS	
<u>Policy File No.</u>	Strategic Applications
D 2.1	Ø Involvement of the KwaZulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme.
<u>Policy File No.</u>	Conservation Management: Protected Area Management
D 2.2	Ø Management of Wilderness Areas.
D 2.3	Ø Protected Area Development.
D 2.4	Ø Prohibition of Works and Servitudes in Board Areas.
D 2.5	Ø <u>Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board.</u>
D 2.6	Ø Quarries in KZN Protected Areas.
D 2.7	Ø Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas.
D 2.8	Ø Ecotourism and Protected Areas.
D 2.9	Ø Solid Waste Management within Protected Areas.
D 2.10	Ø State Security Service Activities within Board Areas.
D 2.11	Ø Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas.
<u>Policy File No.</u>	Integrated Environmental Management
D 2.12	Ø Integrated Environmental Management - incorporating the procedure for the assessment of the impact of proposed development projects on nature conservation concerns.
D 2.13	Ø Precautionary Principle.
D 2.14	Ø Shark Net Installations.
D 2.15	Ø Bioprospecting in KwaZulu-Natal.
D 2.17	Ø Use of Pesticides by the Ezemvelo KZN Wildlife: Safety to Humans and the Environment.
D 2.18	Ø Interference with the Mouth of a Lagoon or River (Breaching).
<u>Policy File No.</u>	Ex Situ Wild Animal Management
D 2.21	Ø Re-establishment of Terrestrial Mammals in Board Areas.
D 2.22	Ø Translocation of Animals.
D 2.25	Ø Elephant Introductions and Elephant in Enclosures.
D 2.27	Ø Introduction and Keeping of Large Predators in Enclosures in KZN.
D 2.28	Ø Use of Narcotic Drugs.
D 2.29	Ø Falconry.
<u>Policy File No.</u>	Human Animal Conflict - Inside and Outside Protected Areas
D 2.30	Ø Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas.
D 2.31	Ø Problem Animal Control.
D 2.32	Ø Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and

	Elephant to Stock and Crops.
D 2.33	Ø 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.
<u>Policy File No.</u>	Environmental Awareness
D 2.34	Ø Environmental Education Policy.
	3. BIODIVERSITY PROTECTION
<u>Policy File No.</u>	Co-management
D 3.1	Ø Supply of Game to Conservancies, Community Conservation Areas and Biosphere Reserves in KwaZulu-Natal
D 3.2	Ø Establishment and Management of Community Conservation Reserves (CCR)
D 3.4	Ø Community Conservation Programmes
D 3.5	Ø Neighbours' Access to Board Protected Areas
D 3.6	Ø Relationship with Local Boards
D 3.7	Ø Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners
D 3.8	Ø Community Trust
D 3.9	Ø Community Levy Policy and Guidelines
D 3.10	Ø Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal
D 3.11	Ø Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal
<u>Policy File No.</u>	Resource-use benefits
D 3.12	Ø Disposal of Venison from Ezemvelo KZN Wildlife Management Operations.
D 3.13	Ø Sustainable use of wildlife resources.
D 3.14	Ø Freshwater Angling.
D 3.15	Ø Freshwater species utilisation.
D 3.16	Ø Use of plant resources from protected areas.
D 3.17	Ø Use of doomed biological material.
D 3.19	Ø Provision of hunting by Ezemvelo KZN Wildlife.
<u>Policy File No.</u>	4. RELATIONSHIPS
D 4.1	Ø Neighbour Relations.
D 4.2	Ø Participation - Non Government Organisations.
D 4.3	Ø Data Access.
D 4.4	Ø Consultation and Communication with Stakeholders: Policy and Guidelines.
<u>Policy File No.</u>	COMMERCIAL OPERATIONS
E 1	Ø Concessions for Welfare Groups.
E 2	Ø Hiking and Mountaineering.
E 3	Ø Educational Concessions.
E 4	Ø Club Facilities within Board Areas.

E 5	Ø Hutted Camps.
E 6	Ø Joint Venture Scheme.
E 7	Ø Allocation of Sites in terms of the Joint Venture Scheme.
E 8	Ø Access to Protected Areas through Unofficial Entry Points.
E 9	Ø Visitor Facilities Management by Ezemvelo KZN Wildlife.
E 10	Ø Lease of Lakeshore at State Dam Protected Areas.
E 11	Ø Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife).
E 12	Ø Private Sector Reservations Policy.
E 13	Ø Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas.
E 14	Ø Discounting of Tariffs for Walk-in Guests.
E 15	Ø Ecotourism Discounting Strategy.
E 16	Ø Travel Trade Commissions: Tour Operator/ Travel Agency.
E 17	Ø Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements.
E 18	Ø Administrative and operational policy on Professional hunting in South Africa.
E 19	Ø Commercialisation.

Appendix 3:

IGR ZONATION SYSTEM

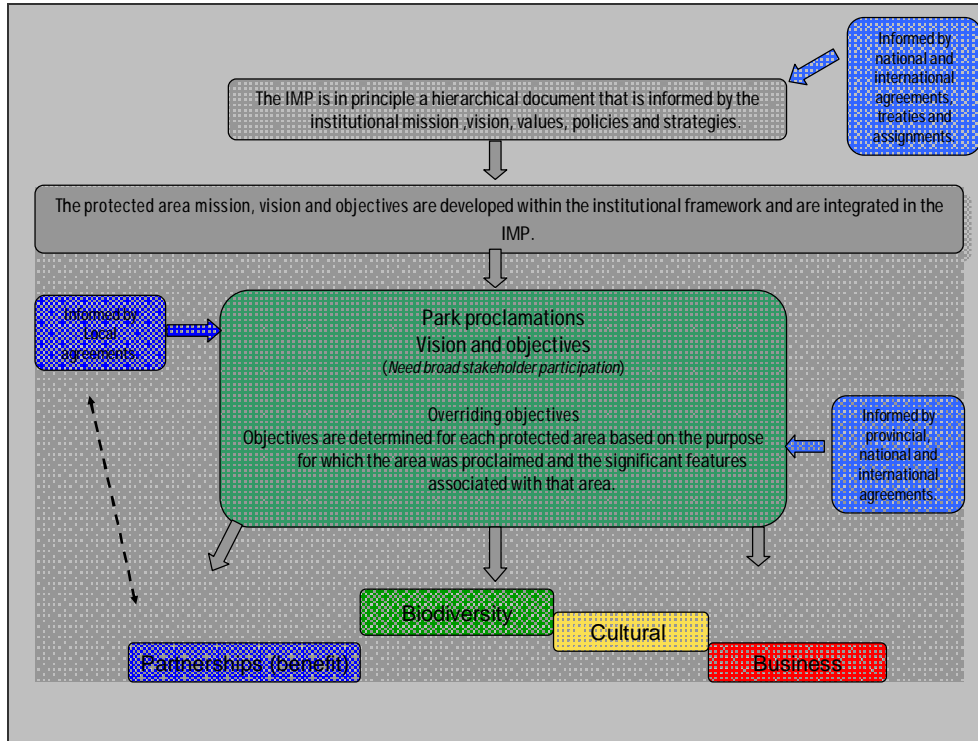
(Source: ROS User Guide, United States Forest Service, as in the Advanced Wilderness Course Manual)

CATEGORY	DESCRIPTION OF CRITERIA TO BE USED FOR ZONATION	SETTING DESCRIPTIONS (AS FROM ROS HANDBOOK)
Pristine Wilderness	Unmodified, no development, not impacted by any sights or sounds of people (e.g. formalized trails) No closer than 100m to either side of existing trails No formalized paths, no signage.	Area is characterised by essentially unmodified natural environment of fairly large size. Interaction between users is very low, and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-introduced restrictions and controls. Motorised use not permitted.
Primitive Wilderness	Unmodified environment, except for formalized trails being used at a low intensity (no signage) Visual and audio impact from outside, but at a distance (> 10km) 100m buffer of formalized trails passing through the Pristine Wilderness Zones will be Primitive Wilderness.	Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquillity and self-reliance through the application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk.
Semi-Primitive Wilderness	Unmodified environment, near-Wilderness experience, formalized trails used at a medium intensity Concreting or rock-packing of trails allowed where necessary (i.e. areas of medium intensity of use) Signage occur Visual and audio impact from outside, but at medium distance (5 – 10km) Natural environment impact.	High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquillity, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.
Semi-Primitive Non-motorised	Closely related to the above zone, but usage of formalized trails at a high intensity – concreting/rock-packing of trails Natural environment experience, non-motorised use, usually a buffer between Wilderness and semi-primitive wilderness/roaded natural areas Visual and audio impact from outside, at a short distance (< 5km) May be hiking huts or other types of low-scale accommodation, possible field ranger outposts.	Area is characterised by a predominantly natural or natural-appearing environment of moderate to large size, interaction between users is low, but there is often evidence of other users. The area is managed such that minimum on-site controls and restrictions may be present, but are subtle. Motorised use is not permitted.
Semi-Primitive Motorised	4x4 trails and their area of impact (audio and visual) Visitor and management tracks and their zone of visual and audio impact (GIS to be used to determine exact range of impact, hence an initial distance of 100m other side has been set) Rustic accommodation, or low-level, low intensity tourism nodes (no bigger than 10 – 20 beds).	Area is characterised by predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are suitable. Motorised use is allowed.
Roaded Natural	Small to medium sized camp nodes (20 – 100 beds), access control points, 2x4 roads (tar & gravel), small to medium management nodes.	Area is characterised by predominantly natural-appearing environments with moderate evidences of the sights and sounds of humans. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modifications and utilisation practices are evident, but harmonise with the natural environment. Conventional motorized use is provided for in construction standards and design of

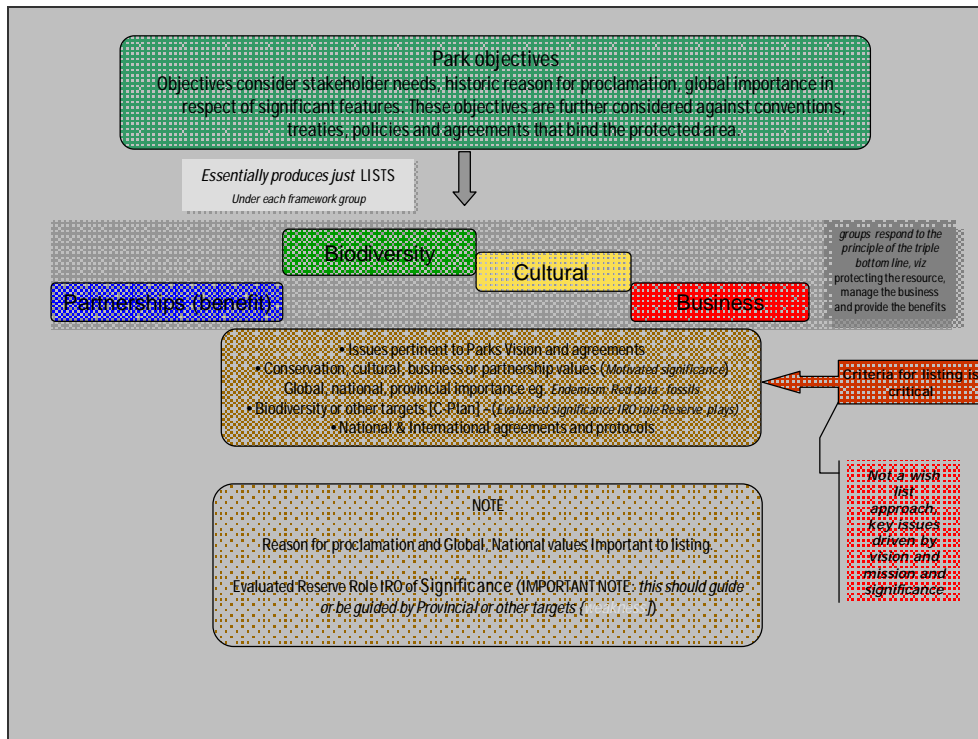
CATEGORY	DESCRIPTION OF CRITERIA TO BE USED FOR ZONATION	SETTING DESCRIPTIONS (AS FROM ROS HANDBOOK)
Rural	A rural recreational node/area, rather than as a nature-based experience. Resort type development rather than a nature-based tourism facility.	facilities. Area is characterised by a substantially modified natural environment. Resource modifications and utilisation practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident and the interaction between users is often moderate-high. A number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.

Appendix 4

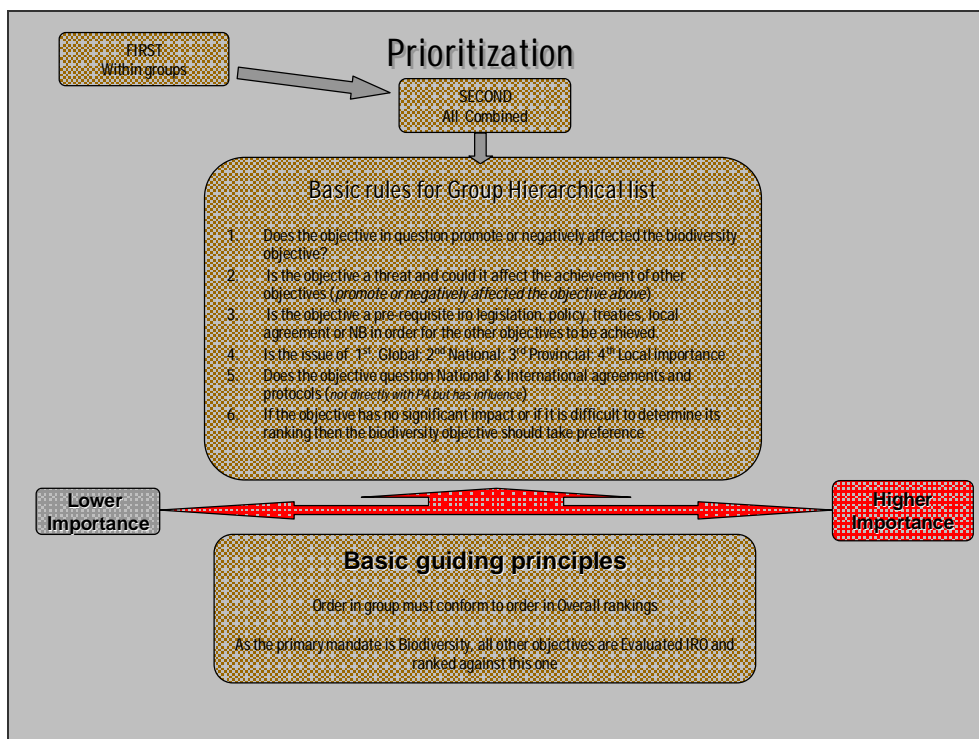
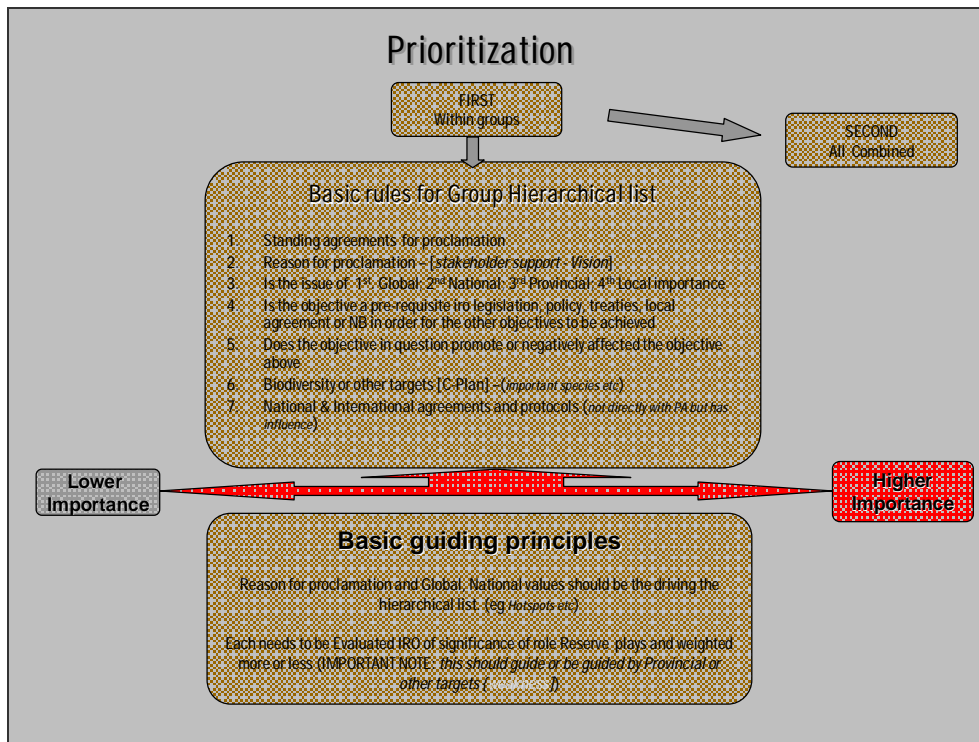
SCHEMATICAL REPRESENTATION OF THE OBJECTIVES PRIORITISATION PROCESS



8.1



8.2



Basic rules for overall Hierarchical list

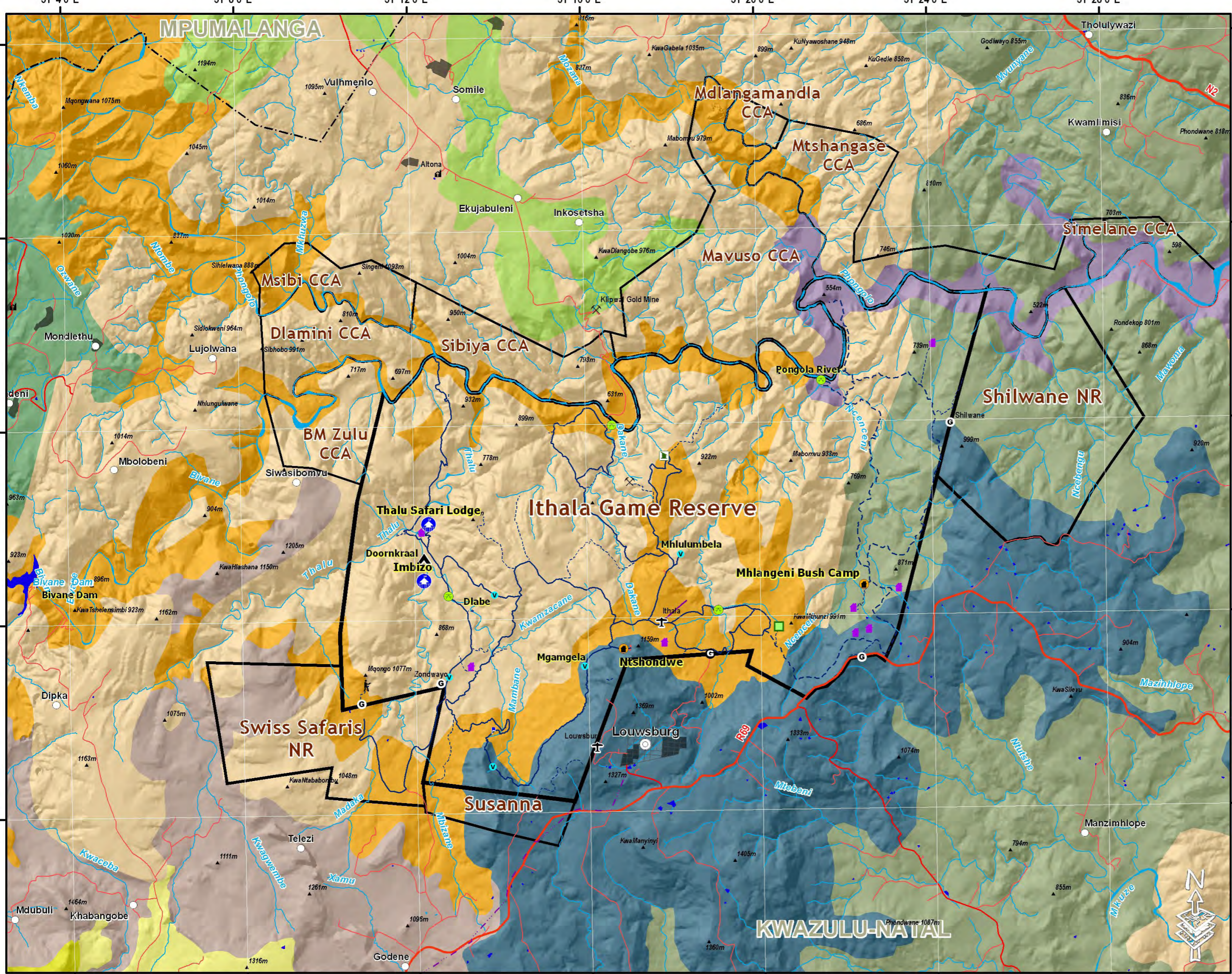
- Order in group must be same as order in Overall rankings
 - As the primary mandate is Biodiversity, all other objectives are test and ranked against this one
1. Does the objective in question promote or negatively affected the biodiversity objective?
 2. Is the objective a threat and could it affect the achievement of other objectives.
 3. Is the objective a pre-requisite iro legislation, policy, treaties, local agreement or NB in order for the other objectives to be achieved.
 4. If the objective has no significant impact or if it is difficult to determine its ranking then the biodiversity objective should take preference.

EKZNW IMP Objectives Prioritisation Process

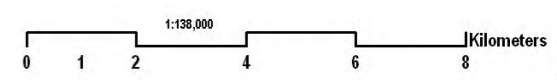
Appendix 5:
ITHALA GAME RESERVE A3 MAPS
Vegetation (Map 2),
Zonation: Future Desired State (Map 4), and
Zonation: Master Plan (Map 5)

Vegetation

- Conservation & tourism**
- Boma
 - Lodge
 - Rest camp
 - Camping site
 - Picnic site
 - Management infrastructure
 - Game hide
 - Entrance gate
 - Control gate
 - Viewpoint
 - Waterhole
 - Place of interest
 - Spothight
- Infrastructure**
- Mine
 - Town
 - Settlement
 - Airstrip
 - Mission
 - Shooting range
 - Power line
 - National
 - Arterial
 - Secondary
 - Other
 - Street
 - Track
 - Tourism: public access
 - Tourism: limited access
 - Management track
 - Provincial boundaries
 - Urban
 - Pan
 - Dam
 - Perennial river
 - Provincial Nature Reserve
 - Private Nature Reserve
 - Possible CCA
- Vegetation**
- Granite Lowveld Bushveld
 - Income Sandy Grassland
 - Ithala Quartzite Sourveld
 - KaNgwane Montane Grassland
 - KwaZulu-Natal Dry Highland Grassland
 - Northern Zululand Mistbelt Grassland
 - Northern Zululand Sourveld
 - Paulpietersburg Moist Grassland
 - Swaziland Sour Bushveld
 - Wakkerstroom Montane Grassland
 - Zululand Lowveld



Ithala Game Reserve



Zonation Future Desired State

Conservation & tourism

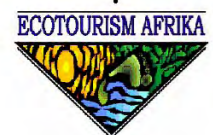
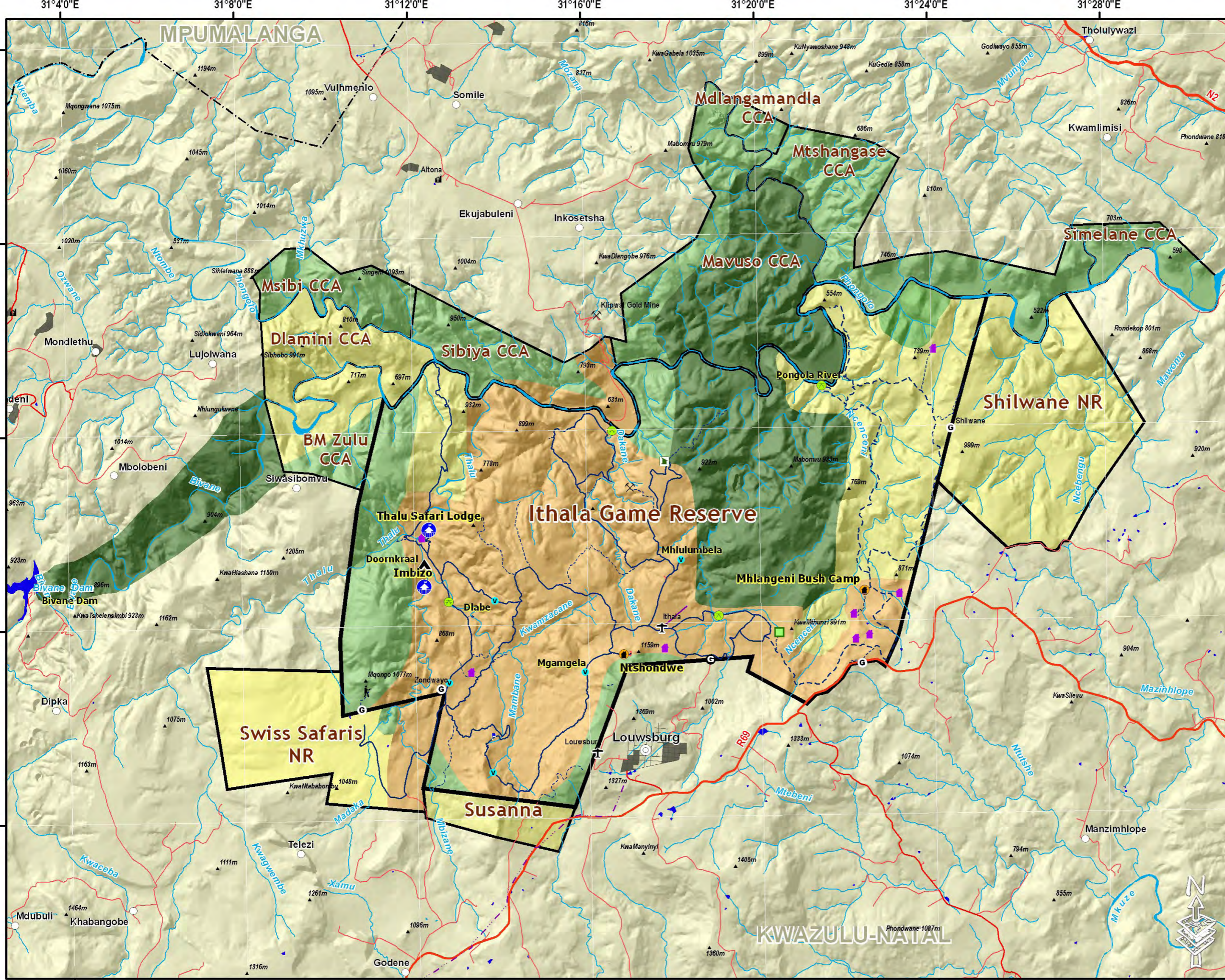
- Boma
- Lodge
- Rest camp
- Camping site
- Picnic site
- Management infrastructure
- Game hide
- Entrance gate
- Control gate
- Viewpoint
- Waterhole
- Place of interest
- Spothight

Infrastructure

- Mine
- Town
- Settlement
- Airstrip
- Mission
- Shooting range
- Power line
- National
- Arterial
- Secondary
- Other
- Street
- Track
- Tourism: public access
- Tourism: limited access
- Management track
- Provincial boundaries
- Urban

Zoning: Future Desired State (ROS categories)

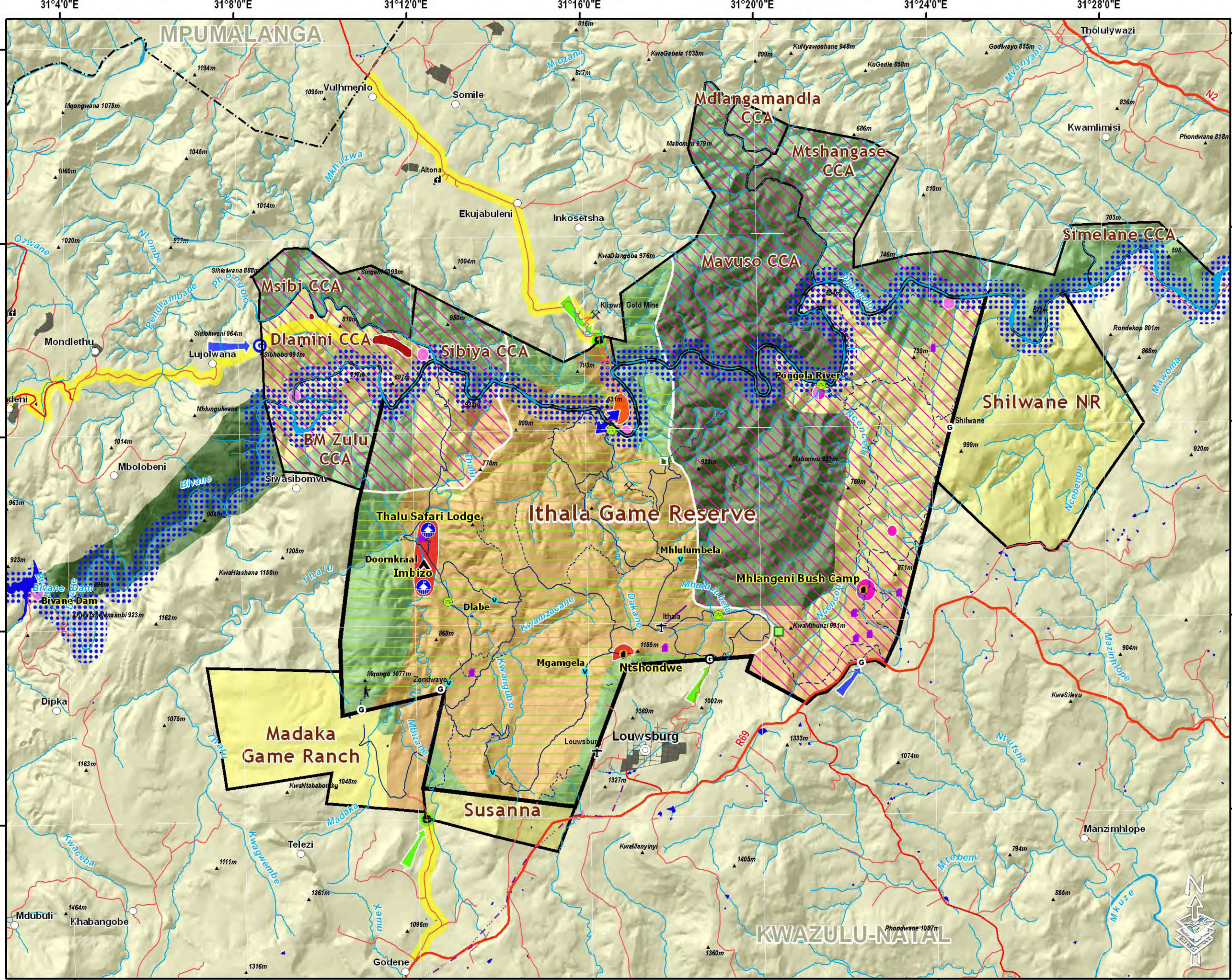
- Primitive wilderness
- Semi-primitive: wilderness
- Semi-primitive: non motorised
- Semi-primitive: motorised
- Roaded: natural



Ithala Game Reserve



Concept Development Plan - Master Plan -



- Access -

CDP: Access

- Proposed public entrance
- Limited access entrance
- Public entrance
- Limited entrance

- Utilisation -

Utilisation

- Concession
- Public
- River concession

- Development -

Development cores

- Ntshondwe
- Pongola River Rest Camp
- Bivane Confluence
- KwaSambane
- River Rafting

- Infrastructure -

Proposed Infrastructure

- River crossing
- Tourism road upgrade

Zoning: Future Desired State (ROS categories)

- Primitive wilderness
- Semi-primitive: wilderness
- Semi-primitive: non motorised
- Semi-primitive: motorised
- Roaded: natural

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2007-10-30

Ithala Game Reserve

