

Gonarezhou National Park



Chilojo Cliffs, Gonarezhou National Park

General Management Plan 2011 – 2021





This General Management Plan has been developed through a participatory process, involving a cross section of stakeholders for the Gonarezhou National Park.

The planning process was conducted under the coordination of a Core Planning Team comprising representatives from the Zimbabwe Parks and Wildlife Management Authority and the Frankfurt Zoological Society.

Funding for the planning process was provided by Zimbabwe Parks and Wildlife Management Authority and the Frankfurt Zoological Society.

Implementation of the objectives and targets outlined in this document will be the primary responsibility of the Zimbabwe Parks and Wildlife Management Authority and the Frankfurt Zoological Society. Where necessary, there will appropriate collaboration with other agencies to ensure implementation.



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Approval Page

The Management, Board of the Zimbabwe Parks and Wildlife Management Authority and the Minister of Environment and Natural Resources Management, Government of Zimbabwe have approved the implementation of this General Management Plan for Gonarezhou National Park.

Signature: _____

Date: _____

Mr. Vitalis Chadenga

Director-General - Zimbabwe Parks and Wildlife Management Authority

Recommended to Zimbabwe Parks and Wildlife Management Authority Board

Signature: _____

Date: _____

Mr. George N. Pangeti

Board Chairman - Zimbabwe Parks and Wildlife Management Authority

Recommended to Ministry of Environment and Natural Resources Management

Signature: _____

Date: _____

Hon. Francis D. Nhema

Minister – Ministry of Environment and Natural Resources Management

Foreword

This General Management Plan for Gonarezhou National Park is a product of the review of several previous management plans. The park has a long history that dates back to 1934 when it was first established as a game reserve and it currently is 5 053 km² in size. This General Management Plan address the issues and threats facing the park through four interlinked programmes.

These four programmes comprise Biodiversity and Natural Resources Management, Sustainable Tourism, Park Operations, Administration, Infrastructure and Collaborative Management and together they facilitate a holistic approach to the management of the park. The planning process was over three years and entailed a consultative process with stakeholders. All four programmes were formulated using working groups comprising of different experts. The plan has working life of ten years and it is supported by 3-year action plans that can be rolled forward with new activities being added as required.

Of special interest is the realisation that this management plan attempts to address the challenges related to the Great Limpopo Transfrontier Conservation Area (GLTFCA). The GLTFCA encompasses the management of Gonarezhou inline with Kruger National Park (South Africa), Limpopo National Park (Mozambique) and their surrounding areas as one large conservation area. The management plan includes a comprehensive tourism development and utilisation plan which zones the park for different levels of use.

Through its objectives, targets, actions and monitoring programmes the management plan pays particular attention to the proper management of the Exceptional Resource Values for Gonarezhou which include the vast wilderness areas, large tusked elephants, Chilojo cliffs, Red Hills and the river systems. We envisage that the application of this management plan will enhance the conservation and management of Gonarezhou so as to sustain the desired state of the wilderness qualities and the exceptional resource values for the benefit of present and future generations.

Vitalis Chadenga
Director General, Zimbabwe Parks and Wildlife Management Authority

Executive Summary

Introduction

Gonarezhou National Park is the second largest national park in Zimbabwe. It was established in 1934 as a Game Reserve and proclaimed a national park in 1975. Gonarezhou is situated in the South-eastern Lowveld and it occupies a total area of 5 053 km². This General Management Plan for Gonarezhou outlines the purpose for the development and management of the park over the next 10 years. The 10-year purpose statement is supported by a set of objectives and targets. This management plan was developed using, a participatory process, baseline information from previous park plans, information from relevant literature and outcomes from consultations with stakeholders. In addition, technical working groups comprising the key stakeholders and park management developed the four management programmes after an analysis of the current opportunities and problems facing the park. The programmes attempt to address and provide solutions to the problems while considering the existing opportunities. A core planning team coordinated the planning process and facilitated the technical working group sessions. The Sustainable Tourism programme underwent an extensive review prior to the final formulation of the plan.

The logical framework approach was adopted for the planning process. The objectives and targets were set to provide a long-term strategy for the park management plan. Each programme has a 3-year action plan which provides detail on the actions, activities, input requirements, assigns responsibility and presents a timeframe. The action plan is designed to be regularly rolled forward every 3 years through an adaptive management cycle that is based on the application of a monitoring and evaluation tool. The logical framework approach has enabled the production of a management plan which is dynamic, flexible and adaptive to changing needs, socio-economic and political environments.

Park Purpose, Significance and Values

Gonarezhou Park Purpose

The Gonarezhou National Park will protect and conserve the wilderness, biodiversity, ecological processes, wild and scenic landscapes within the park boundary. The park's exceptional resource values will be sustained for present and future generations, while supporting its role in the Great Limpopo Transfrontier Conservation Area and regional economic development. The culture and history of the Shangaan people will be recognised as one of the key components of the park.

The significance of Gonarezhou varies and spans local, national, regional and international levels. In November 2000, Gonarezhou became part of the Great Limpopo Transfrontier Park which includes protected areas in South Africa, Mozambique and Zimbabwe. Gonarezhou has great potential in the tourism industry in Zimbabwe as well as in the region and the park is characterised by high biodiversity and largely undeveloped landscapes. Gonarezhou's wilderness and scenic environment are special qualities that will be sustained for the visitors' experience while supporting its role in the development of the Great Limpopo Transfrontier Conservation Area (GLTFCA).

The exceptional resource values of Gonarezhou were classified into four categories namely natural, scenic, social and cultural. The *natural* values include the extensive wilderness, elephants with large

tusks, the river systems and wetlands. The exceptional *scenic* values that were identified comprise the Chilolo cliffs; Red Hills; natural pans (specifically Tambahata and Machiniwa); baobab trees and several gorges along major river systems in the park. The *social* aspect encompasses the connectivity and inclusion of Gonarezhou into the Great Limpopo Transfrontier Conservation Area, its importance as a tourism/tourist destination and the value of the park as a source of animals that can spill over into adjacent safari hunting concessions. The cultural aspects are related to the Shangaan heritage represented by sites of cultural significance within Gonarezhou.

Zoning Scheme

The Gonarezhou management zoning scheme was developed to provide a framework in which to balance the aims of conservation of the park's exceptional resource values and developing the park as a tourism/tourist destination. The conservation of biodiversity, ecosystem processes and the park's wilderness character is the primary management objective throughout the park, irrespective of the zone(s). Two zones with associated prescriptions on types of activities permitted have been designated, i.e. wilderness and wildland zones. Zone boundaries are depicted in this GMP, but these will be properly demarcated on the ground as part of implementation.

Wilderness zone - where wilderness recreation opportunities are subject to a minimum of influence from facility development and intensive visitor activity. Two areas have been identified: the Pombadzi Wilderness area and the Guluene/Chefu Wilderness Area.

The rest of the park is designated as wildland zone where low levels of visitor activity in natural surroundings are permitted. Within the Wildland zones several sub-zones have been designated which include development zones (around the management stations) and special conservation zones (in specific high-value of sensitive areas).

Management Programmes

Four management programmes, addressing logically grouped issues were developed:

1. Biodiversity and Natural Resource Management Programme
2. Sustainable Tourism Programme
3. Park Operations, Administration and Infrastructure Programme
4. Collaborative Management Programme

They are briefly summarised below followed by a summary of the purpose, guiding principles and objectives.

Biodiversity and Natural Resource Management Programme

The Biodiversity and Natural Resource Management Programme deals with the conservation of the Gonarezhou ecosystem components with a focus towards the park's exceptional resource values and identified conservation targets. A key component of the programme is monitoring and research to ensure that the success of the conservation activities can be measured and modified during the life of the plan.

Sustainable Tourism Programme

The Sustainable Tourism Programme strives to ensure that Gonarezhou positions itself strategically within the context of the greater GLTP so as to provide a unique tourism destination. The tourism plan capitalises on the wilderness aspect of the park and two zones have been created (Wilderness and Wildland) to ensure that this endures. Branding of the park is seen as being important for marketing so that it can compete regionally in a crowded marketplace. The undeveloped character of the park provides a unique opportunity for the future direction of tourism in the park.

Park Operations, Administration and Infrastructure Programme

This programme provides the backbone and support structure on which all park management activities are based. It provides a solid foundation to the operations of the other management programmes by developing and maintaining an effective and efficient human resource base and establishing a successful resource protection programme. GNP management will employ financial and resource management strategies with accountability, and endeavour to develop and maintain the necessary and appropriate infrastructure that underpins both management and tourism activities.

Collaborative Management Programme

The Collaborative Management Programme deals with issues beyond the boundaries of the park. One of the primary focuses of the programme is to foster good relations with the surrounding communities and this will be achieved by providing conservation services and education and information to the affected groups. Safari hunting is an important mechanism to provide community benefits and other ways of allowing communities to benefit from the park are also suggested. The programme also recommends strategies to maintain habitat connectivity and to ensure that Gonarezhou becomes an integral part of the Great Limpopo Transfrontier Conservation Area.

Purpose, Guiding Principles and Objectives Summary

Purpose and guiding principles for Gonarezhou management programmes		
Programme	Purpose	Guiding Principles
Biodiversity Conservation & Natural Resource Management	Conserve the biodiversity, ecological processes and wilderness qualities of Gonarezhou National Park through strategic adaptive management.	<ol style="list-style-type: none"> 1. Change is an integral part of the environment 2. Intervention will be a policy of last resort 3. Conservation agendas will also be pursued outside the park 4. Management decisions will be based on scientific information
Sustainable Tourism	GNP tourism developed and managed in order to provide an outstanding wilderness experience and education for both local and international visitors, and to generate optimal economic benefits to all stakeholders and partners, whilst maintaining the park's vision and exceptional resource values.	<ol style="list-style-type: none"> 1. A wide-ranging view will be taken during planning 2. Utilisation of the park and its resources will benefit surrounding communities 3. The wilderness character of the park will be the driving force behind tourism 4. Permanent developments must be peripheral 5. Tourism will be diversified and will concentrate on a low volume-high quality integrated product 6. Mabalauta will be the focus for GLTP linkage 7. Gonarezhou should be a learning and enriching experience 8. Tourism development will be phased 9. Tourism development will be adaptive

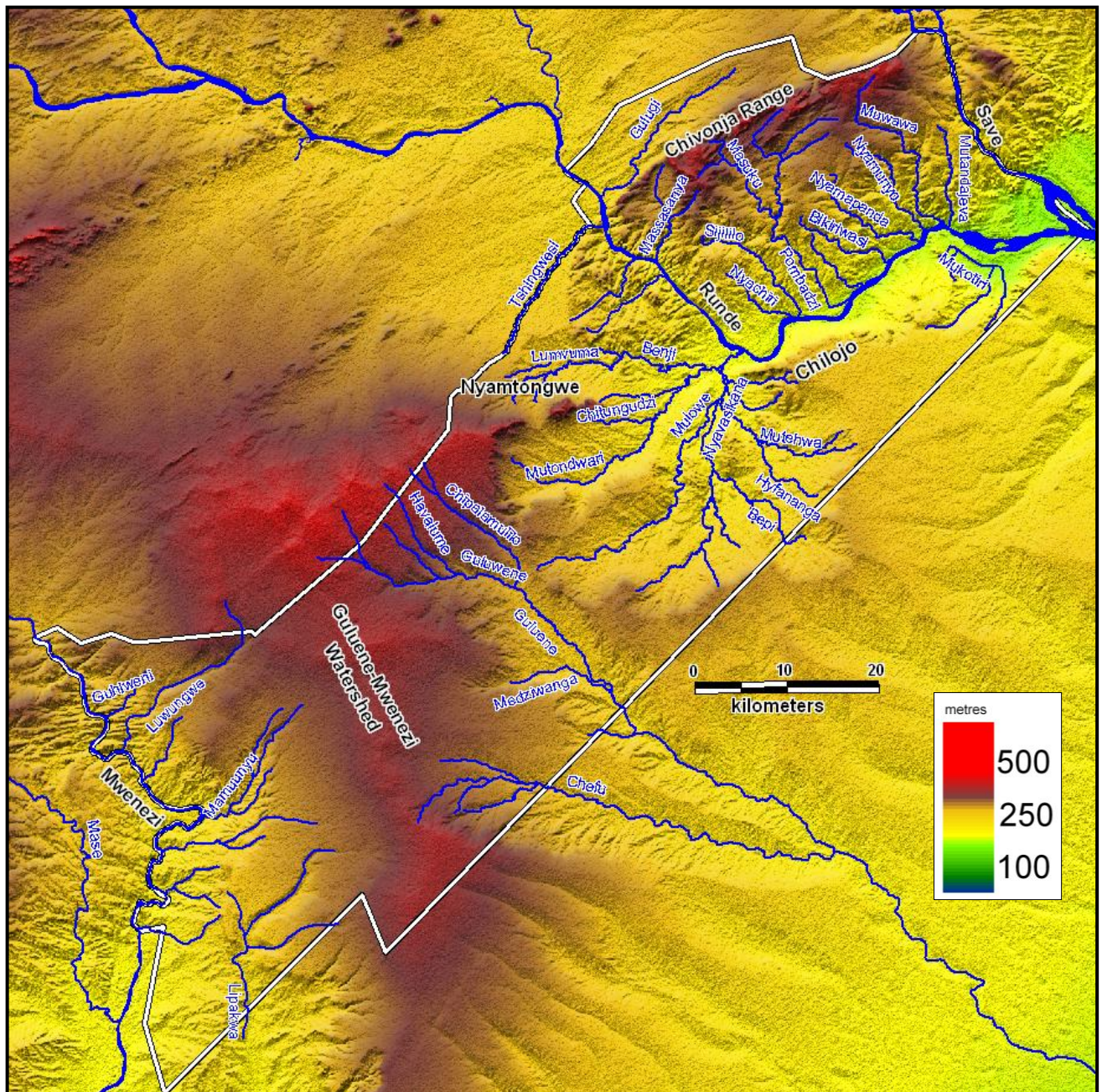
Purpose and guiding principles for Gonarezhou management programmes		
Programme	Purpose	Guiding Principles
Park Operations, Administration and Infrastructure	Transparent, accountable and efficient administration and management of human, financial and physical resources to support the Gonarezhou National Park's purpose	<ol style="list-style-type: none"> 1. Trained and motivated staff are the most important asset for park management 2. Management and financial resources are finite 3. Park infrastructure and activities designed to cause minimal environmental impact 4. Good access and communications are vital for effective management 5. Quality and transparency
Collaborative Management	Supportive linkages with GNP stakeholders and partners at local, regional and international levels established and maintained to safeguard the integrity of the park resource values	<ol style="list-style-type: none"> 1. Open communications with stakeholders 2. Community involvement and participation will be encouraged 3. Cultural sites will be recognised and protected 4. Awareness of park and environmental resources will be promoted 5. Citizen and educational access will be facilitated 6. Transfrontier context will be a motivating force

Objectives summary	
Programme	Objectives
Biodiversity Conservation & Natural Resource Management	<ol style="list-style-type: none"> 1. Biodiversity and ecological processes of Gonarezhou and adjacent areas conserved through an adaptive management approach 2. Human impacts on the Gonarezhou ecosystem managed and mitigated 3. Monitoring and research addresses management needs effectively
Sustainable Tourism	<ol style="list-style-type: none"> 1. Tourism facilities and activities developed 2. Gonarezhou wilderness brand promoted 3. Educational and interpretive facilities, activities and materials developed 4. Management and administration of tourism improved
Park Operations, Administration and Infrastructure	<ol style="list-style-type: none"> 1. An effective and efficient human resource base developed 2. Appropriate infrastructure developed and maintained 3. Adequate equipment for management activities acquired and maintained 4. Resource protection optimised 5. Improved financial and management accountability
Collaborative Management	<ol style="list-style-type: none"> 1. Communities regard Gonarezhou as a positive asset 2. Communities participate in, and receive benefits from, tourism 3. Stakeholder awareness of Gonarezhou and the environment significantly raised 4. Collaboration with government and other institutions improved 5. Gonarezhou becomes a key component of the great Limpopo Transfrontier Conservation area

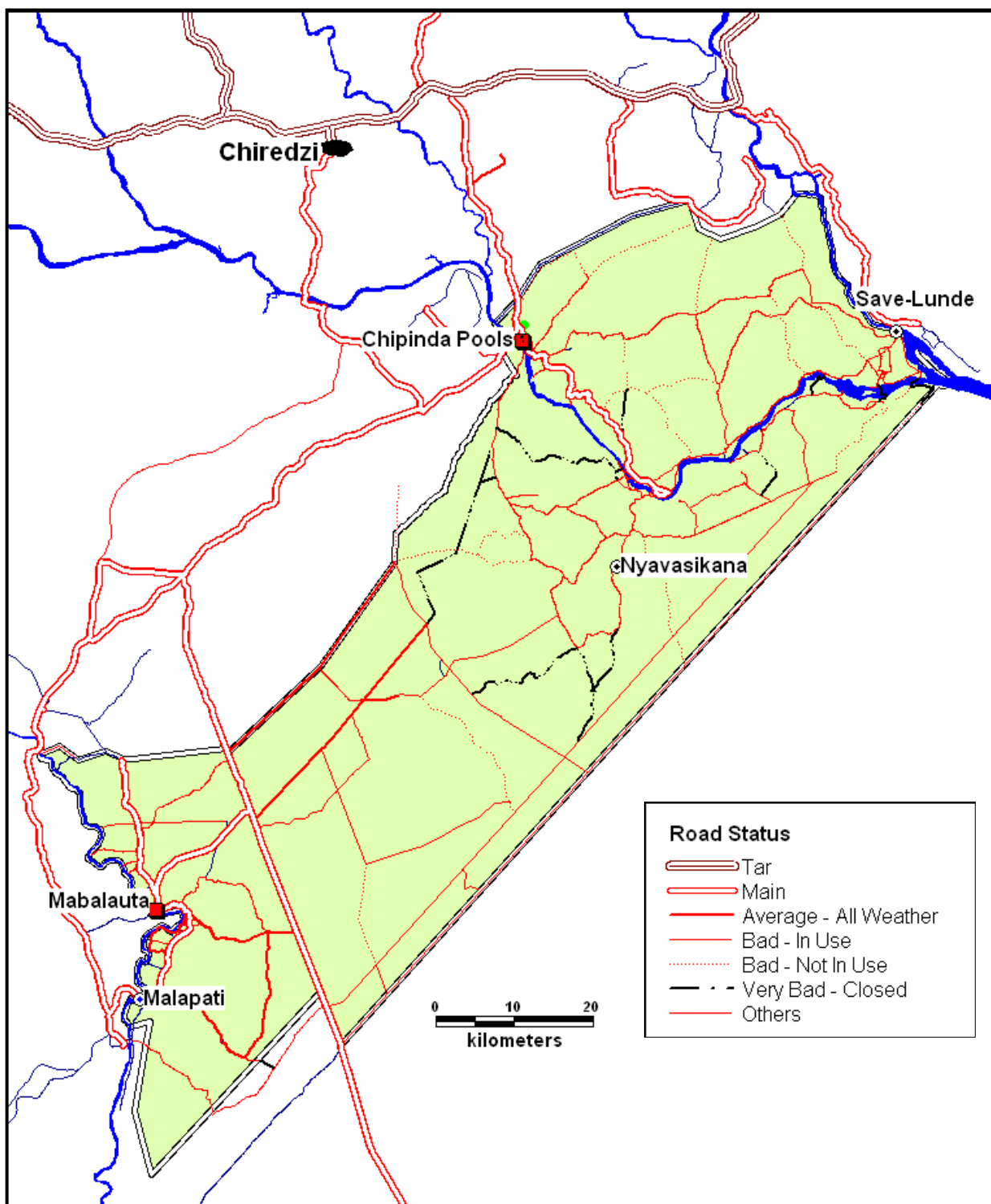
Maps

In order to “set the stage” for the descriptive text in the body of the plan some key maps are presented as part of this Executive Summary. More maps and detail can be found in Part 2 of the management plan (Background).

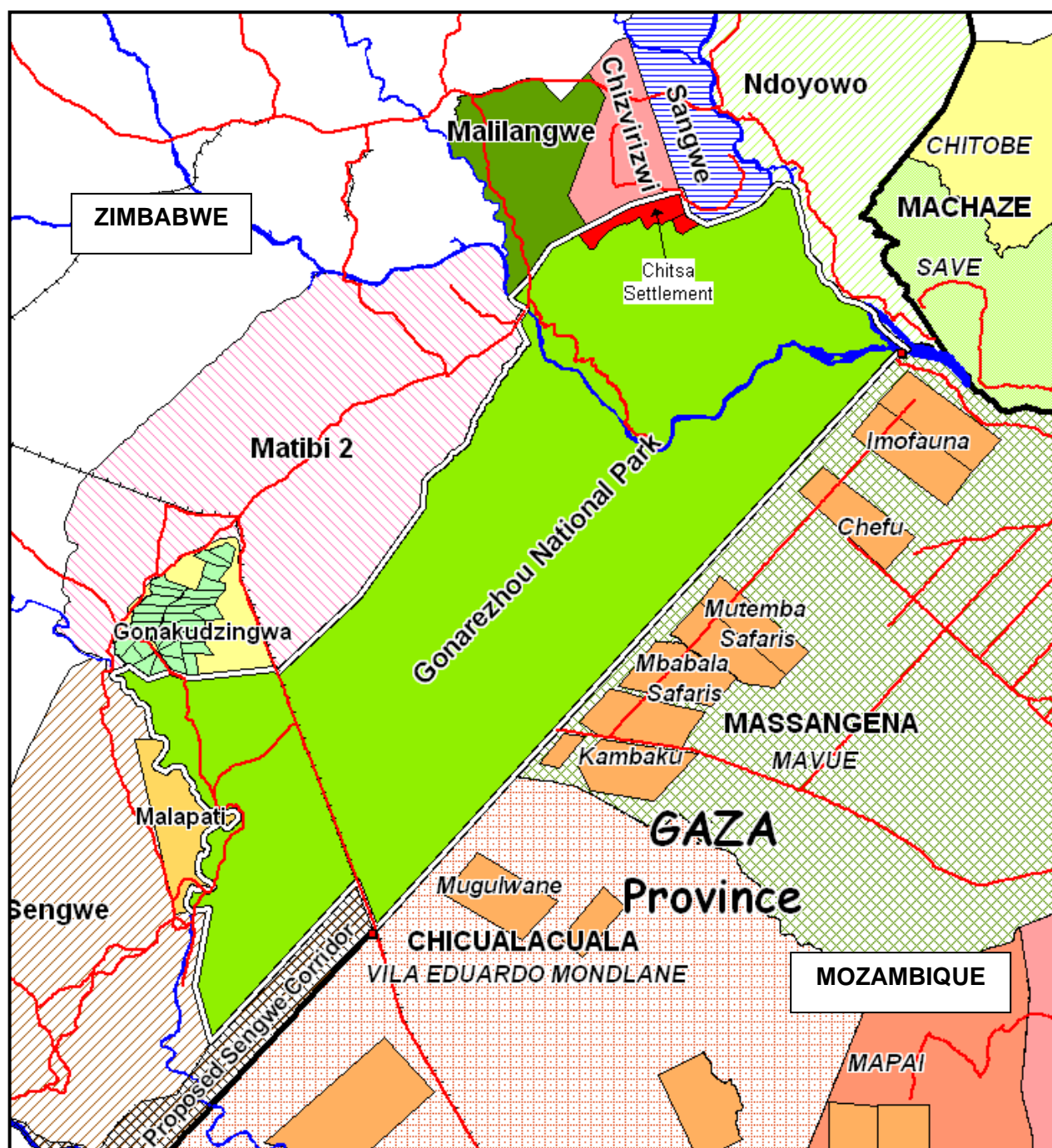
1 Relief and Drainage



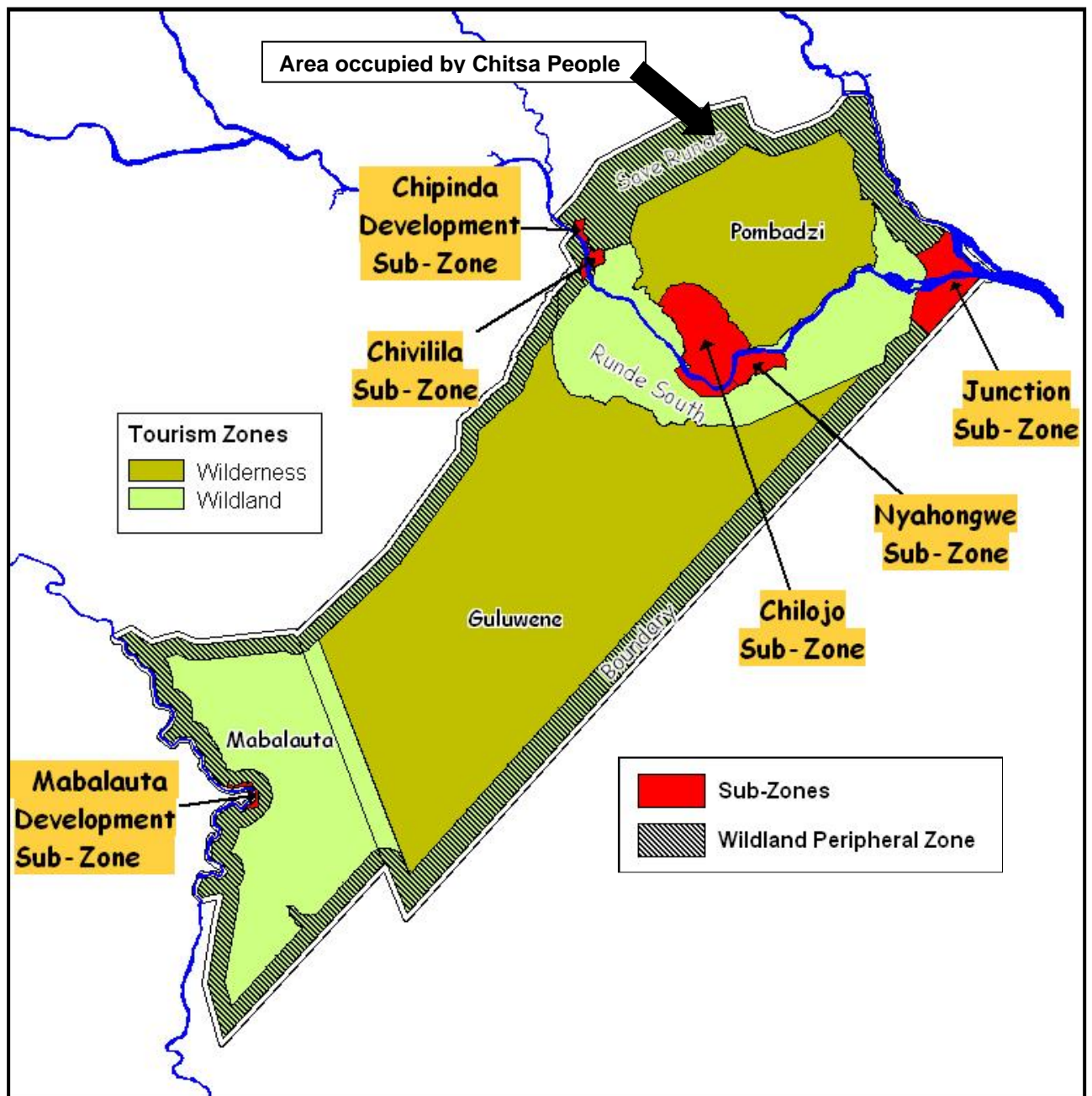
2 Roads and Infrastructure



3 Neighbours



4 Park Zones



Acknowledgments

The Director-General of Zimbabwe Parks and Wildlife Management Authority, Board of the Zimbabwe Parks and Wildlife Management Authority and Gonarezhou National Park Core Planning Team are grateful to many individuals and organisations that contributed to this General Management Plan. In particular we acknowledge Frankfurt Zoological Society, stakeholders in the southeast lowveld and beyond, and numerous reviewers that provided information and assistance or submitted comments that contributed to the development of this General Management Plan.

Acronyms and Abbreviations

AOP	Annual Operations Plan
CBD	Convention on Biological Diversity
CBNRM	Community-Based Natural Resource Management
CBO	Community-Based Organisation
CDF	Conservation Development Framework
CITES	Convention on International Trade in Endangered Species of Wild Fauna & Flora
CPT	Core Planning Team
DNPWLM	Department of National Parks and Wildlife Management
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
ERV	Exceptional Resource Value
FZS	Frankfurt Zoological Society
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GLTFCA	Greater Limpopo Transfrontier Conservation Area
GLTP	Greater Limpopo Transfrontier Park
GMP	General Management Plan
GNP	Gonarezhou National Park
GPS	Global Positioning System
HWC	Human-wildlife Conflict
IPZ	Intensive Protection Zone
IUCN	World Conservation Union
KEA	Key Ecological Attribute
LE	Law Enforcement
LFA	Logical Framework Approach
METT	Management Effectiveness Tracking Tool
NGO	Non-Governmental Organisation
NRM	Natural Resource Management
NR	Natural Resources
PA	Protected Area
PAC	Problem Animal Control
PEC	Principal Ecosystem Component
POAI	Park Operations, Administration and Infrastructure
PP	Precautionary Principle
PPP	Polluters Pays Principle
PPCP	Public Private Community Partnerships
PPF	Peace Parks Foundation
RBI	Resource Based Inventory
RBM	Ranger-based Monitoring
RS	Remote Sensing
RMG	Resource Management Group
RP	Resource Protection
SADC	Southern African Development Community

SNRM	Sustainable Natural Resource Management
SP	Subsidiary Principle
TBNRM	Transboundary Natural Resource Management
TFCA	Transfrontier Conservation Area
TPC	Thresholds of Potential Concern
TPM	Tourism Provision and Management
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
US	User Pays Principle
VHF	Very High Frequency
WB	World Bank
WCPA	World Commission on Protected Areas
WCS	Wildlife Conservation Society (International Conservation NGO)
WHS	World Heritage Site
WWF	Worldwide Fund for Nature
ZESA	Zimbabwe Electricity Supply Authority
ZINWA	Zimbabwe National Water Authority
ZNA	Zimbabwe National Army
ZPWMA	Zimbabwe Parks and Wildlife Management Authority

Table of Contents

A: PLAN FOUNDATIONS

A.1	INTRODUCTION	1
A.1.1	Planning Area	1
A.1.2	Function and Structure of the General Management Plan	1
A.1.3	Previous Planning	2
A.1.4	Current Planning	3
A.1.5	Background Information Summary	4
A.2	EXCEPTIONAL RESOURCES, VALUES AND PURPOSE	7
A.2.1	Exceptional Resources	7
A.2.2	Values	8
A.2.3	Park Purpose	9
A.3	MANAGEMENT ZONES	9
A.3.1	Background	9
A.3.2	Main Zones	10
A.3.3	Sub-Zones	13
A.4	MANAGEMENT PROGRAMMES	17
A.4.1	Background	17
A.4.2	Management Programme Definition And Objectives Summary	17

B: BIODIVERSITY AND NATURAL RESOURCES MANAGEMENT PROGRAMME

B.1	PURPOSE, BACKGROUND AND KEY COMPONENTS	23
B.1.1	Programme Purpose	23
B.1.2	Background	23
B.1.3	Key Components	24
B.2	THREATS, ISSUES AND CONCERNS	25
B.3	GUIDING PRINCIPLES	30
B.4	CONSERVATION TARGETS	31
B.5	OBJECTIVES, TARGETS AND ACTIVITIES	35
B.6	RESEARCH AND MONITORING FRAMEWORK	51
B.6.1	Research	51

C: SUSTAINABLE TOURISM PROGRAMME

C.1	PURPOSE, BACKGROUND AND KEY COMPONENTS	63
C.1.1	Programme Purpose	63
C.1.2	Background	63
C.1.3	Key Components	65
C.2	THREATS, ISSUES AND CONCERNS	66
C.3	GUIDING PRINCIPLES	71
C.4	PERMITTED TOURISM DEVELOPMENTS	73
C.4.1	Introduction	73
C.4.2	Permanent / Semi-Permanent Camps	75
C.4.3	Campsites, View Points, Platforms etc	78
C.4.4	Firewood	79

C.5	MANAGEMENT INFRASTRUCTURE	81
C.5.1	Roads	81
C.5.2	River Crossings	81
C.5.3	Signage.....	81
C.5.4	Communication Points.....	81
C.5.5	Entry Points	81
C.6	PERMITTED TOURISM ACTIVITIES.....	83
C.6.1	Activity “Codes of Conduct”	86
C.7	LIMITS OF ACCEPTABLE USE	88
C.8	ZONE DEVELOPMENT SUMMARY	90
C.8.1	Overview	90
C.8.2	Wilderness Zones	92
C.8.3	Wildland Zones	96
C.9	OBJECTIVES, TARGETS AND ACTIVITIES	108
C.10	ENVIRONMENTAL IMPACTS AND MITIGATION	133

D: PARK OPERATIONS, ADMINISTRATION AND INFRASTRUCTURE PROGRAMME

D.1	PURPOSE, BACKGROUND AND KEY COMPONENTS	137
D.1.2	Programme Purpose.....	137
D.1.2	Background.....	137
D.1.3	Key Components	139
D.2	THREATS, ISSUES AND CONCERNS	140
D.3	GUIDING PRINCIPLES.....	144
D.4	OBJECTIVES, TARGETS AND ACTIVITIES	145

E: COLLABORATIVE MANAGEMENT PROGRAMME

E.1	PURPOSE, BACKGROUND AND KEY COMPONENTS	175
E.1.1	Programme Purpose.....	175
E.1.2	Background.....	175
E.1.3	Key Components	177
E.2	THREATS, ISSUES AND CONCERNS	178
E.3	GUIDING PRINCIPLES.....	181
E.4	OBJECTIVES, TARGETS AND ACTIVITIES	182

F: Plan Monitoring 203

ANNEX 1: GONAREZHOU PLANNING PARTICIPANTS.....	215
ANNEX 2: IDENTIFIED STAKEHOLDERS	218

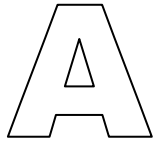
Tables

Table A.1: Document Structure	2
Table A.2: Mechanisms for stakeholder participation in the Gonarezhou planning process	3
Table A.3: Summary of exceptional resource values for Gonarezhou NP	7
Table A.4: Exceptional resource values for Gonarezhou NP	7
Table A.5: Main zone types and key development restrictions for Gonarezhou National Park	11
Table A.6: Sub-zones permitted in the Wildland Zones of Gonarezhou National Park	13
Table A.7: Zone and sub-zone summary	15
Table A.8: Summary of key components of management programmes	17
Table A.9: Purpose and guiding principles for Gonarezhou management programmes	18
Table A.10: Objectives summary	19
Table B.1: Key components of the Biodiversity Programme	24
Table B.2: Summary of threats, issues and concerns	25
Table B.3 : VEGETATION threats, issues and concerns facing the	26
Table B.4: WATER threats, issues and concerns facing the	27
Table B.5: WILDLIFE threats, issues and concerns facing the	28
Table B.6 : MANAGEMENT threats, issues and concerns facing the	29
Table B.7: OTHER threats, issues and concerns facing the	30
Table B.8: Conservation Targets, subsidiary targets and key attributes for GNP	32
Table B.9: Threat analysis for Gonarezhou Conservation Targets	33
Table B.10-B12: Three year Activity plan: Biodiversity & Natural Resources Management	45
Table B.13: Preliminary research priorities for Gonarezhou	51
Table B.14: Plan “deliverables” summary – Biodiversity & Natural Resources Management	57
Table B.15: Mitigation measures for the Biodiversity & Natural Resources Management	59
Table C.1: Current accommodation available in the Gonarezhou NP	64
Table C.2: Key components of the Tourism Programme	65
Table C.3: Summary of threats, issues and concerns	66
Table C.4 : INFRASTRUCTURE threats, issues and concerns facing the Tourism Programme	67
Table C.5 : ENVIRONMENTAL threats, issues and concerns facing the Tourism Programme	67
Table C.6: COMMUNITY threats, issues and concerns facing the Tourism Programme	68
Table C.7: ADMINISTRATIVE threats, issues and concerns facing the Tourism Programme	69
Table C.8: TOURISM PRODUCT threats, issues and concerns facing the Tourism Programme	69
Table C.9: Brief overview of proposed accommodation facilities	74
Table C.10: Permanent and semi-permanent structures permitted for tourism inside GNP	75
Table C.11: Campsites permitted for tourism inside Gonarezhou NP	78
Table C.12: Other structures permitted for tourism inside Gonarezhou NP	79
Table C.13: Permitted tourism activities for Gonarezhou	83
Table C.14: Summary of permitted developments and activities by zone.	85
Table C.15: Draft limits of acceptable use for Gonarezhou	88
Table C.16: Summary of accommodation developments by zone	90
Table C.17: Summary of developments by type	90
Table C.18-C21: Summary and Three Year Activity Plan – Sustainable Tourism Programme	122
Table C.22: Plan “deliverables” summary – Sustainable Tourism Programme	130
Table C.23: Mitigation measures for the Sustainable Tourism Programme	133
Table D.1: Key components of the Park Ops, Admin & Infrastructure Programme	139
Table D.2: Summary of threats, issues and concerns	140
Table D.3: STAFFING AND MORALE issues and concerns	140
Table D.4: MANAGEMENT issues and concerns	141
Table D.5: INFRASTRUCTURE AND EQUIPMENT issues and concerns	142
Table D.6: Current staff establishment compared to approved establishment	148
Table D.7: Additional staff that will be needed for rhino reintroduction	149
Table D.8: Airstrips in Gonarezhou	151
Table D.9: Current houses and house shortages in Gonarezhou	151
Table D.10: Additional housing needed for increase of staff associated with rhino reintroduction	152
Table D.11: Other buildings and infrastructure shortages in GNP	152

Table D.12: Status of the water supply infrastructure in GNP	153
Table D.13: Equipment inventory and shortages	155
Table D.14: Radio equipment analysis for GNP	155
Table D.16: Equipment needed for patrols	156
Table D.15: Monthly LE table with current and target efforts	158
Table D.16: Equipment and rations needed for each long-term patrol	159
Table D.17-D21: Summary and Three Year Activity Plan – Park Ops, Admin and Infrastructure	163
Table D.22: Plan “deliverables” summary – Park Ops, Admin and Infrastructure Programme	170
Table D.23: Mitigation measures for the Park Ops, Admin and Infrastructure Programme	172
Table E.1: Key components of the Collaborative Management Programme	177
Table E.2: Summary of threats, issues and concerns	178
Table E.3: COMMUNITY issues and concerns	178
Table E.4: TFCA issues and concerns	179
Table E.5: OTHER issues and concerns	180
Table E.6-E10: Summary and Three Year Activity Plan – Collaborative Management Programme ..	193
Table E.11: Plan “deliverables” summary – Collaborative Management Programme	199
Table E.12: Mitigation measures for the Collaborative Management Programme	201
Table F.1: Detailed METT for the Gonarezhou National Park including the next steps	204

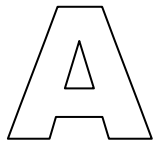
Figures

Figure A.1: Tiered planning structure for Gonarezhou National Park	1
Figure A.2: Conservation Gradient	1
Figure A.3: All access areas	1
Figure A.4: Proposed Main Zones for Gonarezhou National Park	12
Figure A.5: Sub-zones for the GNP	14
Figure A.6: Zone pattern for the GLTP	16
Figure B.1: Adaptive management framework	36
Figure C.1: Camps in the Gonarezhou National Park	77
Figure C.2: Campsites in the Gonarezhou National Park	80
Figure C.3: Entry and control points for Gonarezhou National Park	82
Figure C.4: Overview of tourism developments by zone	91
Figure C.5: Pombadzi Wilderness Zone	93
Figure C.6: Guluene Wilderness Zone	95
Figure C.7: Mabalauta Wildland Zone	97
Figure C.8: Runde South Wildland Zone	99
Figure C.9: Chilolo and Nyahongwe Special Conservation Sub-Zones	101
Figure C.10: Save-Runde Wildland Zone	103
Figure C.11: Junction Special Conservation Sub-Zone	105
Figure C.12: Detail of the Chipinda Pools area	106



PLAN FOUNDATIONS





PLAN FOUNDATIONS

A.1 INTRODUCTION

A.1.1 Planning Area

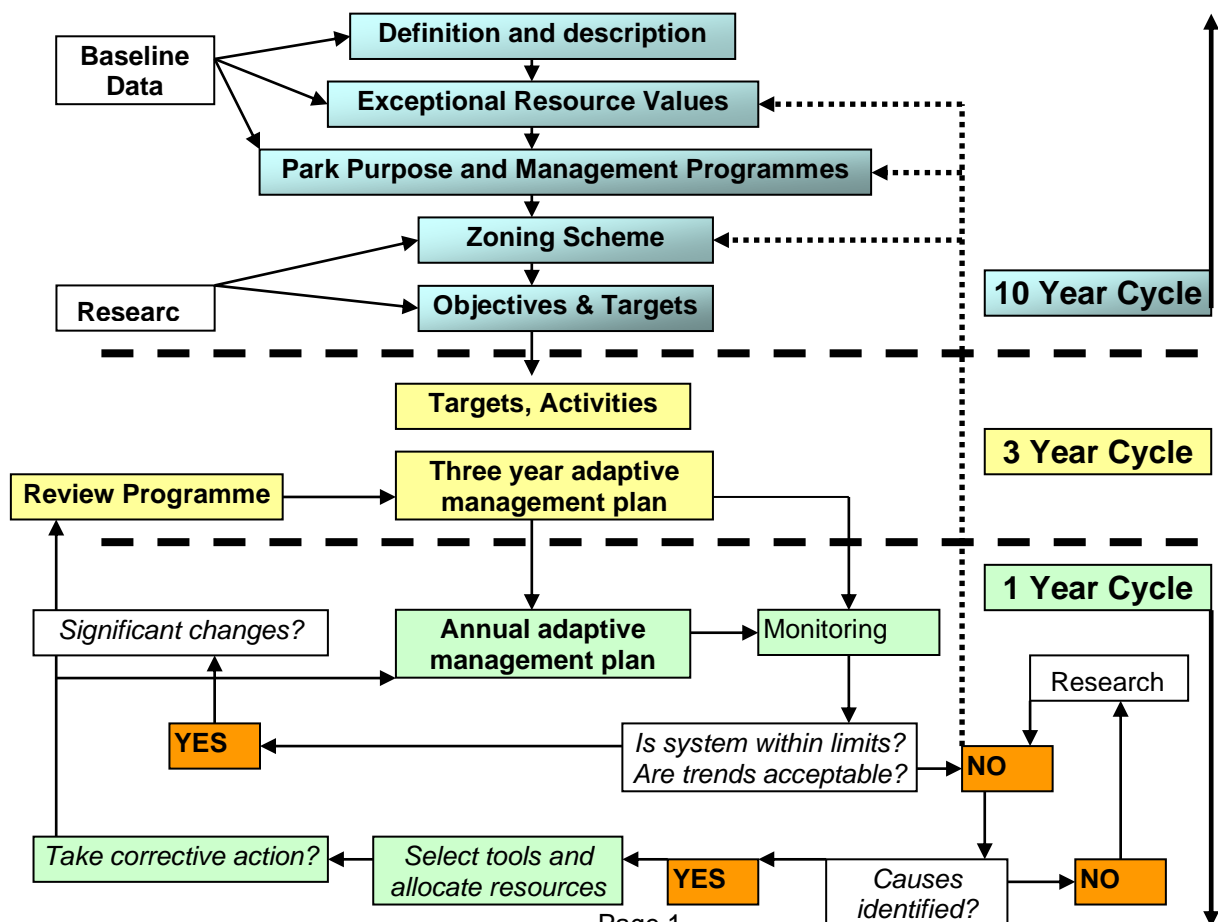
This plan is for the Gonarezhou National Park and the Malapati Safari Area. However, as in any planning process, cognisance needs to be taken of adjacent areas. The situation is complicated by the fact that a significant part of the Gonarezhou National Park forms the international boundary with Mozambique.

A.1.2 Function and Structure of the General Management Plan

The ZPWMA has adopted a three-tiered management plan. At the highest level the plan has a life-span of 10 years. This level defines the exceptional resources, the management programmes and their purposes, the objectives and the targets for each of these objectives.

In the mid-term the plan adopts a three year cycle and defines an adaptive action and activity plan, usually written as a table which links to the targets and objectives. The management plan stops at this level. However, area managers will be compiling annual works plans and budgets which will be based on the three year planning cycle. Feedback mechanisms will allow changes to be monitored and adaptive changes to the plan made. The planning cycles have some leeway as the three year cycles add up to less than 10 years (Figure A.1).

Figure A.1: Tiered planning structure for Gonarezhou National Park



The document is split into three parts which are briefly described below (Table A.1). The set of documents is designed to be stored and accessed as a complete package.

Table A.1: Document Structure	
Document	Brief Description
The Management Plan	<p>This document contains the management plan narrative and the initial three year action and activity plans for Gonarezhou National Park. The plan consists of four programmes, each of which is designed to be “stand-alone”. However, it is recommended that the document is read as a cohesive work.</p> <p>In addition to this document the three year action/activity plan plus some essential other maps and text will be presented on a series of A0 sheets. These should be displayed in the relevant offices to ensure a wide circulation of the plan.</p> <p>The Management Plan document is designed to be as brief as possible to ensure that readers are not put off by the sheer size of the document. However, the supporting documents – the Resource Inventory and its Appendices provide the detail behind the direction and objectives outlined in the Management Plan.</p>
Resource Inventory	The Resource Inventory provides a synthesis of the background information available for the Gonarezhou National Park. It contains far more detail on a number of topics than the Management Plan document and is backed up with tables and maps.
Appendices	The Appendices provided detailed backup for the Resource Inventory document. Here one will find species and equipment lists plus other relevant information.

Each of the management programme chapters is designed to read as a stand alone document, as far as possible. In order to achieve this the three-year activity plans and monitoring plans are included in the relevant chapters rather than being included at the back of the document.

A.1.3 Previous Planning

The first GMP for GNP was completed in 1974 and, of the infrastructure development required, very little was completed. Facilities were provided at sixteen out of 31 picnic sites; one of two camping sites; one of three entrance gates and some staff accommodation was constructed. The plan proposed the construction of 515 km of extra game viewing roads to supplement the existing network of 240 km. This would have provided for maximum of 156 vehicles at an overall density of one vehicle per 5 km of road. The new roads were based on existing tracks built by Tsetse eradication teams. Those tracks that were upgraded were to be stabilised and reclaimed. Little, if any, of this work was undertaken because of inadequate funding.

A second document was prepared in draft form in 1986 but was not completed or implemented. A further plan was developed in 1993 with inputs from external consultants as part of a donor project. Although recommended for approval to the 60th meeting of the Parks Board in 1994 it was not ratified. This was followed by an internally written plan document in 1994 which was again submitted to the Board for approval.

In 1997 the “1993 plan” was revised which resulted in the formally approved management plan for Gonarezhou dated 1998 to 2002. As with the previous plans implementation was limited. This management plan is a review of the 1998-2002 plan.

A.1.4 Current Planning

The ZPWMA has adopted a participatory planning approach which is a modified version of the logical framework approach. The logical framework approach was initially developed by donor agencies to ensure that the project goals, methods and outcomes were clearly defined and measurable. The method essentially defines a logical connection between identified issues and concerns and the activities, which are linked by objectives and targets.

The planning framework is also designed to allow stakeholders an opportunity to be involved in the design of a realistic and appropriate management plan. Stakeholders are encouraged to take ownership of the planning process, and contribute ideas and information to the plan.

Participation in the process is multi-layered, with the objective of providing an opportunity for as many stakeholders as possible to contribute to the planning. There are four principal mechanisms for this (Table A.2).

Table A.2: Mechanisms for stakeholder participation in the Gonarezhou planning process	
Core Planning Team	The core planning team was defined very early in the process and consisted of nine people from ZPWMA HQ and the field.
Stakeholder Workshops	Stakeholders, including representatives from researchers, conservationists, tourism industry, communities adjacent to the parks, senior ZPWMA staff/ managers, and members of the core planning team, were invited to these. The workshops provided the broad outlines needed for the planning process and allowed a public platform for stakeholders to have an input into the management plan.
Working Groups	Four programmes were identified for the planning process: 1. Biodiversity and Natural Resource Management, 2. Sustainable Tourism, 3. Park Operations, Administration and Infrastructure and 4. Collaborative Management. Working groups provided the detail for the plan in each of the programmes. Input from working group members is also taken on individual or during smaller informal meetings.
Individual Consultation	Individual consultations are held with stakeholders throughout the process, as not all stakeholders can attend the meetings.
Document review	The penultimate draft was sent out for review to 59 selected people and comments received were incorporated into the final draft.

The development of the current plan for Gonarezhou has been spread over three years. The process began in 2007 with a series of technical group meetings followed by stakeholder consultations. This resulted in the first draft which was sent out for review. Following the review, and developments regarding the non-functioning leases for lodge sites in the park, it was concluded that the tourism programme should be re-assessed separately. This process started in 2009 and was concluded in mid 2010. The final draft of the management plan, which included the revised tourism plan was finalised in early 2011.

A.1.5 Background Information Summary

This section is a brief overview of the park and its utilisation. More details are found in Part 2 of the plan (Background) and in the individual programme introductions and threats, issues and concerns sections.

Resource Inventory

Relief and Drainage

In terms of elevation, the park varies between 165 m. asl (Save-Runde junction; Zimbabwe's lowest point) and 578 m. asl (Makamandima hill in the Chivonja range). The terrain adjacent to the Runde river is rugged and varied but becomes flatter and higher (520 m.asl at the highest points) on the central cretaceous sandstones. The Ntambambovu red hills in the south fall away to the Mwenezi river. The Nyamutongwe Plateau is a significant isolated hill feature in the centre of the park.

There are three major rivers draining through the park – Save, Runde and Mwenezi but the flow patterns in all three have been disturbed by upstream activities, especially dams and irrigation. Most of the internal drainage of the park feeds the Runde and, to a lesser extent the Mwenezi. The central parts of the park are the headwaters of the Guluene/Chefu river which becomes a significant feeder of the Limpopo river in Mozambique.

The pan system in the Gonarezhou is quite extensive. Apart from the two huge pans near the Save/Runde junction (Tambahata and Machiniwa) there are a number of larger pans which hold water well into the dry season. In addition, especially on the clay based mopane soils, there is an extensive network of small pans. Two artificial weirs (Benji and Massassanya) hold water through most years.

Geology and Soils

There are three main geological formations in Gonarezhou which cover nearly 95% of the park. The largest is the Malvernian cretaceous sandstones which cover most of the park between the Runde and Mwenezi rivers. This is an unusual formation for Zimbabwe. Jurassic basalt is found predominantly along the north western boundary with a small exposure in the Mwenezi Valley. A variety of granophyres and granites of the late Jurassic are concentrated in the Pombadzi area. Small areas of alluvial and rhyolite constitute the remainder of the park.

The soils are moderately deep to shallow self-churning black clays that are highly calcareous. Granophyres and granitic strata, weather to produce moderately shallow to shallow, dark reddish grained, light to medium textured soils. On level sites the sandstone weather to form deep regosols with little or no prolific differentiation.

Climate

The mean annual rainfall for GNP is 466 mm but is highly variable. Two severe droughts have occurred since 1961 and the 1991/1992 drought led to the death of large numbers of wildlife. Average temperatures at Chipinda Pools range from 27 °C in June to 36 °C in January. The park experiences a short dry winter season in June and July with temperatures below 30 °C and a hot wet summer season from November to April when temperatures exceed 40 °C. The remaining months are hot and dry periods which precede and follow summer rains.

Vegetation

The vegetation of Gonarezhou is typical of the semi arid *Colophospermum mopane* zone and is predominantly dry deciduous savanna woodland of varying types. Vegetation communities have been mapped on the basis of aerial photography and described in detail. However, there have been significant changes to the vegetation in the Pombadzi area where the previously extensive *Brachystegia* stands have been replaced by open grasslands and thickets. A vegetation survey is

currently underway and is expected to be completed in the early part of 2011. Broadly speaking the two main vegetation types in the park are mopane and sandveld woodlands/thickets which cover about 80% of the park. They are briefly described below.

Mopane woodland and scrubland. Mopane woodland covers approximately 40% of the park, usually on heavier textured soils derived from all geological types in valley floors. Community composition ranges from pure mopane woodland to a variety of mixed woodland types. Mopane scrubland is an edaphic community of multi-stemmed *C. mopane* apparently caused by restricted drainage and root pruning on self churning vertisols. In some sites, mopane scrubland may be a secondary community caused by fire and large herbivores. The community commonly occurs in the major river valleys.

Dry deciduous sandveld woodland and scrub. A species rich community on deeper sandy loam soils of the watershed between Mwenezi and Runde rivers. This community is regarded as a secondary type caused by tree thinning to eradicate Tsetse fly in the 1960's, and subsequently maintained by high fire frequency and elephant densities.

Wildlife

Fifty fish species have been recorded in Gonarezhou, primarily from the Save and Runde Rivers. Noteworthy species include lungfish and killifish that occur in seasonal pans in the Guluene/Chefu catchment, and the Zambezi Shark and Small-tooth Sawfish, recorded at the Save/Runde confluence.

The herpetofauna of Gonarezhou is unusual in Zimbabwe, as it includes many species which typically occur on the East African coastal plain. The park herpetofauna includes around 6% of the Southern African endemics and 14 species of special conservation interest.

Over 400 species of birds have been recorded from the park and a further 92 species regarded as being 'likely to occur'. There are 11 species that are rare or of limited distribution and are of conservation interest.

The mammal fauna is dominated by elephant which make up approximately 80% of the total biomass, followed by buffalo, giraffe and impala which contribute another 10%. The most recent aerial survey estimates the elephant population as being between 7,000 and 11,000 individuals with a growth rate of between 5 and 6%. Unusual and interesting species include nyala and suni. Fifteen mammal species are classified as rare or as being of limited distribution in Zimbabwe.

Management and Use

Management

Although gazetted as a single park the Gonarezhou is effectively run as two separate units. The Save Runde Sector is managed from Chipinda Pools with a sub station located on the Save river. A third, but currently unutilised sub-station is located south of the Chilojo cliffs at Nyavasikana. The Mabalauta Sector is managed from Mabalauta with a sub-station at Malapati. The Malapati sub-station is also responsible for the management of the Malapati Safari Area.

There are approximately 1 400 kilometers of road inside and along the boundaries of Gonarezhou. Roads are used for both tourism and management purposes. The road network in Gonarezhou has largely been developed along utilitarian lines rather than with tourism in mind. Many of the roads in use today follow fence lines which demarcated tsetse control areas. There are seven airstrips in the Park if we include Malapati. The Chilo airstrip is an important all weather airstrip and is located just outside the park in Mahenye ward.

The status of river crossings, especially on the Runde effectively divides Gonarezhou into two parts during the rains. If the Runde is down in full flood the only access to Mabalauta is via the main road between Harare and South Africa.

The two main management centres – Chipinda Pools and Mabalauta – have well developed staff housing and office facilities. There has been significant investment in staff housing at the Save-Runde

base but the offices here are in a poor state. Existing staff structures are old and in need of urgent renovations, and there is a need for additional accommodation, to cater both for the current staff establishment, as well as to take into consideration future increases in staff numbers.

There are currently 110 staff assigned to Gonarezhou and these numbers are roughly split between Chipinda Pools and Mabalauta. (Not sure if these numbers include staff posted to Save-Runde and Malapati on a rotational basis?). A further 90 staff have been approved for the park but it is unlikely that these staff could be housed on station with a significant upgrade to the staff housing.

Enforcement activities are based around extended patrols which are usually seven to 14 days. In addition, day patrols are carried out as well as responses to reported illegal activities. Other activities such as removal of cattle from the park, establishing informer networks, manning observation posts *etc* are also part of the enforcement activities.

Gonarezhou forms part of the Great Limpopo Transfrontier Park and the Great Limpopo Transfrontier Conservation Area. This is a regional transboundary conservation initiative covering almost 100,000 km². Signed in 2002 by the heads of state of Zimbabwe, Mozambique and South Africa, the treaty will play a significant role in the future development and management of the park.

Utilisation

Gonarezhou has traditionally catered for local visitors seeking a wilderness experience, with amenities focused on providing camping facilities and basic self-catering accommodation. All tourism facilities have been provided by ZPWMA to date. Current tourism is focussed on the Runde and Mwenezi rivers with exclusive campsites located along both of these rivers. There are three public campsites with shelters and ablutions areas, two being located in the HQ areas of Chipinda Pools and Mabalauta with the third at the exit of the Runde Gorge (Chinguli).

Nine self-catering lodges have been built at Swimuwini, a few kilometres from the Mabalauta HQ station. These have recently been connected to the ZESA grid. Two more lodges are under construction at Chipinda Pools. In total there are 383 "beds" available in Gonarezhou National Park, but many of the exclusive campsites are only used sporadically.

Gonarezhou National Park is almost completely surrounded by hunting concessions on the Zimbabwean side and by "game farms" on the Mozambican side. The Malapati Safari Area is adjacent to Mabalauta in the south. Generally speaking all hunting is done along the park boundary with the possibility of a big "Gonarezhou Tusker" being the main drawcard. Buffalo and leopard are also important species in the south.

A.2 EXCEPTIONAL RESOURCES, VALUES AND PURPOSE

A.2.1 Exceptional Resources

The exceptional resource values (ERVs) consists of the natural, scenic, social and cultural characteristics and attributes of Gonarezhou which are considered critical for the continued existence of the park (Table A.3). The exceptional resource values were used to help identify the park purpose, the management issues and opportunities.

Table A.3. Summary of exceptional resource values for Gonarezhou NP			
Category	Exceptional Resource	Category	Exceptional Resource
Natural	<ul style="list-style-type: none"> Wilderness character Elephants River system 	Scenic	<ul style="list-style-type: none"> Relief Pans Baobab trees Buffalo Bend Gorges and falls
Social	<ul style="list-style-type: none"> TFCA Tourism 	Cultural	<ul style="list-style-type: none"> Shangaan heritage

Table A.4. Exceptional resource values for Gonarezhou NP		
Exceptional Resource Value		Brief Description
Natural	Wilderness	An elusive concept but central to Gonarezhou as a protected area. Has to do with elements of size, remoteness, degree of use, scenic beauty etc
	Elephants	The park has an expanding population of elephants currently estimated at around 9,000 animals. The bull estimate is around 750 animals and some of these are known to possess exceptionally large tusks.
	Rivers	There are three main rivers found in the park – Save, Runde and Mwenezi. All have been affected by upstream activities but they still provide the dry season water for the park. The Runde is unique in that a significant portion of its length is completely protected by the park.
Scenic	Relief	The park contains some significant relief features, the most famous of which are the Chilojo Cliffs. Other impressive areas include the Ntambambomvu Red Hills, the Nyamtongwe plateau and the Chivonja Range.
	Pans	Tambahata, Machiniwa
	Baobab trees	Large and clustered
	Buffalo Bend	This part of the Mwenezi river has a remarkable riverine forest, most of it outside the park in the Malapati safari area.
	Gorges and falls	Where the large rivers - Runde, Save and Mwenezi - cut through the rocks they form impressive gorges and falls.

Table A.4. Exceptional resource values for Gonarezhou NP		
Exceptional Resource Value		Brief Description
Cultural	Shangaan heritage	Prior to 1975, parts of the park were occupied by the Hlengwe and Shangaan people who cultivated small grains such as sorghum due to the limited rains. They were also hunters and gatherers. The sites of cultural value include the archaeological, rainmaking, hunting and fishing sites.
	TFCA	The Gonarezhou is part of the Great Limpopo Transfrontier Conservation Area which focuses conservation efforts across international boundaries
Social	Tourism	Tourism has the potential to become a significant economic driving force within the region which will also confer benefits to local communities. In addition, the park is the main source of animals sought by safari hunters in the adjoining hunting areas.

A.2.2 Values

These values govern the management of Gonarezhou National Park:

- Respect the complexity, as well as the richness and diversity of the socio-ecological systems making up the national park and the wider landscape and context.
- Respect the interdependency of the formative elements, the associated biotic and landscape diversity; and the aesthetic, cultural, educational and spiritual attributes and leverage all these for creative and useful learning.
- Strive to maintain natural processes in ecosystems, along with the uniqueness, authenticity and worth of cultural heritage, so that these systems and their elements can be resilient and hence persist.
- Manage with humility the systems under our custodianship, recognising and influencing the wider socio-ecological context in which we are embedded.
- Strive to maintain a healthy flow of ecosystem and cultural goods and services.
- Specifically preserving cultural artefacts, making these available through access to national parks, thereby promoting enjoyment, appreciation and other benefits for people.
- When necessary, intervene in a responsible and sustainable manner, complementing natural processes as far as possible, using only the level of interference needed to achieve our mandate.

A.2.3 Park Purpose

The park purpose statement provides the present-day rationale as to why the Gonarezhou is considered important enough to merit national park status. Within the context of designing the general management plan, the reaffirmation or refinement of the park purpose statement provided a solid foundation for focusing the entire planning effort, as well as for the ongoing management of the Gonarezhou National Park.

Gonarezhou Park Purpose

The Gonarezhou National Park will protect and conserve the wilderness, biodiversity, ecological processes, wild and scenic landscapes within the park boundary. The park's exceptional resource values will be sustained for present and future generations, while supporting its role in the Great Limpopo Transfrontier Conservation Area and regional economic development. The culture and history of the Shangaan people will be recognised as one of the key components of the park.

A.3 MANAGEMENT ZONES

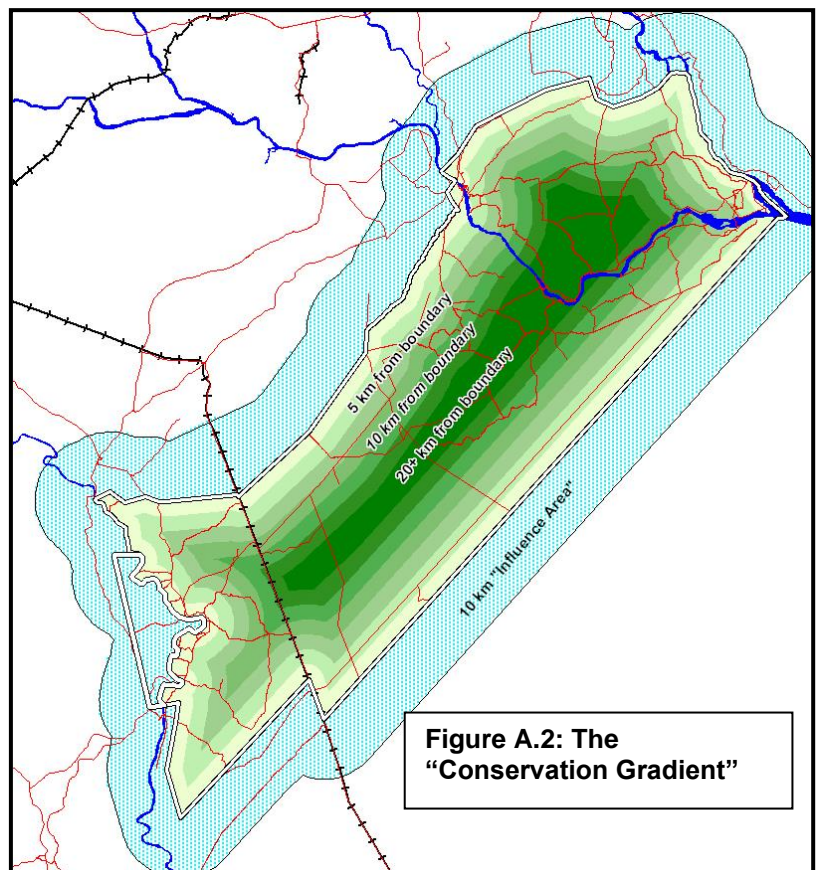
A.3.1 Background

In keeping with linkages for the GLTP cognisance will be taken of the Conservation Development Zoning Framework which is used in the rest of the Transfrontier park. The key principles which lie behind the CDF planning process are

- Environmental sustainability
- Financial sustainability
- Sense of place
- Equitable access
- Nodal facility provision
- Participation and partnership

These principles were considered during the zone planning for the Gonarezhou National Park.

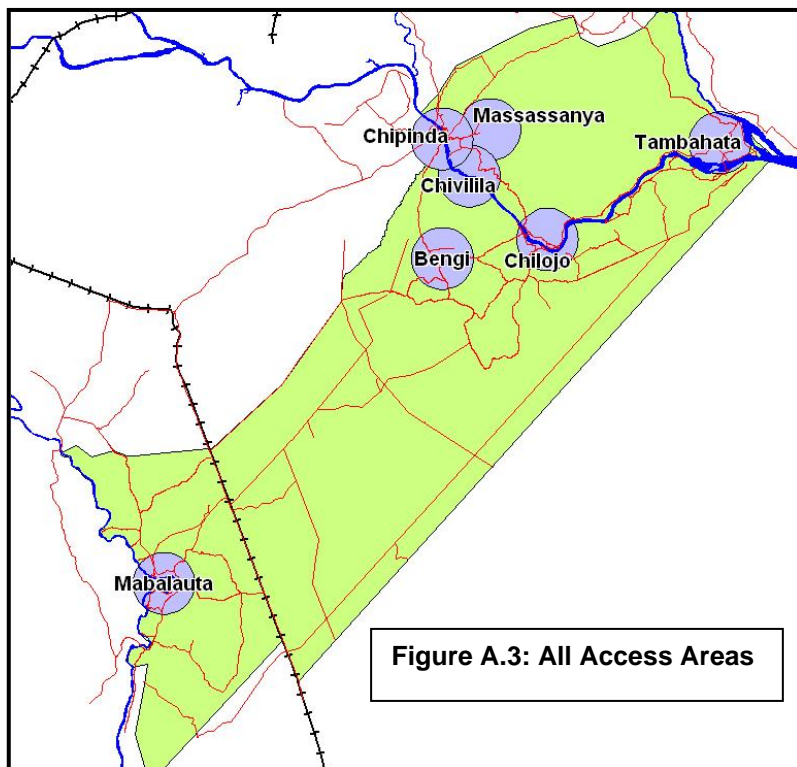
A “conservation gradient” based on distance from the boundary was established for planning purposes (Figure A.2). This distance gradient was used to develop the zone boundaries and to influence the placing of tourism and management infrastructure.



In addition, the previous zone plan was also taken into account. Details of this zone scheme can be found in the 1998 management plan.

There are areas of the park where it was considered important for all visitors to have access. These areas would need to be zoned accordingly and included the Chilojo Cliffs, the Save-Runde Junction, Chipinda Pools and the Chivilila Falls, Benji Weir and Mabalauta (Figure A.3).

Essentially the zone plan defines two main zone types - Wilderness and Wildland - aimed at conserving the wilderness aspects of Gonarezhou National Park. The Wilderness Zone has limited infrastructure and development while the Wildland Zone can have tourism accommodation infrastructure. In addition, parts of the Wildland Zone are zoned as sub-zones where appropriate. The details of the main and sub-zones are found in the following pages.



A.3.2 Main Zones

There will be two main types of zones in the Gonarezhou National Park, both of which reflect the wilderness character of the park. In keeping with the expected wilderness marketing drive for Gonarezhou, the zone names remain as “Wilderness” and “Wildland” which equate to Primitive and Low Intensity Leisure in the CDF framework (Table A.5). The Remote category in the CDF framework specifies no motorised access by tourists and this is clearly not possible in the Gonarezhou, unless the Wilderness Zones become smaller and more fragmented. As a general rule zone boundaries should follow features such as roads, rivers, hills *etc.*

The purpose of the **Wilderness Zones** is to provide a “wilderness experience”. No permanent tourism facilities will be permitted and accommodation will be limited to temporary camps with a maximum stay of ten days at any one site.

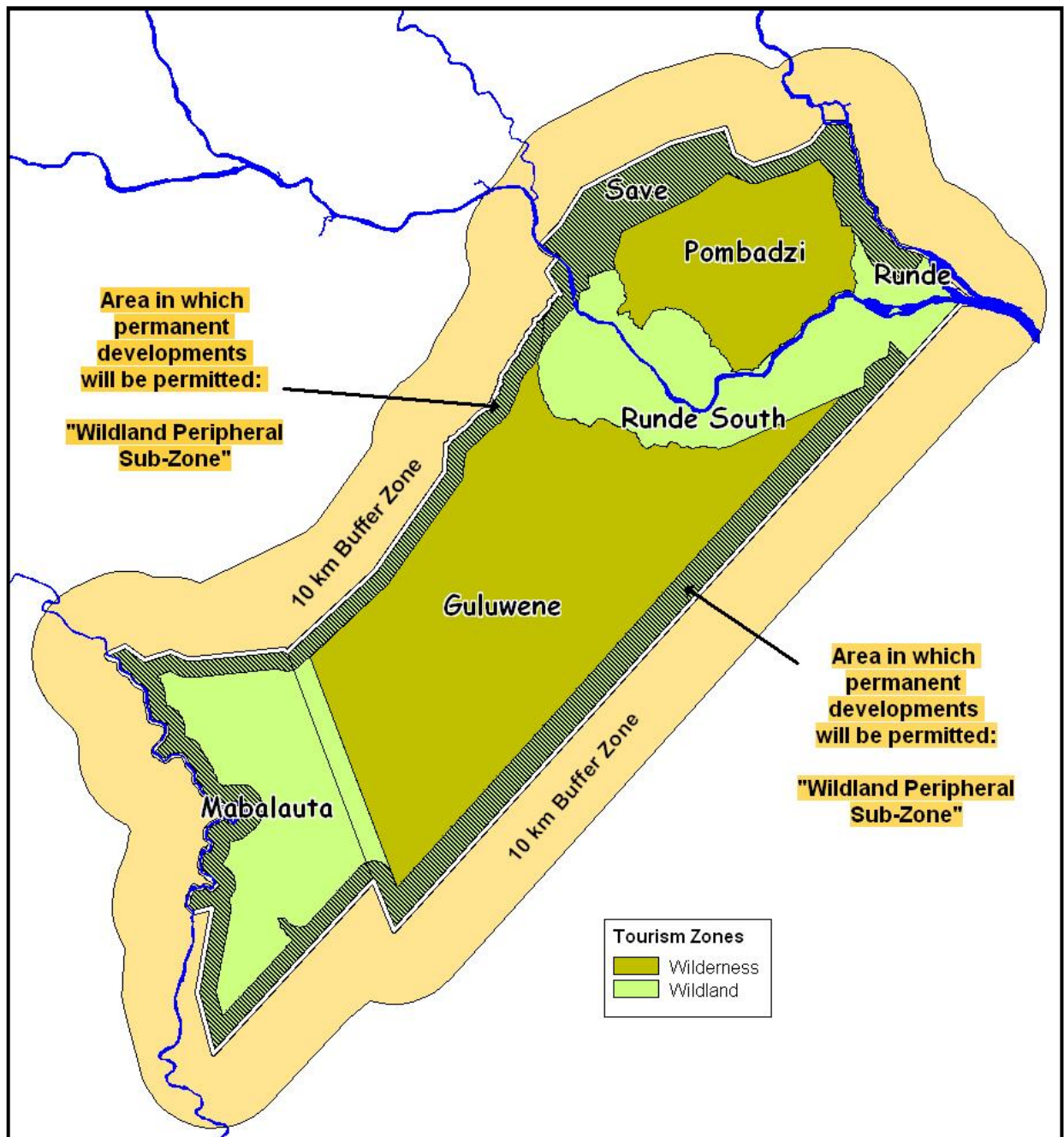
The purpose of the **Wildland Zones** is to provide areas that can be accessed and enjoyed by relatively large numbers of people. Semi-permanent and permanent structures will be permitted but the permanent structures will have to be within the defined Wildland Peripheral Sub-Zone, approximately 2.5 kilometres from the park boundary.

Table A.5: Main zone types and key development restrictions for Gonarezhou National Park

Zone Type	Permitted Developments/Infrastructure
Wilderness <i>CDF = Primitive</i>	<ul style="list-style-type: none"> • Camping only permitted at Wilderness Bushcamps and Fly Camp sites • Tracks permitted for motorised access but permits needed by members of the public for access • Management infrastructure permitted but attempts made to minimise use of concrete
Wildland <i>CDF = Low Intensity Leisure</i>	<ul style="list-style-type: none"> • Only semi-permanent facilities permitted in the core areas of the zone. Where possible concrete and cement use will be avoided. • Permanent facilities permitted in the defined development zone which is approximately 2.5 kilometres from the boundary (see zone map; Figure 3) • Bushcamps, picnic sites and viewpoints with concrete and shelters permitted. The style and amount of concrete needs to be specified for those sites inside the core areas of the wildland zones

In addition, an important part of the “Gonarezhou complex” is the adjacent buffer area. In Zimbabwe this is mainly comprised of hunting areas in which trophy hunting by visiting foreign clients is permitted. In Mozambique the situation is less clear although it is known that a number of leases for “game farms” have been issued.

Figure A.4: Proposed Main Zones for Gonarezhou National Park



Notes:

- Only Semi-permanent and Annual Camps will be permitted in the Wildland Zones. However, Permanent facilities will be permitted in the Wildland Peripheral Sub-Zone which is approximately 2.5 km from the park boundary. In exceptional cases concrete structures will be permitted in the Wildland Zones outside the peripheral Sub-zone. Manyanda platform is one such structure as it is already existing
- No concrete or cement structures will be permitted in the Wilderness Zones, unless they have been specifically defined. This would include toilets and cooking sites at campsites, essential river crossing or drainage structures, beacons etc.

A.3.3 Sub-Zones

Sub-Zones are a zoning sub-division permitted only in the Wildland Zones. These sub-zones will include development zones, special conservation areas, special walking areas and a peripheral zone adjacent to the boundary in which more permanent structures will be permitted.

The Parks and Wildlife Act specifies that the Authority, with concurrence of the Minister, shall have the power to declare development zones in which visitor and other facilities can be constructed. This section (Section 23) has been used in the past to issue concession sites within the Parks estate. Although, probably not the envisaged use of this legislation¹, it is likely that it will be used to issue sites for tourism facilities in the Wildland Peripheral Sub-Zone adjacent to the Park boundary.

Table A.6 provides more detail on the proposed sub-zones.

Table A.6: Sub-zones permitted in the Wildland Zones of Gonarezhou National Park		
Sub Zone Type	Location	Description
Development	<ul style="list-style-type: none"> • Chipinda Pools • Mabalauta • Save-Runde Base 	Mainly for management infrastructure. Includes offices, housing, workshops, Tourist facilities, campsites, Day visitor site etc.
Special Conservation	<ul style="list-style-type: none"> • Chilojo • Junction 	These are areas of the park which contain significant attractions and are likely to come under considerable pressure from tourists. Special measures may need to be put in place to ensure a balance between access and conservation.
Walking	<ul style="list-style-type: none"> • Chivilila • Nyahongwe 	<p>These are areas in which walking will be permitted. The Chivilila sub-zone will be for unescorted walking while the Nyahongwe sub-zone will be for guided walks.</p> <p>During the implementation of this plan more walking areas will be considered.</p>
Wildland Peripheral Sub-Zone – approx 2.5 km from boundary	<ul style="list-style-type: none"> • Park Boundary 	<p>Permanent structures such as lodges and permanent tented camps will be permitted in this area at appropriate locations. Sites will be investigated thoroughly prior to action being taken. The location of Wilderness Zones needs to be considered as it will affect access. This Peripheral Zone does not apply in the Save-Runde Junction area.</p> <p>The Wildland Peripheral Sub-Zone also includes the land currently occupied by the Chitsa people.</p>

¹ This legislation was probably intended to declare development zones in areas such as Chipinda Pools rather than for individual sites at arbitrary locations within the park.

Figure A.5: Sub-zones for the GNP

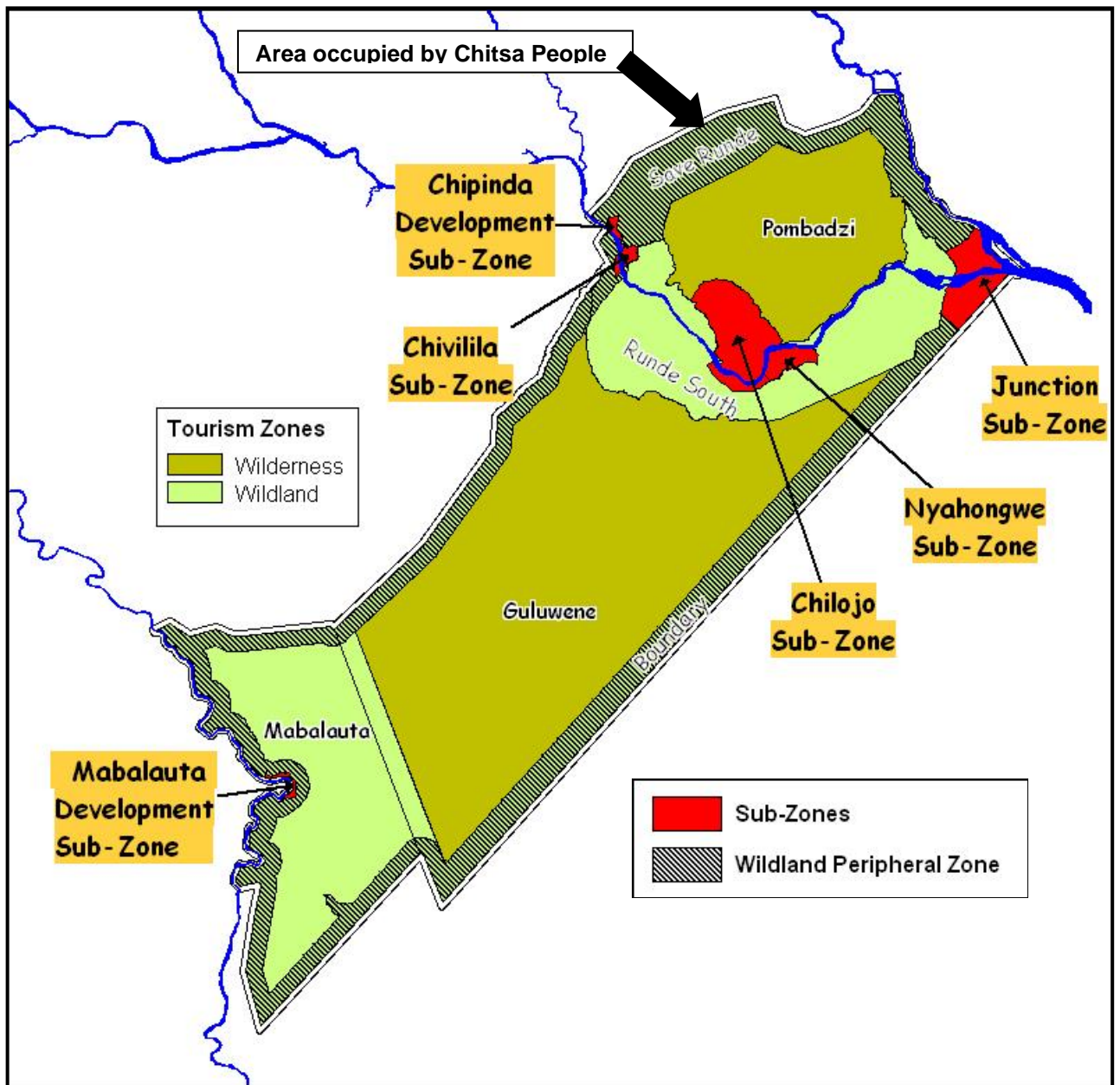
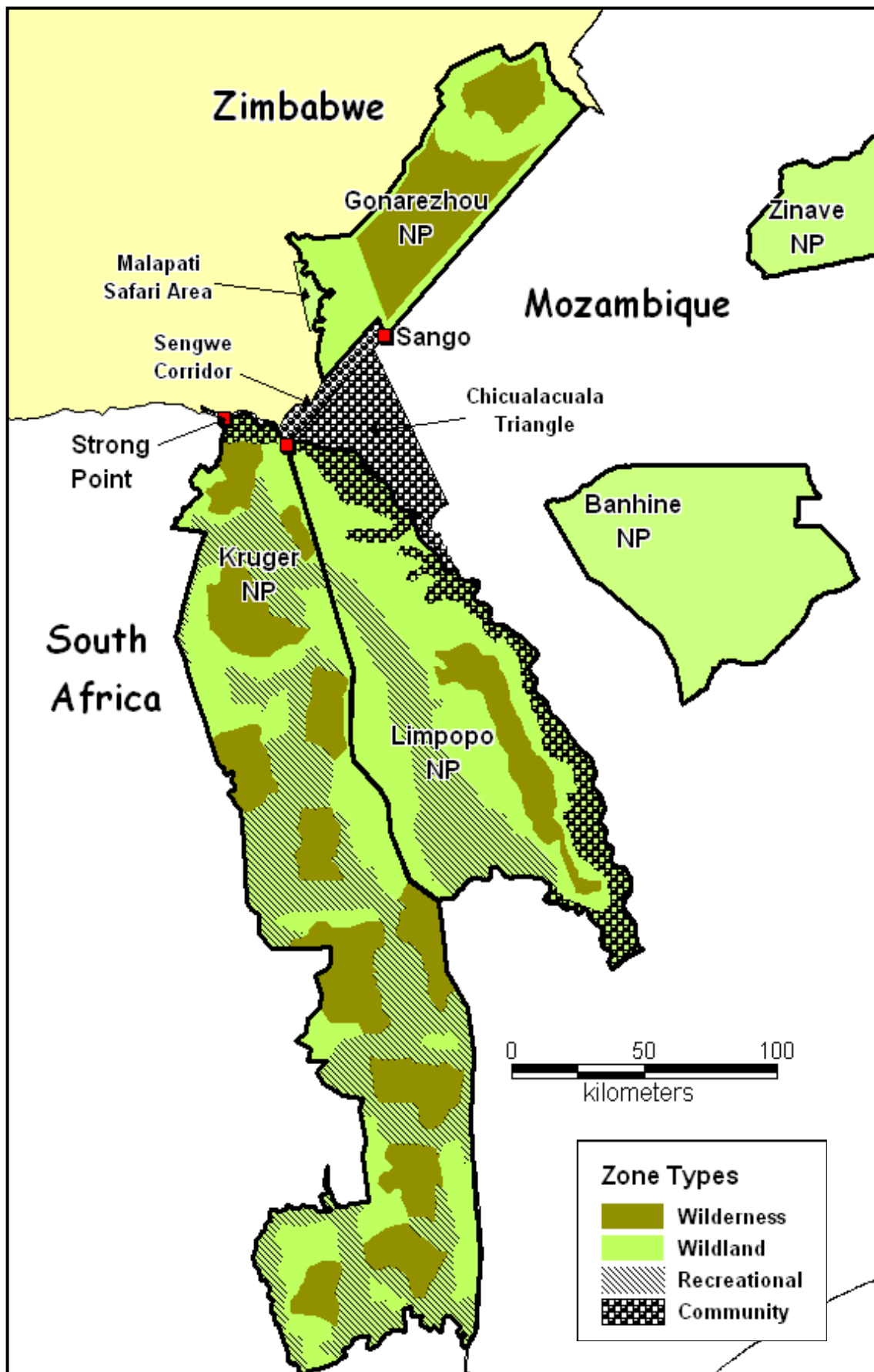


Table A.7: Zone and sub-zone summary			
Type	Name	Features	Sub-Zones
Wilderness	Guluene	Area: 1,844 km ² . Central portion of the park containing most of the more significant pans. <i>Notes:</i> Compromised by Nyavasikana parks camp	None
	Pombadzi	Area: 575km ² . Central part of the area north of the Runde River. Southern and western boundary formed by roads.	
Wildland	Mabalauta	Area: 895 km ² . Mwenezi River to the railway line	Mabalauta Development
	Border	Area: 609 km ² . Buffer area for the Guluene Wilderness. Approx 2.5 km from boundary	2.5 km (approx) Wildland Peripheral Sub-Zone
	Runde South	Area: 495 km ² . Southern bank of the Runde River. Contains all bush camps, Benji Weir and the Chilojo Cliffs	Nyahongwe Special Walking Chivilila Chilojo
	Save-Runde	Area: 596 km ² . Area to the north of the Runde excluding the Pombadzi Wilderness.	Chipinda Development Save-Runde Base Development Chilojo Chivilila

Zones in relation to the GLTP

The zone plan for Gonarezhou must also be viewed in the context of the Greater Limpopo Transfrontier Park. Although there are differences in the names of the zone types in each country it is possible to assign the zones into the categories of Wilderness, Wildland, Recreational and Community throughout the park. The resultant map is shown in Figure A.6 on the next page. Gonarezhou is unique in not having a Recreational Zone and this is to ensure that the park can be effectively marketed as a wilderness park.

Figure A.6: Zone pattern for the GLTP



A.4 MANAGEMENT PROGRAMMES

A.4.1 Background

Current planning procedure involves the use of a log-frame type of analysis which links problems, objectives, targets and activities more directly. This format ensures that all problems and issues are addressed by the natural resources management plan on the one side and that all activities can be costed on the other hand. The text of this section takes this planning procedure into account.

Objectives are statement of desired future intent, and in this planning exercise, they are for a 10 year period. Targets are the linkage between the objectives and the actions and activities. They provide a more focused goal for sub-components that when, taken together allow the objectives and hence the purpose of the management programme to be achieved.

Using the log-frame approach for the management planning the management activities are the final outcomes of the planning process. These are the actual tasks that will be carried out and they are the core focus for field management of the area.

Each of the programmes contain a summary table which shows the objectives, strategies, activities, results (and monitoring and evaluation parameters) and the responsibility for carrying out the activities.

A.4.2 Management Programme Definition And Objectives Summary

Four management programmes were defined for Gonarezhou National Park. These and their key components are listed below (Table A.8).

Table A.8: Summary of key components of management programmes		
Programme	Key components	
Biodiversity Conservation & Natural Resource Management	<ul style="list-style-type: none"> • Monitoring • Research • Resource Management • Wildlife Management • Anti-poaching Monitoring and Guidance 	
Sustainable Tourism	<ul style="list-style-type: none"> • Development and management of tourism • Marketing • Trans- Frontier Aspects • Education/ Interpretation • ZPWMA Tourism facilities 	
Park Operations, Administration and Infrastructure	<ul style="list-style-type: none"> • Staffing • Morale • Access • Buildings • Communications 	<ul style="list-style-type: none"> • Finances • Transport • Boundaries • Anti-poaching • Fire
Collaborative Management	<ul style="list-style-type: none"> • Communities • Education and awareness • Boundaries • Safari Hunting • Corridors and Connectivity • Transfrontier issues • Partner agencies 	

A purpose was developed for each programme as was a description of the threats, issues and concerns facing it. In addition guiding principles were defined for each programme. These were broad statements about the direction of the programme. The purpose and guiding principles for each programme are shown below (Table A.9).

Table A.9: Purpose and guiding principles for Gonarezhou management programmes		
Programme	Purpose	Guiding Principles
Biodiversity Conservation & Natural Resource Management	Conserve the biodiversity, ecological processes and wilderness qualities of Gonarezhou National Park through strategic adaptive management.	<ol style="list-style-type: none"> 1. Change is an integral part of the environment 2. Intervention will be a last resort 3. Conservation agendas will be pursued outside the park 4. Management decisions will be based on scientific information
Sustainable Tourism	GNP tourism developed and managed in order to provide an outstanding wilderness experience and education for both local and international visitors, and to generate optimal economic benefits to all stakeholders and partners, whilst maintaining the park's vision and exceptional resource values.	<ol style="list-style-type: none"> 1. A comprehensive view will be taken during planning 2. Utilisation of the park and its resources will benefit surrounding communities 3. The wilderness character of the park will be the driving force behind tourism 4. Permanent developments must be peripheral 5. Tourism will be diversified and will concentrate on a low volume-high quality integrated product 6. Mabalauta will be the focus for GLTP linkage 7. Gonarezhou should be a learning and enriching experience 8. Tourism development will be phased 9. Tourism development will be adaptive
Park Operations, Administration & Infrastructure	Transparent, accountable and efficient administration and management of human, financial and physical resources to support the Gonarezhou National Park's purpose	<ol style="list-style-type: none"> 1. Trained and motivated staff are the most important asset for park management 2. Resources are finite 3. Park infrastructure and activities designed to cause minimal environmental impact 4. Good access and communications are vital for effective management 5. Quality and transparency
Collaborative Management	Supportive linkages with GNP stakeholders and partners at local, regional and international levels established and maintained to safeguard the integrity of the park resource values	<ol style="list-style-type: none"> 1. Open communications with stakeholders 2. Community involvement and participation will be encouraged 3. Cultural sites will be recognised and protected 4. Awareness of park and environmental resources will be promoted 5. Citizen and educational access will be facilitated 6. Transfrontier context will be a motivating force

The objectives for each of the management programmes are listed below (Table A.10) and provide an overview of the structure and direction of the programmes. The following sections provide the detail for these programmes and are designed to be as stand alone sections.

Table A.10: Objectives summary	
Programme	Objectives
Biodiversity Conservation & Natural Resource Management	<ol style="list-style-type: none"> 1. Biodiversity and ecological processes of Gonarezhou and adjacent areas conserved through an adaptive management approach 2. Human impacts on the Gonarezhou ecosystem managed and mitigated 3. Monitoring and research addresses management needs effectively
Sustainable Tourism	<ol style="list-style-type: none"> 1. Tourism facilities and activities developed 2. Gonarezhou wilderness brand promoted 3. Educational and interpretive facilities, activities and materials developed 4. Management and administration of tourism improved
Park Operations, Administration & Infrastructure	<ol style="list-style-type: none"> 1. An effective and efficient human resource base developed 2. Appropriate infrastructure developed and maintained 3. Adequate equipment for management activities acquired and maintained 4. Resource protection optimised 5. Improved financial and management accountability
Collaborative Management	<ol style="list-style-type: none"> 1. Communities regard Gonarezhou as a positive asset 2. Communities participate in, and receive benefits from, tourism 3. Stakeholder awareness of Gonarezhou and the environment significantly raised 4. Collaboration with government and other institutions improved 5. Gonarezhou becomes a key component of the great Limpopo Transfrontier Conservation area

B

BIODIVERSITY AND NATURAL RESOURCES MANAGEMENT PROGRAMME

Elephants and the Machiniwa Escarpment





BIODIVERSITY AND NATURAL RESOURCES MANAGEMENT PROGRAMME

B.1 PURPOSE, BACKGROUND AND KEY COMPONENTS

B.1.1 Programme Purpose

BIODIVERSITY AND NATURAL RESOURCES MANAGEMENT PROGRAMME PURPOSE:

Conserve the biodiversity, ecological processes and wilderness qualities of Gonarezhou National Park through strategic adaptive management.

B.1.2 Background

The background to the park has been summarised in Part 2 of this management plan (Background Information) where there is an extensive literature base compiled for the park. This section deals briefly with key topics important for the programme. In addition, many of these topics are detailed in the section on threats, issues and concerns.

Water availability is a key issue facing the park as the rivers that feed it are at the end of the catchment basins and hence are severely affected by upstream activities. The major river in the park, the Runde, is an exception in the national park system in that both banks are within the protected area; in all other areas the large rivers are only protected on one bank. Siltation, pollution and declining water flows are serious issues for the park, given the complications that might arise from the drier climate regime that is expected through global climate change.

The vegetation of Gonarezhou is typical of the semi arid mopane zone and is predominantly dry deciduous savanna woodland (nearly 60% of the park) and scrubland (40%). Savannah grassland accounts for around 1% of the park (based on earlier studies but this type has increased significantly in recent years in the Pombadzi area – see below).

Between ten and 16 vegetation types have been described in earlier vegetation studies and the biggest is mopane woodland and scrubland. Another significant vegetation type is dry deciduous sandveld woodland and scrub. Forty years ago miombo woodland was recorded as occurring in the Pombadzi – Chivonja area but this vegetation type has been extensively transformed into open bushland and grassland.

The plant checklist for the park includes 924 species from 118 families and 364 genera, with 265 trees, 310 shrubs, 55 woody climbers and 137 grasses. The list is regarded as incomplete as no systematic survey has been undertaken. However, a detailed survey is underway (including an updated vegetation map) and the results are expected during 2011.

The mammal fauna includes 23 large herbivores and 8 carnivore species. The large herbivore community is dominated by elephant which make up approximately 80% of the total biomass, followed by buffalo, giraffe and impala that contribute another 10%.

Two large mammal species have gone locally extinct in recent times. The black rhino first vanished from the Gonarezhou landscape by the 1940s but was reintroduced in 1969. Unfortunately it was again extinct 25 years later, mostly a victim of uncontrolled poaching in the park. The Lichtenstein's Hartebeest has not been seen in the park since the 1991/1992 drought.

Elephant are a species of concern for the future of the park and the significant increase in numbers during the last decade is worrying. This increase could have implications for some vegetation communities in the park.

Safari hunting takes place on the boundaries of the park and the park is effectively the main source of trophies taken by the hunters. Between 20 and 30 elephants are shot annually. Other important species are buffalo (around 20 per annum), leopards (6 per annum), crocodile (5/6 per annum), hippo (4-6 per annum) and lion (sometimes not taken at all).

Human activities do have an effect on the park resources and exceptional resources. At the most immediate level poaching and encroachment activities are a threat which has been more serious in the past than it is today. At a more removed level human activities in the surrounding areas which include poor land-use practices, overstocking with domestic animals, and the increasing human population can lead to land degradation and pressure on the park. In addition, a political element has also come into play in the last decade and a portion of the northern part of the park has been claimed in a boundary and leadership dispute.

There are a number of species of special concern in Gonarezhou and these include the carnivores (wild dog, lion and cheetah), herbivores (roan, sable and tsessebe) and other species (killifish, lappet-faced vulture). Species of special concern are species which either in Gonarezhou, or in the species general area of distribution, occurs as populations which are vulnerable due to small population sizes, poaching and disease issues, declining habitat and the need for large home ranges.

B.1.3 Key Components

The Biodiversity and Natural Resources Management Programme, mainly in conjunction with the Park Operations, Administration and Infrastructure Programme, will address issues relating to the conservation and protection of the environment of Gonarezhou. The problem of assigning activities to programmes is a common one in park management plans as there are many cross-cutting issues. For example, anti-poaching and fire management activities are controlled and managed through staff supervised by the park administrators and not by the ecologists. However, the ecology section collects and analyses information which is used by the park administration to implement the activity. Therefore a close association is needed between these two programmes.

Table B.1: Key components of the Biodiversity Programme	
Aspect	Brief Description
Monitoring	Monitoring refers to activities designed to give management a long-term insight into parameters that affect the park. This includes climatic data, wildlife estimates, tourism information, use of wildlife outside the park and other basic information.

Table B.1: Key components of the Biodiversity Programme	
Aspect	Brief Description
Research	There is a fine line between research and monitoring but in this context means a project specifically initiated to answer a management question. Many research projects leave behind a monitoring component.
Resource Management	Resource management refers to water, fire and vegetation management (including exotics). Fire management is a special case and this is dealt with in more detail under the Park Operations, Administration and Infrastructure programme.
Wildlife Management	Wildlife management is concerned with problem animals, cropping, culling, removals, introductions and veterinary issues.
Anti-poaching Monitoring and Guidance	As with fire management the day-to-day operations for this activity are dealt with in more detail under the Park Operations, Administration and Infrastructure programme. However, monitoring and guidance for these operations originates from this programme.

B.2 THREATS, ISSUES AND CONCERNS

Planning is largely about finding solutions to threats and concerns and their identification is an important step in the process. The threats, issues and concerns identified for the Biodiversity Programme were used to help develop the objectives and research and monitoring framework which are detailed later in this chapter. They are summarised in Table B.2 and more fully described in the following tables (B.3 to B.7), where they have been broadly grouped into vegetation, water, wildlife, management and other categories.

Table B.2: Summary of threats, issues and concerns Biodiversity and Natural Resources Management Programme			
Vegetation	<ul style="list-style-type: none"> • Invasive exotic species • Elephant impact • Fire - frequency and timing • Degraded vegetation • Changing vegetation • Infrastructural developments 	Water	<ul style="list-style-type: none"> • Declining water volumes and quality • Upstream dams • Siltation • Restricted dry season water • Artificial water points • Large pans with a fluctuating water regime • Poor land use practices in surrounding areas
Management	<ul style="list-style-type: none"> • Poorly organised information • No clearly defined research policy • Illegal settlements - Chitsa • Restricted knowledge base • Possible tourist hunting threat 	Wildlife	<ul style="list-style-type: none"> • Illegal fishing • Poaching – commercial and subsistence • Hunting ethics • Wildlife-livestock interface • Diseases • Recent local extinctions • Fencing • Low predator numbers • Elephant concentration in Gonarezhou • Introductions and translocations • Uneven wildlife distribution • Dry season overstocking
Others	<ul style="list-style-type: none"> • Loss of biodiversity • Climate variability • Erosion and gullies • Uncleared minefields 		

Table B.3 : VEGETATION threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme	
Issue/Concern	Description
Invasive exotic species	Invasive exotic species are a developing concern in Gonarezhou. A recent study suggests that Lantana is already well established in the northern region and there are significant threats to the riparian woodland from a number of species. Studies on the problem are underway and methods to deal with these plants need to be devised and implemented.
Changing vegetation	The 1973 vegetation map shows a significant part of the Pombadzi area being classified as a miombo type (specifically with extensive stands of <i>Brachystegia glaucesens</i>). There are reports of closed canopies of this species in the area. Today the area is largely open grassland with remnant large trees. Fire, elephants and climate are all thought to have played a role.
Degraded vegetation	In places, the Gonarezhou vegetation has been significantly impacted by human activities, fire and elephants (see below). Apart from the miombo area described below there are many areas in the park that are regarded as being degraded or significantly modified from their original form to be a cause for concern. The main agents of change have been tsetse control operations, fire and elephants, the latter two being discussed in more detail below.
Elephant impact	<p>The elephant population of the Gonarezhou is currently estimated to be over 9,000 animals, probably two or three times what was considered the “optimal” number in the past. A recent vegetation survey indicates that most vegetation in the park has been disturbed or damaged by elephant this is likely to increase given the current population size. Some experts believe that, if unchecked (either by management or naturally), the elephant will be the biggest test to the integrity of the Gonarezhou in the years to come.</p> <p>However, control and management of mega-herbivores such as elephant is a complicated subject and inextricably linked with human population growth and changing land use. The debate is not concluded and many believe that elephant management should follow a non-interventionist approach which would allow natural cycles to control elephant numbers. The most famous example of this was in Tsavo NP in Kenya in the 1970s where elephants were instrumental in transforming the park vegetation before the population crashed.</p>
Fire	Uncontrolled fires are a feature of Gonarezhou which usually occur between August and December, the vast majority of which have been caused by humans. Fire records have been kept since 1969 which show that fires are not uniformly distributed throughout the park, with some areas being repeatedly burnt (e.g. Pombadzi) while others are seldom or irregularly burnt. On average of 22% of the park is burnt annually. However, as much as 80% of the park has been burnt in a single year (1978). The extent of the area burnt each year is strongly correlated with the mean annual rainfall for the preceding year.
Infrastructural developments	Vegetation can be affected by badly sited or poorly designed infrastructural developments. For example, management infrastructure or tourism development has the potential to degrade riverine vegetation (e.g. Save-Runde Base).

Table B.4: WATER threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme	
Issue/Concern	Description
Declining water volumes and quality	The three main rivers of the Gonarezhou – the Save, Runde and Mwenezi are at the end of the catchment areas and hence water quantity and quality is affected by upstream users. Flows in all rivers have declined and pollution is a potential threat. Associated with the declining flows is siltation, which is most noticeable in the Mwenezi. There is a general lack of knowledge with regards to river system management and the rights of downstream users. It should be noted that users in Mozambique are also affected as the Mwenezi is part of the Limpopo catchment while the Save and Runde are feeders of the Save river in Mozambique.
Upstream dams	There are several large dams in all catchments but the Runde seems to be the most severely affected with the Muturikwe, Bangala and Manjirenji dams established to supply water to the Triangle, Hippo Valley and Mkwazine sugar estates. The Mwenezi has been severely impacted by the Manyuchi dam. In addition to the existing dams there are nearly 20 more proposed sites with four of these being in the planning stage. The largest these – Tokwi-Mukorsi - will be the largest dam in Zimbabwe after Kariba, if constructed.
Irrigation schemes	This is directly related to the declining water volumes and quality but some details are included here for interest. Major irrigation schemes near Gonarezhou include Triangle, Chisambanje, Hippo Valley, Mkwazine and Mwenezana.
Siltation	Directly linked to the above issues is that of siltation of the river sections within the park. The Mwenezi is probably the most seriously affected and the hippo has disappeared from this river, largely due to the lack of suitable habitat. Some of the larger pools in the Runde have either shifted or disappeared (e.g. Pokwe Pool)
Restricted dry season water and dry season “overstocking”	Often, the only water available at the height of the dry season in the Gonarezhou is in the larger rivers. Essentially this means the Mwenezi, Save and Runde. However, in some years some of the larger pans will retain water and as well as some of the larger pools in secondary rivers such as the Pombadzi. This will concentrate wildlife in the dry season and this may well be the ecological bottleneck that will cause increasing elephant damage to become evident.
Artificial water points	<p>In the 1970s and 1980s the management policy for the park was to provide artificial water for wildlife. A significant number of boreholes were drilled and the associated infrastructure erected (piping, troughs etc). However, all of this infrastructure has fallen into disrepair and currently no boreholes are working. In addition, two dams were constructed on the Benji and Massasanya rivers and these still remain, with the area around Benji dam exhibiting significant damage from elephants and other wildlife. The current policy in many protected areas, including Kruger NP, is to move away from artificial water provision, except in exceptional circumstances (e.g. if a fence or road blocks historical water access).</p> <p>The issue is further complicated by the situation along the boundary with Mozambique where the Government is establishing “game farms” It is possible that these will provide artificial water which may draw animals out of Gonarezhou.</p>
Large pans with a fluctuating water regime	There are two large pans in the vicinity of the Save-Runde junction – Tambahata and Machiniwa which can be spectacular sheets of water in some years and completely dry in others. In addition, the central areas of the park have a number of large pans which also respond to the local rainfall situation and it can be difficult to predict the water holding characteristics of these on a year to year basis.

Table B.4: WATER threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme

Issue/Concern	Description
Poor land use practices in surrounding areas	Life for subsistence farmers in the south-east lowveld is harsh mainly due to the low and seasonally variable rainfall. Increasing human populations will place greater demands on the environment

Table B.5: WILDLIFE threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme

Issue/Concern	Description
Illegal fishing	Illegal fishing in the larger pools remaining in the rivers and the larger pans is a concern during the dry season. This threat is both from visitors ignoring the bag limits and from residents of the adjacent communal lands.
Poaching	Poaching is currently at a relatively low level within Gonarezhou, although there was an incident in 2010 of 10 elephants being shot at one time in the northern sector. Both subsistence and commercial poaching do occur and perhaps the most common poachers caught are fishermen. Setting of snares and grazing of cattle are also common in some areas of the park.
Hunting ethics	Virtually the whole of the safari industry in the areas surrounding Gonarezhou relies on wildlife, and particularly elephants, crossing the boundary. Luring of wildlife out of the park and possible hunting within the park are thought to be a problem, but more research is needed to ascertain the extent of this problem.
Cattle grazing	Cattle are grazed within the park, especially along the western and southern boundaries. At certain times of year the sight of cattle inside the park is relatively common in the Mabalauta area.
Diseases	The Gonarezhou is a wildlife-livestock interface, especially cattle are commonly grazed and watered within the park. There are a number of serious diseases which are threats to both cattle and wildlife, particularly buffalo. These include foot-and-mouth, bovine tuberculosis, brucellosis and anthrax and monitoring and the containment of outbreaks is a priority. Diseases affecting carnivores are also a threat.
Recent local extinctions	Of the large mammal fauna two species have become locally extinct in the Gonarezhou. These are the black rhino and the Lichtenstein's Hartebeest. The black rhino extinction is unique in that it has happened twice in the last 40 years.
Fencing	Although most of the fences within the Gonarezhou are non-functional there are other fencing possibilities in the wider area which are perceived as being threats to wildlife corridors and ecological linkages. These include the fencing of the Malilangwe and the fencing of the game farms in Mozambique. Other fences may be required for disease control, especially in relation to international boundaries and these should be resisted where possible.
Low predator numbers	The numbers of predators in the park are low compared to other similar protected areas. The numbers of lions are remarkably low (estimated to be around 40 animals) and the major reason for this is thought to be their persecution outside the park through snaring and hunting. Other predators of concern are the wild dog, cheetah and leopard. Hyena numbers are more comparable with other areas and the relationship between the two probably needs more study.

Table B.5: WILDLIFE threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme	
Issue/Concern	Description
Elephant concentration in Gonarezhou	The 2009 aerial survey estimated over 9,000 elephants for the Gonarezhou and almost all of these were restricted to the park. There was little dispersal to areas outside the park. Some dispersal is known to occur as hunters do shoot animals in the adjacent hunting blocks and a satellite tracking study shows that some individuals move out of the park, but, by and large, the elephants remain concentrated in the park.
Introductions /translocations	Two locally extinct species are being considered for reintroduction into the park – the black rhino and Lichsteinstein's Hartebeest. A feasibility study was carried out for the black rhino in 2005 but this probably needs to be updated prior to any reintroduction. Lions have been translocated into the park but immediately returned to their point of origin (Malilangwe). In addition the authority has recently been offered some animals from the Save Conservancy that include 700 wildebeest, 500 impala, 250 zebra, 150 eland and 40 giraffe. An assessment has been carried out which recommends that this go ahead. Gonarezhou needs to develop a strategy for introductions and translocations.
Uneven wildlife distribution	Wildlife is unevenly distributed throughout the park, especially in the dry season. This is more of a tourism issue.

Table B.6 : MANAGEMENT threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme	
Issue/Concern	Description
Poorly organised information	During the compilation of this management plan and the background material it became apparent that the information base could be better organised. The Chipinda library/Research section contains a valuable store of historical information and this needs to be properly organised. Digital information needs to be accessible and backed up.
No clearly defined research policy	In addition, there seemed to be a great deal of uncoordinated research going on, largely due to the fact that there is no "official" research policy and direction for the Gonarezhou. Much of the research is related to the wildlife-livestock interface and is carried out in the Mabalauta area.
Illegal settlements - Chitsa	The invasion of the Ndali area of the park by the Chitsa people is a well publicised and documented threat to the integrity of the park. There is no denying that the Chitsa people have strong historical claims on the park but the situation has been unresolved for over ten years. The situation on the ground is that a significant section of the park north of the Chivonja hills has been settled and cleared for agriculture. The scope and complexity of the problem is such that it is difficult to summarise but it is urgent that it is resolved in the near future.
Restricted knowledge base	With only a limited amount of information available management is in the face of uncertainty and hence needs to be adaptable.
Possible tourist hunting threat	Several times in the past few years the ZPWMA has indicated that the ration quota could be sold to safari hunting clients as a way of generating funds. Currently there is no ration hunting in Gonarezhou as meat is supplied through a partner agency. However, the possibility of hunting being permitted in the park may resurface.

Table B.7: OTHER threats, issues and concerns facing the Biodiversity and Natural Resources Management Programme	
Issue/Concern	Description
Climate variability	Climate variability, and its longer-term cousin global warming, are major threats to Gonarezhou as we know it. The future is difficult to predict but there may be significant changes in the rainfall and river flow patterns that will affect the vegetation and wildlife. Climate variability may have already played a part in vegetation change in the north of the park.
Loss of biodiversity	With climate change, vegetation damage, invasive species siltation and declining water flows comes the threat of loss of biodiversity. The original species inventories were undertaken in the 1960s and 1970s and there has been very little work since then.
Erosion and gullies	There are several sites of concern with respect to erosion, especially in the southern part of the park. A gully monitoring and reclamation plan has been initiated to deal with the problem.
Uncleared minefields	During the Zimbabwean liberation war a minefield was laid between the Gonarezhou National Park and the Mozambican border in the Sengwe Communal Land. This part of the Sengwe Communal Land area has been designated as the Sengwe Corridor, an important linkage to the Limpopo and Kruger National Parks. These minefields are a threat to the wildlife and human life.
Mining activities	Prospecting activities are currently being carried out on the boundary of the Park in the Ndoiyowo Communal Land. Coal deposits have been found north of the Park and there is renewed interest to exploit these. Rio Tinto previously held prospecting rights inside Gonarezhou and coal-bed methane extraction could be a possibility in Matibi II.

B.3 GUIDING PRINCIPLES

The following guiding principles were elaborated for the Biodiversity and Natural Resources Management Programme after consideration of the issues and concerns, the identified opportunities and a review of national and international policies, Acts and initiatives. The guiding principles are listed below before being described in more detail.

1. Change is an integral part of the environment
2. Intervention will be a policy of last resort
3. Conservation agendas will also be pursued outside the park
4. Management decisions will be based on scientific information

1 Change is an integral part of the environment

Change is already occurring in Gonarezhou and this programme recognises that this change is an integral part of the functioning of the park. Natural systems in natural zones will not be preserved as frozen at a given point in time. Monitoring of this change will be an important part of this programme.

2 Intervention will be a policy of last resort

A non-intervention policy will be pursued in general, although interference with natural processes may occur to maintain wildlife and plant species diversity, to preserve sensitive species or to restore native ecosystem functioning that has been disrupted by past or ongoing human activities. The provision of artificial water is also considered to be an intervention and will not be pursued by management.

3 Conservation agendas will also be pursued outside the park

GNP management will influence the surrounding communities, local and district governments, and other agencies to help ensure that activities occurring outside the park do not impair park resources and values, especially through local district planning forums. Cognisance will be taken of transboundary issues and conservation agendas pursued here when possible.

4 Management decisions will be based on scientific information

A significant amount of research has been carried out in Gonarezhou. Much of the original work was carried out in the 1960s and 1970s but more current research undertaken during the last ten years is building on this base. Research and monitoring will provide an accurate scientific basis for planning, development and strategic adaptive management in pursuit of park objectives. It will be important for this programme to define a cohesive monitoring strategy and a clear research policy to ensure that the knowledge base backs up management decisions.

B.4 CONSERVATION TARGETS

Conservation targets depict the ecological systems, communities, species and both the cultural and scenic values that are identified as priorities for conservation. When effectively and collectively managed conservation targets reflect and maintain the overall health of the ecosystem. In addition, conservation of subsidiary systems, communities and species that have not been prioritised can also be achieved through the conservation of the main targets. Conservation targets classify the special biological and ecological processes of GNP.

Table B1 summarises the conservation targets, subsidiary targets and the key attributes. The key attributes are the factors that most clearly define or characterise the conservation target, limit its distribution, or determine its variation over space and time on a scale of over 100 years. The key attributes are sensitive to change and provide the basis for monitoring the overall health of their respective conservation targets

In summary the conservation targets are listed as:

1. Wetlands
2. Threatened vegetation communities
3. Large herbivore populations
4. Large carnivore populations
5. Rare, endangered and locally extinct species
6. Wildlife corridors
7. Shangaan heritage
8. Wilderness Values
9. Natural geographic landforms

Table B.8: Conservation Targets, subsidiary targets and key attributes for GNP		
Conservation target	Subsidiary targets	Key attribute
Wetlands	Save River Mwenezi River Runde River Pombadzi river Tambahata Pan Machiniwa Pan Guluene-Chefu catchment pans	Water catchment integrity
		Pollution
		Siltation
		River bank integrity
		Water flow
		Size and number of pans
		Extent and size of internal rivers
Threatened vegetation communities	Cliff/hilltop woodlands (<i>Ironwood</i> , <i>Combretum</i> , and <i>Brachystegia</i> woodlands) Riparian woodlands Baobabs Grasslands – Mavave	Indicator species – density and distribution
		Size and extent
		Soil moisture relationships
Large herbivore populations	Elephant Buffalo Hippo	Population size and distribution
		Ecosystem integrity
		Food availability
		Diseases
Large carnivore populations	Lions Leopard Cheetah Brown Hyena	Population size and distribution
		Population viability
		Ecosystem integrity
		Trophy quality
Rare, endangered and locally extinct species	Rhino Lichtenstein's hartebeest Wild dogs Roan Sable Killifish	Population size, structure and spatial distribution
		Endemism (killifish)
Wildlife corridors	Sengwe corridor Malilangwe-Fair Range corridor Future options	Size and extent
		Habitat quality
		Land-use pattern
Shangaan heritage	Cultural sites (e.g. Baobab tree – Chipinda; Mabalauta) Archaeological sites Traditional leader settlement sites Saila (traditional fishing ceremony)	Integrity of sites
		Place names and meanings
		Fish abundance/diversity
Wilderness Values	Pombadzi Wilderness Guluene/Chefu Wilderness Malapati Wilderness Wild character of higher-use zones	Remote
		Rugged
		Undeveloped
		Restricted access

Table B.8: Conservation Targets, subsidiary targets and key attributes for GNP		
Conservation target	Subsidiary targets	Key attribute
Natural geographic landforms	Chilojo Cliffs	Natural
	Nyamutongwe	Integrity of feature
	Red Hills Runde, Save, Samalema gorges Buffalo Bend/Swimuwini	Geomorphology

In accordance with Conservation Target methodology a threat analysis was carried out for the targets with an indication of the severity and scope of the threat. Finally each threat was ranked. This analysis was key to the development of the research and monitoring programme.

Table B.9: Threat analysis for Gonarezhou Conservation Targets				
Cons. Target	Threat	Severity	Scope	Ranking
Wetlands	Catchment deforestation/inappropriate land-use	Very high	Very high	Very high
	Large-scale water extraction	Very high	Very high	Very high
	Damming	Very high	Very High	Very high
	Climate change	Very high	Very high	Very high
	Pollution (mining, agriculture, industry)	Very high	Very high	Very high
	Poor river management information	High	Very high	High
	Illegal fishing	Medium	Very high	High
	Invasive exotic species	Medium	Medium	Medium
Threatened vegetation communities	Mine-fields	Very high	Medium	High
	Unresolved land claims	Very high	High	High
	Elephant impact	Very high	Medium	High
	Fire frequency and timing	Very high	High	High
	Unresolved land claims	Very high	High	High
	Climate change	High	Medium	Medium
	Poorly managed tourism	Medium	Medium	Medium
	Infrastructure development	Medium	Medium	Medium
	Competition with invasive species	Medium	Medium	Medium
Wildlife corridors	Poor/lack of land-use planning	Very high	Very high	Very high
	Veterinary restrictions/fencing	Very high	Very high	Very high
	Human population growth	Very high	Very high	Very high
	Mining	Very high	Very high	Very high
	Poaching	High	High	High
Large herbivore populations	Inappropriate international pressure on management interventions	Very high	Very high	Very high
	Ecological carrying-capacity	Very high	High	High
	Human/wildlife conflict	Very high	Medium	High
	Diseases (e.g., Bovine TB, Brucellosis)	High	High	High
	Poaching and luring of wildlife (salt etc).	High	High	High

Table B.9: Threat analysis for Gonarezhou Conservation Targets				
Cons. Target	Threat	Severity	Scope	Ranking
Large carnivore populations	Incidental poaching through snaring	Very high	Very high	Very high
	Diseases	Very high	Very high	Very high
	Security threats	Very high	Very high	Very high
	Over-hunting – safari areas	High	High	High
	Human/wildlife conflicts	High	High	High
	Restricted knowledge base	High	High	High
	Reduced prey base	Medium	High	Medium
Rare, endangered and locally extinct species	Climate Change	Very high	Very high	Very high
	Habitat suitability	High	High	High
	Diseases	Medium	Medium	Medium
	Competition	Medium	Medium	Medium
Shangaan Heritage	Site-specific damage (e.g. mining, fires, tourism development)	Very high	Very high	Very high
	Lack of inventory/documentation of indigenous knowledge systems	Very high	Very high	Very high
Wilderness Values	Inappropriate development	Very high	Very high	Very high
	Development pressures	Very high	Very high	Very high
	Mining	Very high	High	High
	Unresolved land claims	Very high	High	High
	Monitoring capacity	Very high	High	High
	Loss of biodiversity	High	High	High
	Over-expectations of benefits	High	High	High
Natural geographic landforms	Catchment deforestation/inappropriate land-use	Very high	Very high	Very high
	Inappropriate development	Very high	Very high	Very high
	Development pressures	Very high	Very high	Very high
	Mining	Very high	High	High
	Monitoring Capacity	Very high	High	High
	Large-scale water extraction	Very high	Very high	Very high
	Damming	Very high	Very High	Very high

B.4.1 Thresholds of Potential Concern (TPCs)

The concept of Thresholds of Potential Concern (TPCs) was developed at Kruger National Park as part of their effort to integrate science and management. TPCs are a set of operational goals that together define the spatial and temporal variation in ecological conditions for which an ecosystem is managed. The concept is still in development and modifications to the original definitions are continually occurring, mainly aimed at ensuring that it is possible for management to respond effectively to the TPCs.

Broadly speaking the thresholds of potential concern represent the upper and lower limits along a continuum of change in selected environmental indicators. Taken together, TPC's define the envelope of desired conditions within which ecosystem may vary. When the upper or lower thresholds are reached, or when it is predicted that they will soon be reached, an assessment of the cause is implemented. This assessment provides the basis for determining whether management action is warranted and/or whether the TPCs should be recalibrated in the light of new knowledge and/or understanding.

A more recent approach to thresholds of potential concern tries to estimate the rates of approach towards an undesirable system change and then tailor management interventions to this. Of course, the definition of undesirable is key to the concept, but it should also be realized that the definition of undesirable may also change in the light of new information and improved understanding of dynamic ecosystems.

Gonarezhou NP management will be committed to establishing and recognising TPCs for each key ecological attribute of the Gonarezhou ecosystem so as to identify the appropriate actions that will be required to restore the key ecological attributes to their desired states.

B.5 OBJECTIVES, TARGETS AND ACTIVITIES

Based on the threats, issues and concerns and the guiding principles outlined above the following objectives and targets were formulated for the Biodiversity Programme. They are summarised below before being described in detail. At the end of this section the three year activity plan based on the objectives and targets is presented.

Objective 1: Biodiversity and ecological processes of Gonarezhou and adjacent areas conserved through an adaptive management approach

Targets

- 1.1: Viable populations of recently extinct mammal species re-established
- 1.2: Rare carnivore populations restored
- 1.3: Selected herbivore populations managed effectively
- 1.4: Exotic species controlled
- 1.5: Thresholds of potential concern developed

Objective 2: Human impacts on the Gonarezhou ecosystem managed and mitigated

Targets

- 2.1: Human impacts on the park and surrounding areas mitigated
- 2.2: Human impacts on Gonarezhou wetlands reduced
- 2.3: Fire impacts on key habitats reduced

Objective 3: Monitoring and research addresses management needs effectively

Targets

- 3.1: Ecological monitoring framework updated and improved
- 3.2: Basic ongoing data sets maintained and improved where possible
- 3.3: Research priorities updated and relevant research encouraged
- 3.4: Appropriate research equipment available on station

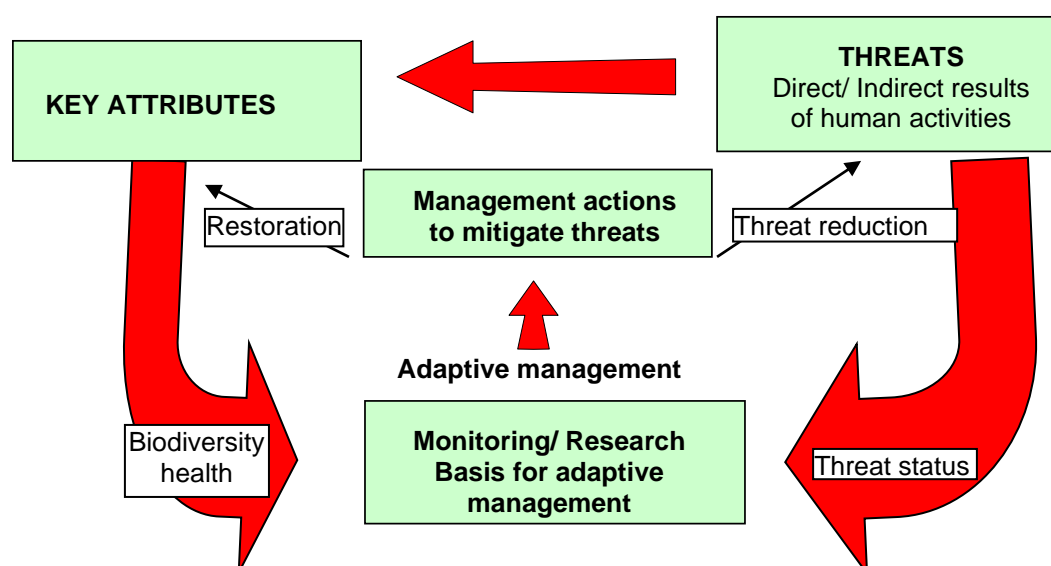
Objective 1: Biodiversity and ecological processes of Gonarezhou and adjacent areas conserved through an adaptive management approach

One of the primary aims of the Biodiversity and Natural Resources Management Programme will be to conserve the biodiversity and ecological processes of the park. Given that ecological management is an inexact science and that the data bases underlying some management decisions is not as complete as it could be, this programme subscribes to the principle of adaptive management. In other words, the outcome of a particular management policy of intervention may not be exactly known but the intervention activity can be modified as the outcome scenarios unfold. The adaptive management approach is a key part of the Biodiversity and Natural Resource Management Programme and some of its central concepts are outlined in the guiding principles and reiterated in the Programme Purpose. A brief description of the approach is shown below.

The Adaptive Management Framework

Adaptive management implies applying management strategies without being fully confident of the outcomes. However, the process means that the eventual or partial outcome is a result which can be used to temper further interventions to see which strategy will provide the best possible outcomes in the long-term. The adaptive management framework (Figure B.1), depicts a feedback loop between management actions to conserve biodiversity and to mitigate the threats on the key attributes for the conservation targets. The Conservation Targets, their key attributes and the possible threats have been identified (Section B.5) and the three-year activity plan sets its actions based on the rating of the threat. Where a threat is rated very high adaptive management action is also a priority.

Figure B.1: Adaptive management framework



Target 1.1: Viable populations of recently extinct mammal species re-established

Two large mammal species have recently become locally extinct in the Gonarezhou National Park. These are the black (and white) rhino and the Lichtenstein's Hartebeest. The policy will be to re-establish these species in the park.

Action 1.1.1: Reintroduce rhino

The black rhino enjoys the dubious distinction having gone locally extinct twice in the recent history of Gonarezhou. In 2005 a detailed assessment for the possibility of re-introduction was carried out and this recommended the release of individuals into the Pombadzi area. The reintroduction of rhino is a high-profile conservation intervention which usually has significant spin-off benefits, the most important of which is usually improved protection.

Prior to any new release programme the 2005 study should be revisited in the light of recent vegetation work and the developments surrounding the Chitsa invasion of part of the area.

Action 1.1.2: Reintroduce hartebeest

The Lichtenstein's Hartebeest was never common in Gonarezhou but the last animals were seen prior to the 1991/1992 drought. All individuals either perished or were removed from the park at this time. The possibility of re-introducing this locally rare antelope back into the park should be assessed and carried out if conditions are deemed to be favourable. The pending release of a large number of animals from the Save Conservancy may have a bearing on the timing or suitability of this programme.

Target 1.2: Rare carnivore populations restored

Numbers of key carnivore species are known to be low in the park but the reasons for this are not well understood. These include the lion, leopard, cheetah and brown hyena. Spotted hyena population densities are thought to be comparable with other similar areas.

Action 1.2.1: Supplement depleted populations

The possibility of supplementing depleted populations should be considered. This was attempted recently with the release of lions near Chilojo cliffs. Unfortunately these lions relocated back their point of origin (Malilangwe) a few days later. It may be necessary to have a fuller understanding of the dynamics of predator populations before undertaking this type of exercise. In addition, the dynamics of competition between different predator species may have a bearing on the success of supplemental programmes. Protocols for considering population supplementation need to be developed prior to feasibility studies being carried out. Assessments of the current populations have been undertaken and these need to be continually updated.

Action 1.2.2: Monitor and manage wildlife diseases.

Diseases have had devastating effects on carnivore populations in other parts of Africa and it is important to monitor and manage these, where necessary. Collaboration with the relevant veterinary authorities is essential in this regard.

Target 1.3: Selected herbivore populations managed effectively

Action 1.3.1: Elephant population managed

The most recent survey of the park and its environs estimates a population of around 9,000 elephants, far in excess of the previously considered maximum carrying capacity (around 3,000 animals). Surveys have been carried out over a number of years and these indicate a 6% rate of increase for this population which could mean a doubling of the population to around 18,000 animals during the life span of this management plan.

A strategy to deal with the burgeoning elephant population is probably one of the most urgent priorities facing the park. A vegetation survey of the park is nearing completion and this may highlight some of the current and potential issues with regard to elephants and vegetation. Currently public opinion is against the lethal control of elephant populations but the failure to address the issue may lead to a "Tsavo situation" where there was a major die-off of elephants in Tsavo National Park but they had completely changed the vegetation of the park before the population crashed.

A comprehensive elephant management plan should be developed at the earliest opportunity. This should be in line with other management plans in the GLTP, specifically that for the Kruger National Park. It must also align with the elephant management strategy for Zimbabwe.

Ongoing activities that need to be continued include regular population assessments using standardised methodology and the ongoing monitoring of movements through satellite surveillance of collared elephants.

Action 1.3.2: Management of other herbivores

Generally the levels of most herbivores in the park (elephants excepted) are believed to be lower than the probable carrying capacity. During the 1991/19932 a significant number of animals died from starvation and thirst and other were removed to prevent their dying. Although numbers have been building up it still may be possible to supplement the numbers of selected species. In fact a significant number of animals have been offered to the park from the Save Conservancy and a study to assess the feasibility of this reintroduction has been carried out. It is likely that these animals will be moved into the park in the near future.

However, a protocol for these types of population supplementations needs to be formulated and animals actively sourced if it is deemed to be the way to improve the profile of the park.

Action 1.3.3: Monitor and, if necessary, manage surface water supply

The previous management strategy with regard to water in Gonarezhou was to actively provide artificial and supplemented water supplies in parts of the park which were normally devoid of water in the dry season. At least 40 boreholes were drilled and water pumped to pans. In addition, water was pumped from the Mwenezi river inland to Manyanda and Mafuku Pans. Finally two weirs were constructed on the Benji and Massassanya rivers. None of the boreholes are functioning (although some could be resuscitated) and the Mwenezi pumping project is also defunct. However, the two weirs still remain and hold water throughout the dry season,. There has been significant vegetation modification in the vicinity of the Benji weir.

The central parts of Gonarezhou have a number of large pans which hold water well into the dry season. However, there is little information about the seasonal and longer-term patterns. These pans, as well as other pans need to be monitored and a database constructed. This information could assist with management of the elephant populations.

Target 1.4: Management of species of special concern improved

Action 1.4.1: Identification of species of special concern

There are a number of species in Gonarezhou that are defined as being of special concern. Generally speaking a species of special concern is one that has a limited distribution or is especially vulnerable to disturbance from human related activities. Elephants and rhino are special cases and are dealt with under Targets 1.1 and 1.3. A preliminary list of species of special concerns has been drawn up and includes the following:

Carnivores	Herbivores	Others
wild dog lion cheetah	roan sable tsessebe nyala	killifish, lappetfaced vulture

However, this list should be expanded as more information becomes available. In addition, a protocol for inclusion of a species into this list should be developed.

Action 1.4.2: Management strategies for species of special concern developed

Management strategies for these species need to be drawn up and this includes an assessment of their importance to the safari hunting industry. These species are especially vulnerable to disturbance by humans. A priority will be to encourage research on these species so that more informed management strategies can be devised.

Target 1.5: Thresholds of potential concern developed

Thresholds of potential concern are defined as an important part of any adaptive management programme (see section B.5). As a management strategy the concept is already developed within the GLTP, specifically the Kruger National park and they are expected to become more important in the Gonarezhou during the life of this management plan. However, it should be noted that the development of the thresholds is not an easy task. In addition, monitoring methodology to assess and realise that the thresholds are being approached is also not a straightforward task.

Action 1.5.1: Prioritisation of categories and identification of measurable components

The first step will be the identification of the categories or areas that will be used as indicators for the thresholds. These need to be carefully chosen and, as mentioned, Gonarezhou ecologists and management should draw on work that has already been done in the Kruger National Park. It may necessary to ask for training assistance in this regard.

The second, and vitally important step will be the identification of the measurable components of the systems being considered. These need to be practical, cost effective and meaningful. The methodology is still in its infancy and there is considerable modification of the methodology and the parameters that are being measured.

Action 1.5.2: Monitoring programme amended

Once some headway has been made with the categories and measurable components then the monitoring programme needs to be amended to reflect these new components.

Objective 2: Human impacts on the Gonarezhou ecosystem managed and mitigated

Gonarezhou is to some degree an “island park” as it is surrounded in part by communal lands with burgeoning human populations. The climate of the south-east lowveld is generally not conducive to agriculture as the rainfall is low and unreliable. Increasing human populations in these areas usually are conducive towards low incomes and increasing levels of poverty. This, in turn, can lead to pressures on the park. Addressing land use and conservation practices outside the park falls under the Collaborative Management Programme.

Target 2.1: Human impacts on the park mitigated

Action 2.1.1: Reduce illegal use of wildlife and vegetation

Illegal use of wildlife and vegetation resources within the park is an ongoing problem but has been significantly worse in the past than it is at present. Anti-poaching activities are covered under the Park Operations, Administrations and Infrastructure Programme but the control of illegal use is of primary concern to this programme and so is included here as well.

Action 2.1.2: Reduce the impact of visitors in wilderness areas

Roads provide access to the park and its wild areas and there are around 1,400 kilometres of road in the park. The road network needs to be revised taking into account tourism, management and wilderness preservation needs. The road plan needs to be revised at the earliest opportunity in conjunction with the Sustainable Tourism and Park Operations, Administration and Infrastructure Programmes.

Target 2.2: Conservation of rivers and wetlands in and around Gonarezhou improved

Human impacts on Gonarezhou's wetlands and rivers may be a result of inappropriate land use practices outside the park which negatively impact on the river catchments and other wetland systems. Since major rivers originate from outside the park, a combined effort with all the relevant stakeholders will be required in the identification of the threats to these wetlands, minimisation of impacts and on-going monitoring programmes.

Action 2.2.1: River health monitoring programme improved

A long-term river health monitoring programme is in the process of being developed for Gonarezhou and this will be implemented in collaboration with other authorities and/ or independent researchers. In addition, park management will strive to ensure that there is a perennial flow of water particularly in the Mwenezi River in order to maintain the ecological processes.

Action 2.2.2: Upstream water users influenced for all basins

Gonarezhou management will seek to advocate and actively participate in the watershed management both within Zimbabwe and in the region, using the monitoring information collected on fish populations and agriculture. In support of this active participation, park staff will influence issues affecting the management of watersheds by taking a proactive role in efforts to collaborate the conservation and management of the greater Gonarezhou wetland ecosystems.

Action 2.2.3: Control tourism and park management developments and activities on wetlands

Environmental Impact Assessments will be a precondition for any new development and activities within the park. The Sustainable Tourism Programme defines limits of use for wetlands and wild areas and these should be enforced. Siting of roads near wetlands will require special consideration.

Target 2.3: Fire impacts on key habitats reduced

Uncontrolled fires are a common occurrence in the Gonarezhou. Almost all of these fires are started by illegal hunters within the park. Other fires start outside the park and will move in if not stopped. Very few fires have been started by natural causes. The number of fires recorded is variable but records from 1969 indicate that there are an average of five large fires per annum with as much as 80% of the park being burnt in exceptional years.

Action 2.3.1: Fire monitoring database improved

As mentioned above fire monitoring has been ongoing since the late 1960s. The recent development of satellite fire monitoring and the almost immediate dispersal of this information via email and internet has changed the way in which fires are studied. However there is also a need to ensure that new fire data is backwardly compatible with research that has gone on before (specifically burn scar data).

Action 2.3.2: Fire management plan developed with annual updates

The development of an adaptable fire management plan that can be changed to suit the climatic circumstances is a priority. As with anti-poaching and law enforcement activities, fire is one of the cross-cutting issue for park management. The Biodiversity and Natural Resources Management Programme is responsible for the recording and analysis of fire data but the Park Operations, Administration and Infrastructure Programme is responsible for implementation of fire management and control measures. There needs to be significant collaboration between the two programmes to ensure that fires are effectively controlled and managed.

Action 2.3.3: Fire prevention and control measures implemented

As mentioned above the prevention and control of fires is the responsibility of the Park Operations, Administration and Infrastructure Programme but the measures that are carried out need to feed back into the recording and analysis system.

Action 2.3.4: Collaboration with other stakeholders

Many of the fires that impact on the park cross into the park from other areas. It will be important to collaborate with neighbours to the park with regard to fire prevention and control. Education of communities and other stakeholder groups could help lessen the incidence of fire (see also Collaborative Management Programme).

Target 2.4: Exotic species controlled

Exotic and invasive species are becoming a significant problem for protected areas and often the problem is quite severe before it is noticed.

Action 2.4.1: Extent of problem assessed

The first step for any control programme for exotic and invasive species is an assessment of the population. Initial studies have been carried out in Gonarezhou and they indicate that the problem is

on its way to becoming severe, especially with regard to *Lantana camara*. A clearer understanding of the problem is needed and research into this is a priority.

Action 2.4.2: Exotic plant strategy developed

It is vital that a framework and strategy to deal with the exotic and invasive plants is formulated at the earliest opportunity. This strategy should draw on work carried out in other areas, notably the Kruger National Park and identify the likely and practical control measures that could be carried out.

Action 2.4.3: Control measures implemented

Implementation of the control measures identified under 1.4.2 is likely to be time consuming, labour intensive and costly. However, these measures aimed at control and eradication should be implemented at the earliest opportunity.

Objective 3: Monitoring and research addresses management needs effectively

The desired future state of the Gonarezhou National Park is where the evolving ecosystem functioning and status are understood and where this knowledge is used to make informed management decisions to achieve the Park's objectives. To achieve this desired state, an Ecological Monitoring Framework has been developed in this management plan for future monitoring of the health of the Gonarezhou ecosystem and to ensure the sustained maintenance or enhancement of the viability of the Conservation Targets.

Ideally, the functioning of the ecosystem should be fully understood, the status of the key attributes should be known and the threat levels should be comprehensively identified and monitored. This knowledge can be used to make informed management decisions in order to meet the park's objectives and thus a fully adaptive management system will be operational. Therefore, research and monitoring are key elements in biodiversity management. Research and monitoring activities in the park will lead to:

- i. a better understanding of the Park's biodiversity and natural values;
- ii. identification of changes to the environment in the Park;
- iii. effective management of the Park and the region and
- iv. indications of the effectiveness of management actions in protecting Park values.

Target 3.1: Ecological Monitoring Framework updated and improved

The draft Ecological Monitoring Framework is presented at the end of this section. The framework defines monitoring activities for the key ecological attributes that were identified for the Conservation Targets

Action 3.1.1: Reassessment of goals and methodology of the ecological monitoring framework

It should be noted that the Ecological Monitoring Framework presented here is the first draft of a programme that will continue to be modified in the light of new information and shifting conservation strategies in response to changing environmental and social circumstances. Any monitoring programmes devised for the thresholds of potential concern will need to be included here. However, it is important to note that the Ecological Monitoring Framework should not just be a wish list of parameters that it would be interesting to monitor. The framework must be practical, affordable and adaptable.

Action 3.1.2: Data collection and storage improved

Data collection and storage is a key part of research and monitoring and there is a need to improve the systems in place at both Chipinda Pools and Mabalauta. Training of field staff in data collection methodology is important, as is the training of people who enter the data into the computer. Regular checks need to be carried out to ensure that both activities are being carried out correctly.

Action 3.1.3: Staff numbers and skills improved

The monitoring framework, as it stands is ambitious and there are probably not enough staff to implement its activities. Accordingly, once it has been redrafted an assessment of staffing requirements for its implementation needs to be carried out and these staff requirements added to the staff schedules found in the Park Operations, Administration and Infrastructure Programme.

Target 3.2: Basic ongoing data sets maintained and improved where possible

Although the Ecological Monitoring Framework reflects the future state of monitoring expected in the park, there are a number of basic monitoring activities that are already in place. It is imperative that these basic data sets are continually updated and analysed. The framework should also include these activities meshed into it. For the record, the current datasets are mentioned below and are also reflected in the three year activity plan.

- Climate
- River health
- Erosion and siltation
- Vegetation
- Potential corridors
- Fires
- Wildlife
- Law enforcement
- Human wildlife conflict
- Safari hunting
- Photographic Tourism
- GIS updated and improved

Target 3.3: Research priorities updated and relevant research encouraged

Action 3.3.1: Update and modify research priorities

A preliminary list of research priorities has been compiled for Gonarezhou but this needs to be updated and developed into a document that defines the reasons behind the need for research, rather than just being a listing. Monitoring activities are not considered to be part of research and are dealt with separately. A draft document should be compiled by the Gonarezhou ecologists prior to being discussed and modified at a wider level. Cognisance should be taken of research activities that are being undertaken in Kruger National Park for comparison.

Action 3.3.2: Appropriate research encouraged

Once the research priorities have been updated it will be necessary to encourage appropriate research. Information of research priorities could be circulated on the website proposed under the Collaborative Management Programme.

Action 3.3.3: Update and correct current species lists

The bulk of the work on the species lists for Gonarezhou was undertaken in the 1960s and the 1970s. Apart from the birds there have not been any significant updates. The current lists need to be finalised and made accessible and checked for mistakes. Then appropriate institutions need to be encouraged to update the lists. This is important for a full understanding of the biodiversity of the park.

Action 3.3.4: Electronic bibliography improved

An electronic bibliography was created during the formulation of this management plan and this data should be made freely available to anyone with an interest in the park and its surrounding areas. A bibliography, however, is an unfinished work as it will continually be added to and so it should be regarded as the starting point for future updates.

The larger the bibliography becomes the more important it is to catalogue it correctly so that it is possible to search the metadata files to find relevant and appropriate information.

Target 3.4: Appropriate research equipment available on station

Action 3.4.1: Appropriate monitoring and recording equipment secured

Appropriate monitoring and recording equipment will be needed to ensure that basic and applied monitoring can be carried out. This list needs to be circulated and finalised as soon as possible. It is likely to include cameras, computers, GPS, fishing equipment, computer software, secchi disks, field battery systems etc.

Action 3.4.2: Basic laboratory established

It would be advantageous to establish a basic laboratory at the Chipinda Pools Ecology centre for tasks identified from the Ecological Monitoring Framework that could be carried out in-house. Equipment is likely to include microscopes, centrifuge etc.

Action 3.4.3: Appropriate maintenance of equipment

As with all equipment used in all programmes maintenance will be the key to longevity. Staff who will be using the equipment need to have a short training course on proper use and care of the equipment. If any equipment needs regular maintenance or special storage situations these should be noted and adhered to.

Action 3.4.4: Data storage systems improved

With any digital storage systems backup is vital and investment into appropriate backup storage systems will be required. A system for regular backups of all data should be devised and adhered to. In addition a backup of the backup is advised (at longer intervals) which should be stored in a different physical location to the rest of the information to guard against the possibility of fire or theft.

Table B.10: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme					
OBJECTIVE 1: BIODIVERSITY AND ECOLOGICAL PROCESSES OF GONAREZHOU AND ADJACENT AREAS CONSERVED THROUGH AN ADAPTIVE MANAGEMENT APPROACH					
Target	Action	Activity	Notes	Implementation Schedule	Priority
1.1: Viable populations of recently extinct mammal species re-established	1.1.1: Reintroduce rhino	Revision of 2005 feasibility assessment		Feasibility study 2011; Then Introduction	2
		Implementation of resulting reintroduction programme	Important that IUCN guidelines are adhered to		
	1.1.2: Reintroduce hartebeest	Feasibility study		Feasibility study 2012	3
1.2: Rare carnivore populations restored	1.2.1: Supplement depleted populations	Protocol for population supplementation			3
		Population assessments		As required	
		Feasibility studies			
	1.2.2: Monitor and manage wildlife diseases.	Establish disease surveillance programme	Collaborate with Zimbabwe wildlife veterinary unit for disease surveillance		3
1.3: Selected herbivore populations managed effectively	1.3.1: Elephant population managed	Regular population assessments		Ongoing. Annual or every few years	3
		Ongoing monitoring of movements	Dependant on collar battery life	Ongoing	
		Development of management plan			1
	1.3.2: Management of other herbivores	Population supplementation where necessary			3
		Protocol for population supplementation			
	1.3.3: Monitor and, if necessary, manage surface water supply	Surface water inventory (pans & pools)			2
		Full EIA and assessment of dams	Benji and Massasanya		

High priority = 1; Low priority = 3

Table B.10: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme					
OBJECTIVE 1: BIODIVERSITY AND ECOLOGICAL PROCESSES OF GONAREZHOU AND ADJACENT AREAS CONSERVED THROUGH AN ADAPTIVE MANAGEMENT APPROACH					
Target	Action	Activity	Notes	Implementation Schedule	Priority
1.4: Management strategies for species of special concern developed	1.4.1: Identification of species of special concern	Protocol for inclusion defined			1
		List updated		Ongoing	
	1.4.2: Management strategies for species of special concern developed	Updated and expanded information on species of special concern	To include information on dispersal into hunting blocks	Strategy by mid 2011	1
		Specific strategy implementation		Implementation from mid 2011	
		Database on safari hunting	Participate in setting of hunting quotas; See also Collaborative Management Programme		
1.5: Thresholds of potential concern developed	1.5.1: Prioritisation of categories and identification of measurable components	Workshop	Outcome will be a clear and practical document		2
	1.5.2: Monitoring programme amended	Additional monitoring components as required			2

High priority = 1; Low priority = 3

Table B.11: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme

OBJECTIVE 2: HUMAN IMPACTS ON THE GONAREZHOU ECOSYSTEM MANAGED AND MITIGATED

Target	Action	Activity	Notes	Implementation Schedule	Priority
2.1: Human impacts on the park mitigated	2.1.1: Reduce illegal use of wildlife and vegetation	Conduct anti-poaching operations	In conjunction with Parks, Operations, Administration and Infrastructure Programme	Ongoing	
		Input into anti-poaching strategies using databases	Reliant on illegal use database	Ongoing	
	2.1.2: Reduce impact of visitors in wilderness areas	Road plan developed with initial workshop with key players	In collaboration with Sustainable Tourism and Park Operations Programmes		
		Draft paper and plan for discussion			
2.2: Conservation of rivers and wetlands in and around Gonarezhou improved	2.2.1: River health monitoring programme improved	Expanded site and data collections	Institutional agreements to be formalised (Chiredzi, Malilangwe)		3 2
		Research with independent institutions encouraged			
		Collaboration with relevant stakeholders	Target upstream users and Govt.		
	2.2.2: Upstream water users influenced for all basins	Participate in watershed management forums	GNP management to take a proactive role in basin issues		
		Collaborate with grassroots water management institutions			
	2.2.3: Control tourism and park management developments and activities on wetlands	Ensure EIAs are relevant, enforceable and of an acceptable quality			3 1
		Enforce Tourism limits of use	See Sustainable Tourism Programme		
2.3: Fire impacts on key habitats reduced	2.3.1: Fire monitoring database improved	Consolidate all historical and current fire data			1
		Ongoing fire and burn scar data inputs (MODIS, field assessments)			
		Continued assessments of fire impacts on vegetation types	Possible research		
		Annual assessments and recommendations	In conjunction with Parks, Operations, Administration and Infrastructure Programme		

High priority = 1; Low priority = 3

Table B.11: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme					
OBJECTIVE 2: HUMAN IMPACTS ON THE GONAREZHOU ECOSYSTEM MANAGED AND MITIGATED					
Target	Action	Activity	Notes	Implementation Schedule	Priority
2.3: Fire impacts on key habitats reduced (Cont..)	2.3.2: Fire management plan developed with annual updates	Workshops (incl. key stakeholders)	In conjunction with Parks, Operations, Administration and Infrastructure Programme		3
	2.3.3: Fire prevention and control measures implemented	As per management plan details	In conjunction with Parks, Operations, Administration and Infrastructure Programme		3
	2.3.4: Collaboration with other stakeholders	Sharing of data	Protocols as part of fire mgmt plan		2
		Collaboration for fire management	In conjunction with Parks, Operations, Administration and Infrastructure Programme and Collaborative Management Programme	Ongoing	
2.4: Exotic species controlled	1.4.1: Extent of problem assessed	Exotics plant database established with continual updates			2
		Research encouraged			
	1.4.2: Exotic plant strategy developed	Workshop			2
	1.4.3: Control measures implemented	As per the strategy			2
		Training and awareness workshops for exotics identification and control measures			

High priority = 1; Low priority = 3

Table B.12: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme

OBJECTIVE 3: MONITORING AND RESEARCH ADDRESSES MANAGEMENT NEEDS EFFECTIVELY					
Target	Action	Activity	Notes	Implementation Schedule	Priority
3.1: Ecological monitoring framework updated and improved	3.1.1: Reassessment of goals and methodology of the ecological monitoring framework	Revised framework		Mid 2011	1
		Annual update	Practical implementation to be taken into account	Annual update	
	3.1.2: Data collection and storage improved	Training for data collection	Field training for rangers	Ongoing, at least one course annually	2
		Training for data entry, storage	In house training	Ongoing	
		Regular checks for accuracy and consistency of data entry	By Ecologists	Ongoing	
		Ongoing development and improvement of database construction, data entry etc	In house with external advice	Ongoing	
	3.1.3: Staff numbers and skills improved	Additional research staff	See also Park Ops. Admin. & Infra. Programme	As soon as practical	2
		Skills training for existing staff			
3.2: Basic ongoing data sets maintained and improved where possible	3.2.1: Climate	Rainfall, temperature, evaporation	Expand stations if possible	Ongoing daily	1
	3.2.2: River health	Expansion of sites, annual assessments	Collaboration with stakeholders	Annual	
	3.2.3: Erosion and siltation	Mapping of sites and monitoring		Ongoing	
	3.2.4:Vegetation	New vegetation map in use			
		Photopanorama expansion			
	3.2.5:Potential corridors	Mapping	FairRange, Sengwe, Mozambique	Base maps by mid 2012, then assessment every 2 years	
		Ground surveys			
	3.2.6: Fires	Burn scars from patrol and other sources	To match historical methodology		
		MODIS fire mapper data		Daily collection	
	3.2.7: Wildlife	Mortality from patrol reports			
		Population dynamics from patrol reports			
		Population sizes and spatial distribution from aerial surveys and other sources			
		Wildlife/Cattle diseases			
	3.2.8:: Law enforcement	Activities, arrests, convictions etc from ranger based monitoring system	Ensure data is correctly entered		

High priority = 1; Low priority = 3

Table B.12: Summary and three year Activity plan: Biodiversity and Natural Resources Management Programme					
OBJECTIVE 3: MONITORING AND RESEARCH ADDRESSES MANAGEMENT NEEDS EFFECTIVELY					
Target	Action	Activity	Notes	Implementation Schedule	Priority
3.2: Basic ongoing data sets maintained and improved where possible (Cont...)	3.2.9: Human wildlife conflict	Location, type	Collaboration with RDCs		
	3.2.10: Safari hunting	Offtakes, trophy quality	Collaboration with RDCs		
	3.2.11: Photographic Tourism	Numbers, use of sites, origins, income, environmental degradation			
	3.2.12: GIS updated and improved	Accessible storage system with metadata		Ongoing	
		Ongoing updates			
3.3: Research priorities updated and relevant research encouraged	3.3.1: Update and modify research priorities	Meeting to update and align priorities with HQ	Based on research completed and changing circumstances	At least annually	
	3.3.2: Appropriate research encouraged	Promote collaborative research projects with academic and independent research institutions			
	3.3.3: Update and correct current species lists	Ensure that lists are correct and easily accessible			2
		Encourage species inventory level research			
	3.3.4: Electronic bibliography improved	Current bibliography completed		Version 1 distributed mid 2011, then annual updates	
		Ongoing updates as new material available			
		Searchable metadata established and user friendly			
3.4: Appropriate research equipment available on station	3.4.1: Appropriate monitoring and recording equipment secured	Cameras, GPS, computers, software, backup drives etc	Chipinda Pools and Mabalauta		1
	3.4.2: Basic laboratory established	Equipment required identified			2
	3.4.3: Appropriate maintenance of equipment	Correct use and storage procedures	All users to be trained		
	3.4.4: Data storage systems improved	Regular backups with separate storage areas	Weekly and monthly backups		
		Metadata systems in place and updated	Information must be generally accessible at all times		

High priority = 1; Low priority = 3

B.6 RESEARCH AND MONITORING FRAMEWORK

B.6.1 Research

A preliminary list of research priorities has been established for the Gonarezhou National Park which focuses on vegetation and wildlife issues (Table B.13). Some of the currently identified research priorities are already covered under the basic monitoring activities outlined in the previous section. It is imperative that a clear and comprehensive listing and description of research priorities is developed for the park to guide and focus limited resources.

Table B.13: Preliminary research priorities for Gonarezhou	
Category	Research Priorities
Vegetation	<ul style="list-style-type: none"> Digital vegetation map - updated and ground truthed Fixed point photography - building on historical work - comparison of historical vegetation cover - remote sensing? Invasive plant species - extent, species involved. GIS. Invasive species management plan.
Fish	<ul style="list-style-type: none"> Fish populations - general - status of the Save, Runde, Mwenezi fish populations. Species, numbers, age structure - impacts? Fish populations - specific - status of the Killifish population - illegal offtake? Fish populations - invasive species. Occurrence, extent - invasive management plan?
Reptiles and Amphibians	<ul style="list-style-type: none"> Herpetology - status and distribution of herpetofauna? Amphibians - status and distribution of amphibians
Birds	<ul style="list-style-type: none"> Lappet-faced vulture - status of breeding population
Carnivores	<ul style="list-style-type: none"> Carnivores - numbers, pack sizes, range (special reference to wild dogs, lions)
Herbivores	<ul style="list-style-type: none"> Elephant numbers, population structure, movement. Dry season range. Impact on vegetation. Elephant management plan?
GIS	<ul style="list-style-type: none"> GIS layers for database - roads (including condition), rivers, elevation, all infrastructure Land-use in adjoining areas - population densities, livestock densities, vegetation, settlements. GIS

Research Regulations in the Gonarezhou National Park

1. Researchers must communicate with the Chipinda Pools Ecology Centre and all letters of permission and copies of research proposals must be on file prior to beginning work. Email communications are acceptable. Only once they are “registered” will they receive a letter of support from the Park (see 4 below).
2. Researchers should also report to the Chipinda Pools Ecology Centre upon arrival and present both letters of permission from the relevant authorities and a copy of their research proposal. Researchers may only undertake the work for which they received letters of permission. It is possible that there will be logistic reasons for not being able to pass through Chipinda Pools and then email registration is possible (see 1 above).
3. It is strictly forbidden to collect samples or specimens of any plant or animals without explicit letters of permission from the relevant authorities.
4. Researchers should also receive a letter of support from the park prior to beginning their work.
5. Researchers will be assigned a park liaison person with whom they will discuss their work plan and timeline before commencing the work.
6. Researchers should ensure that their park liaison person is kept regularly up-to-date on progress of the project and report any changes in their work plan as necessary.
7. Researchers should also submit written quarterly reports to their park liaison person for review and comment.
8. Researchers should provide GNP with copies of any publications, theses, or other materials produced.
9. The Gonarezhou National Park and any park collaborators should be acknowledged in any publications or other materials produced and offered authorship where it is considered appropriate.
10. Researchers must abide by all park regulations
11. Researchers should promote local employment and training wherever possible
12. Foreign researchers should adhere to the provisions of the Research Council of Zimbabwe and the Research Act

B.1.2 Monitoring Framework

A preliminary monitoring framework was established which is based on the identified conservation targets and their key attributes. The practicality of such a monitoring framework is sometimes debatable but it provides a roadmap for an idealised and desirable monitoring programme, should funds and personnel be available.

It must be remembered that this is a first pass and that one of the activities of this programme is to modify this research framework to ensure that it is relevant and practical.

Conservation Target 1: Wetlands						
Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Infiltration rates into water catchment	Water yield in relation to rainfall	Gauge stations		Catchment councils	Historical, yes	Very high
	Precipitation	Rain stations (rain gauges etc)		Sugar industry, ZINWA	some	Very high
Water quality	Turbidity	Secchi discs				
	Pollutants	Water analysis				
	Pool size	Mapping				
River bank integrity	Vegetation structure, vegetation competition	FPP?	3 years	PWMA, FZS	No	High
	Change in land use; extent and erosion	Remote sensing	3 years	PWMA, FZS	No	Very high
Size and number of pans	Change in number	Remote sensing	2-3 years	PWMA, FZS	No	Medium
	Surface area	Remote sensing	2-3 years	PWMA, FZS	No	Medium
	Max depth/ water status	Aerial or ground survey	2-3 years	PWMA, FZS	No	Medium
Extent and size of rivers	Number of pools		2-3 years	PWMA, FZS	Historical only	Medium
	Location of pools		2-3 years	PWMA, FZS	Historical only	Medium
	Average depth		2-3 years	PWMA, FZS	Historical only	Medium
Fish abundance/diversity	Stock assessment	Ecological surveys	Seasonal			
	Numbers	Frame surveys, socio-economic surveys	Seasonal			
	Species richness	Habitat monitoring, sampling	Seasonal			

Conservation Target 2: Threatened vegetation communities

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Indicator species	Density and distribution	FFP, sample plots	Annual	FZS, PWMA	Historical	Medium
Size and extent of vegetation community, (fragmentation?)	Area coverage	Remote sensing	Annual	FSZ, PWMA	No	High
	Fragmentation level	Remote sensing	Annual	FSZ, PWMA	No	High
	Fire frequency (extent and timing)	Remote sensing	Annual	FSZ, PWMA	Partly	High

Conservation Target 3: Large herbivore populations

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Population size, distribution and structure	Numbers, distribution	Aerial and ground census	Annual	FZS, WWF	Yes	Very high
Habitat availability/ quality?	Key forage and non-dietary resources`	Permanent plots to monitor vegetation	Annual	FZS	No	Very high
		Fixed point photos				
		Monitor spatio-temporal distance from surface water				
Level of demand/ consumption of illegally harvested bushmeat?	Number of poaching incidences	Counting of carcasses, snares etc	Dairy	FZS	Yes	Very high

Conservation Target 4: Large carnivore populations

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Population size, distribution and structure	Numbers	Trophy quality, tourism sightings, counting	Ad hoc	Conservancies	some	
	Distribution	GPS sightings, collaring, etc	Ad hoc	Conservancies	some	
Population viability (recruitment/mortality?)	Numbers	Surveys				
	Sex ratios, ages	Surveys				
Prey abundance and distribution	Prey abundance	Counting				
	Prey distribution	GPS, GIS and RS				
Trophy quality	Size	Size of jaws				
	Hunt effort (time)	Timing				
	Age	Skull size, length				
Genetic diversity?	Status (condition)	Observations				
	Appearance	Observations				
	Survival	Observations (cohort)				
	Life expectancy/ life span	Collars				

Conservation target 5: Rare, endangered and locally extinct species

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Population size and distribution (data for locally extinct species to be added once introductions complete)	Number in known groups	Tag individuals in each group and then frequent patrols to get counts	Monthly	FZS	No	Very High
	Age and sex structure of known groups	Supplement data from other censuses, e.g. waterhole counts				
	Spatial distribution	Mapping of sightings	Ongoing			
	Individual monitoring		For reintroduced species			
Endemism (killifish)	Killifish distribution	Wet season collections				
Habitat availability	Woodland/grassland levels	Measurement system to be devised	Annual	FZS	No	Very High
Genetic diversity (for introduced species)	Level of gene diversity	Genetic analysis	5 years?	FZS	No	High

Conservation Target 6: Wildlife corridors

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Size and extent of corridors	Changes surrounding land use	Remote sensing, ground inspection	Annual	PWMA, FZS	No	Medium
	Barriers	Fencing, mining	Annual	PWMA, FZS	No	Medium
Habitat quality	Canopy cover	Remote sensing	2 years	Universities	No	High
	Use by wildlife	Ground inspections, collar studies,	Ongoing	RDCs, CESVI	Yes?	High
		Aerial surveys	2/3 years			

Conservation Target 7: Shangaan heritage

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Integrity of sites	Status and condition	Observations	Seasonal	PWMA, FZS, RDCs	No	High
Place names and meanings	Record the number of sites that are important to the local Shangaan community	Involve community representative in developing inventory	Seasonal	PWMA, RDCs	Yes	Medium

Conservation Target 8: Wilderness Values

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Remoteness and levels of development	Average Euclidian distance from made structures	Measure in GIS	Every 3 years	FZS	No	High
Access	Rate of vehicle access per region	Counting number of tyres of vehicles accessing each region	Daily counting, monthly summary		FZS	High
	Numbers of walking safaris					

Conservation Target 9: Natural geographic landforms

Ecological Attribute	Indicator of change	Method of measurement	Collection frequency	Potential partners	Already being collected?	Priority
Remoteness	Average Euclidian distance from made structures	Measure in GIS	Every 3 years	FZS	No	High
		Conduct EIA's				
Integrity of feature	Erosion	Ground surveys				

The following table summarises the “deliverables” that can be expected to ensure that the Biodiversity and Natural Resources Management Programme is implemented. It focuses on things that can be “ticked off” and is expected to act as a guide to help with the implementation of this programme.

Table B.14: Plan “deliverables” summary – Biodiversity and Natural Resources Management Programme			
Electronic	Documents	Infrastructure	Other
Objective 1: Biodiversity and ecological processes of Gonarezhou and adjacent areas conserved through an adaptive management approach			
Exotic plant database	Revision of Rhino re-introduction		Disease surveillance programme
	Feasibility report for Lichtenstein’s hartebeest		Exotic plants workshop
	Protocol for herbivore population supplementation		
	Elephant management plan		
	Protocol for carnivore population supplementation		
	Assessment of existing artificial water		
	Thresholds of potential concern documents		
Objective 2: Human impacts on the Gonarezhou ecosystem managed and mitigated			
Law enforcement databases	Law enforcement analyses (monthly, quarterly and annually)		Input into quota setting meetings
Hunting database	Strategy for species of special concern		Collaboration with upstream users
River health databases	GNP road plan		
Fire databases	Expanded river health monitoring		
	Appropriate and approved EIAs		
	Fire management plan		

Table B.14: Plan “deliverables” summary – Biodiversity and Natural Resources Management Programme			
Electronic	Documents	Infrastructure	Other
Objective 3: Monitoring and research addresses management needs effectively			
Basic monitoring databases	Revised ecological monitoring framework		Staff training
User-friendly GIS	New vegetation map		Additional staff
Functional electronic bibliography	Expanded photopanorama points		Basic monitoring and laboratory equipment
Functional backup system	Corridor surveys		
	Fire mapping		
	Ecological monitoring reports		
	Updated research priorities		
	Improved species lists		

Table B.15: Mitigation measures for the Biodiversity and Natural Resources Management Programme		
Development/Activity	Potential Impact	Mitigation Measures
Rhino reintroduction	<ul style="list-style-type: none"> • Improved enforcement • Raising of conservation status 	•
Other species reintroductions	<ul style="list-style-type: none"> • Raising of conservation status 	•
Herbivore population supplementation	<ul style="list-style-type: none"> • More wildlife 	•
Carnivore population supplementation	<ul style="list-style-type: none"> • Lions are key tourism species 	• Care to be taken with this one
Fires reduced	<ul style="list-style-type: none"> • Healthier vegetation 	•
Elephants managed	<ul style="list-style-type: none"> • Healthier vegetation 	•
Exotic species controlled	<ul style="list-style-type: none"> • Healthier vegetation 	•

C

SUSTAINABLE TOURISM PROGRAMME



Swimuwini Camp



SUSTAINABLE TOURISM PROGRAMME

C.1 PURPOSE, BACKGROUND AND KEY COMPONENTS

C.1.1 Programme Purpose

SUSTAINABLE TOURISM PROGRAMME PURPOSE:

GNP tourism developed and managed in order to provide an outstanding wilderness experience and education for both local and international visitors, and to generate optimal economic benefits to all stakeholders and partners, whilst maintaining the park's vision and exceptional resource values.

C.1.2 Background

Introduction

Gonarezhou is a place of varied and scenic beauty, with the main physical attractions being the large rivers (Mwenezi, Save and Runde) and the world-famous Chilojo Cliffs. The vegetation of the park is varied and runs through miombo derived woodlands and sandveld vegetation on higher areas to mopane woodlands on the lower ground. Historically, the park has not been considered a good wildlife viewing destination for a number of reasons. These include low numbers of most species, a poaching history, the secretive nature of some animals and the terrain. However, the situation appears to be changing and the wildlife experience is improving. But wildlife viewing in the Gonarezhou is both a challenging and rewarding experience.

The Gonarezhou wilderness is one of the most saleable assets that the park has. The problems of access to the park, and the depressed state of the tourism industry in Zimbabwe during the last decade, has left the park with a relatively undeveloped interior where all accommodation are limited to campsites with basic facilities. The lack of permanent accommodation facilities within the park opened up an opportunity to plan for the park using wilderness as its key feature.

Access

The location of the Gonarezhou, well away from other tourism circuits in Zimbabwe, means that access for the general tourist is difficult. Most visitors to the park are self-drives and more than 80% of these are of Zimbabwean origin. There is an international airport at Buffalo Range but currently there are no scheduled flights into the area. Few tourist operators use the park at present.

Access within the park is also difficult and it is only possible to cross the Runde inside the park in the dry season. This effectively cuts the park in two during the rains and access between the two main tourism areas (Chipinda and Mabalauta) is limited at this time. Many of the roads are in poor condition.

There are a number of “official” access points into the Park but only one is manned at present – Gonakudzingwa. Visitors report to either Chipinda Pools or Mabalauta on arrival. There is need to consolidate the number of entry points into the Park, and to construct basic gate and entry facilities at designated entry points.

GLTP and Market Position

The Gonarezhou National Park is part of the Great Limpopo Transfrontier Park which also includes the Kruger NP (in South Africa) and the Limpopo NP (in Mozambique). It is important that the three parks compliment each other and do not compete for the same market. South Africa is a regional economic powerhouse and has marketed the Kruger as a mass tourism destination in the past. However, they are now moving away from this and are trying to sell the wilderness aspects of the park, but they are in no position to compete with Gonarezhou. The Transfrontier Conservation Area treaty regarding the GLTP was signed by the Presidents of Zimbabwe, Mozambique and South Africa but the ZPWMA is responsible for the agreements relating to the treaty.

Existing Tourism

Historically the South East Lowveld of Zimbabwe has been an area which has received relatively little attention as a tourism destination. A combination of factors, including access that is mostly restricted to the dry season, major droughts in the early 1980's and 1990's, unscheduled closures and it's significant distance from the main tourism centres in Zimbabwe, has contributed to the fact that GNP has not extensively been utilised as a regional and/or international tourism destination.

Gonarezhou has traditionally catered for local visitors seeking a wilderness experience, with amenities focused on providing camping facilities and basic self-catering accommodation. All tourism facilities have been provided by ZPWMA to date.

Current tourism is focussed on the Runde and Mwenezi rivers with exclusive campsites located along both of these rivers. There are three public campsites with shelters and ablutions areas, two being located in the HQ areas of Chipinda Pools and Mabalauta with the third at the exit of the Runde Gorge (Chinguli).

Nine self-catering lodges have been built at Swimuwini, a few kilometres from the Mabalauta HQ station. These have recently been connected to the ZESA grid. Two more lodges are under construction at Chipinda Pools.

In total there are 383 “beds” available in Gonarezhou National Park, but many of the exclusive campsites are only used sporadically. A brief overview of tourism in the park is included as Appendix 2 with the site locations shown in Appendix 3).

Table C.1: Current accommodation available in the Gonarezhou NP					
Type of accommodation	Save-Runde		Mabalauta		TOTAL bednights available GNP
	No. of sites	No. of beds	No. of sites	No. of beds	
Exclusive Campsites	17	170	6	60	230
Public Campsites	2	89	1	36	125
Lodges			9	28	28
TOTAL		259		124	383

Fourteen concession sites were allocated to investors in 2006 but none of these were developed which led to the ZPWMA withdrawing the sites in 2009 (See Appendix 4).

Activities

The main activities on offer in the park include game viewing from vehicles and limited walking. Fishing was a very popular activity but has been regulated during the last few years and is currently restricted to identified sites along the Runde and Mwenezi rivers.

Although in principle guided walking safaris in the company of ZPWMA rangers are possible, this activity takes place very rarely at present. Walking safaris by commercial operators have been carried out, as have guided 4x4 trails. The development of these types of activities is considered to be an important component of tourism in the Gonarezhou.

Adjacent Areas

The Gonarezhou is surrounded by hunting concessions, both in Zimbabwe and Mozambique. Most of the hunting takes place along the boundaries of the park and it is the source of the trophies taken by the hunters. Many hunting areas in Zimbabwe are administered through the CAMPFIRE programme and the Rural District Councils (in this case, Chiredzi and Chipinge) will distribute the proceeds from the hunting to the appropriate community.

C.1.3 Key Components

The Sustainable Tourism Programme has a number of components and these are described below (Table C.2).

Table C.2: Key components of the Tourism Programme	
Aspect	Brief Description
Development and management of tourism	Existing tourism needs to be managed and the proposed tourism development plan needs to be implemented. Regulations regarding the use of the park by tourists need to be clearly defined and enforced.
Marketing	Marketing of the attractions of the park needs to be improved. The ZPWMA should collaborate with tour operators to ensure that the tourism product is well known and appreciated in the marketplace.
Trans- Frontier Aspects	Gonarezhou is an integral part of the Greater Limpopo Transfrontier Conservation Area, and agreement which has been signed into place by the presidents of Zimbabwe, South Africa and Mozambique. This programme is responsible for the tourism aspects of this initiative.
Education/ Interpretation	Education of the public about the environment is one of the important functions of the tourism programme. This includes ensuring that school groups and other educational entities are catered for.
ZPWMA Tourism facilities	The ZPWMA runs its own tourism facilities in the Gonarezhou and is responsible for ensuring that these are successful and that they help to fund the management of the park.

C.2 THREATS, ISSUES AND CONCERNS

There are a number of threats, issues and concerns facing the development and management of tourism in Gonarezhou. These are summarised below before being described more fully in the following text. The identification of these threats, issues and concerns helped to develop the objectives for the programme.

Table C.3: Summary of threats, issues and concerns			
Infrastructure	<ul style="list-style-type: none"> • Poor access • Poor road network • Roads not designed with tourism in mind • No bridge over the Runde • Major road and railway bisects the park • Few tourism facilities 	Administration	<ul style="list-style-type: none"> • Pressure for development • Effectively two parks • Inadequate resources • Economics vs Conservation • Boundary Issues • Little progress in Sengwe • Slow GLTP Progress
Environmental	<ul style="list-style-type: none"> • Nervous and aggressive wildlife • Increasing elephant population • Declining water flows in rivers • Upstream Dams • No water in many parts of the park • Supplemented water Issues • Large pans with a fluctuating water regime 	Tourism Product	<ul style="list-style-type: none"> • Poor GLTP linkage • Poor image of Zimbabwe • Poor marketing • Unrealistic investor expectations • Poor tourism monitoring • Little hunting and photographic integration • Zimbabwean access becoming more expensive
Community	<ul style="list-style-type: none"> • No detail on cultural sites • No community involvement in tourism/ park • Poor communications • Problem animals • Livestock prevalent in many parts of the park • Chitsa issue not being resolved at local level 		<ul style="list-style-type: none"> • Tourism product not diversified • Little revenue from tourism • Little accessible information • Harsh and hot environment (Including diseases) • Large parts of the park unutilised • Extensive areas with poor game viewing • Tourism carrying capacity not defined – inside and outside • Poor GLTP linkage • Reservation problems • Problems with leases

However, there are a number of opportunities that need to be considered when planning for the Gonarezhou. These include

- Wilderness
- GLTP
- Options are still open. Planning the park from “scratch”
- Regional tourism linkages (Vic Falls, SE Lowveld, Mozambique)
- GNP has the potential to become a “unique” tourism destination.
- Integrity of the management authority
- Conservancy linkages – GNP is SE Lowveld catalyst for tourism
- Extensive commercial farming community who can become park users
- Rich cultural heritage (both inside and outside GNP)
- On Maputo-Harare proposed main access route

Table C.4 : INFRASTRUCTURE threats, issues and concerns facing the Tourism Programme	
Issue/Concern	Description
Poor Access	Access for tourists to the south-east lowveld is poor. The area is well away from the other established tourism circuits of Victoria Falls, Mana and Nyanga and hence is never an add-on to these destinations. There is an international airport at Buffalo Range and an upgrade has been discussed for many years. However, some kind of critical mass may be needed before this upgrade actually becomes a reality.
Poor road network	The road network in the park is not well developed, especially in the north. Many of the roads and tracks have been allowed to deteriorate and some are no longer passable without significant investment in road works. The Mabalauta area has a better developed all-weather network but away from this the standard of the tracks drops significantly. A recent development has been the upgrading of the track between Chipinda Pools and the Chilojo Cliffs into an all-weather road.
Roads not designed with tourism in mind	As with many parks, the road network was developed 50 years ago and was not designed with tourism in mind. Many of the roads in the park are straight as they follow old fence lines. This type of alignment is functional rather than being interesting and there is an urgent need to re-align some of these tracks.
No bridge over the Runde	Access across the Runde river is problematic since the demise of the Runde high-level bridge in 2001. Currently there are several low water crossing points within the park with the one at Chipinda Pools (Madawo Crossing) being built-up. All of these crossings become unusable one the river rises and the Madawo Crossing needs to be re-constructed annually. This effectively limits activities from Chipinda Pools to the northern bank of the river.
Major road and railway bisects the park	The main railway to Maputo from Zimbabwe and the proposed Harare to Maputo road link runs through the park. Although traffic on this route is currently light the circumstances may change especially as this road is scheduled to be surfaced sometime in the future. There are many examples of main roads through national parks and they are always a management challenge. This is exacerbated in the Gonarezhou as noise from the railway line can significantly impact on the wilderness aspect of the park.
Few tourism facilities	At present there are few tourism facilities within the park. Roofed accommodation for guests is limited to the ZPWMA lodges at Swimuwini

Table C.5 : ENVIRONMENTAL threats, issues and concerns facing the Tourism Programme	
Issue/Concern	Description
Nervous and aggressive wildlife	<p>Gonarezhou has a reputation for nervous wildlife, which is often seen disappearing into the bush at the approach of tourists. While this may have been true it appears that the wildlife in certain areas has become more habituated to vehicles and good wildlife sightings are becoming more frequent.</p> <p>Gonarezhou also has a reputation for aggressive elephants and there are a number of attacks on record.</p>
Increasing elephant population	The recent elephant survey of Gonarezhou and the surrounding areas shows a significant increase in the numbers of elephants. Most of the estimated 9,000 animals (upper limit of the estimate) are concentrated in the park. Given that many experts believe that the park is only capable of supporting half of this number, there is a potential for significant habitat modification to occur. There may also be a substantial die-off of elephants in a bad drought.

Table C.5 : ENVIRONMENTAL threats, issues and concerns facing the Tourism Programme

Issue/Concern	Description
Declining water flows in rivers	All of the major rivers flowing through the park have been dammed upstream and flows are thought to have significantly declined as a result. There is an urgent need to quantify this decline and engage in discussions with other users in an attempt to mitigate these effects.
Dams	Related to the above is the issue of dams. The Mwenezi is dammed at Manyuchi and any water issues appear to be between sugar growers only and the park is not considered at all. There is the possibility of a new dam on the Runde which has the potential to significantly affect water flows in this river and the ZPWMA needs to be involved in any environmental assessments of this structure.
No water in many parts of the park	At the height of the dry season surface water is limited to the large rivers, the two dams and some large pans (depending on the rainy season). This then is the ecological bottleneck that will determine the upper limit of wildlife populations in the park.
Supplemented water issues	In the past management attempted to resolve the water problem by drilling a significant number of boreholes and pumping water into selected pans. Current thinking, based on the experiences in other areas (including Kruger), is not to allow and supplemented water. However, there is always pressure from operators to allow pumping of pans to attract wildlife to their facilities.
Large pans with a fluctuating water regime	The two large pans near the Save-Runde confluence (Tambahata and Machiniwa) have a fluctuating water regime, Although full, and a magnet for wildlife and birds, during the preparation of this plan they are periodically dry throughout the entire season. This makes it difficult to base any tourism facilities in these areas.

Table C.6: COMMUNITY threats, issues and concerns facing the Tourism Programme

Issue/Concern	Description
No detail on cultural sites	There are a number of references to the cultural significance of sites in the park but to date this has not been properly mapped and detailed.
No community involvement in tourism	Communities are not involved in tourism within the Gonarezhou National Park at present. However, it must be stated that communities and the Rural District Council benefit through the safari hunting taking place on land surrounding the park. All of these hunting activities rely on the existence of Gonarezhou. In addition, there are two community linked tourism establishments on the eastern border of the park which make significant use of the Tambahata area.
Poor communications	In general, there has been poor communications between the ZPWMA in Gonarezhou and the surrounding communities.
Problem animals	Wildlife from the park, especially elephants, are a continual problem for the surrounding communities
Livestock prevalent in parts of the park	As the dry season progresses, and especially during drought years, cattle are found in many parts of the park. This in response to poor grazing in the communal areas and the presence of water in the larger rivers.
No direction on Chitsa issue	The invasion of the north of the park has become a political issue and now cannot be resolved at the local level.

Table C.7: ADMINISTRATIVE threats, issues and concerns facing the Tourism Programme

Issue/Concern	Description
Pressure for development	There has been considerable pressure for development of the park. Recently 14 lodge sites were awarded, some of them at inappropriate sites. The possibility of this pressure returning in the future should always be considered
Effectively two parks	Although gazetted as a single national park the area has two separate management centres – Chipinda Pools and Mabalauta who directly report to the regional office. This tourism plan is for the whole park and not for two separate chains of command.
Inadequate resources	The ZPWMA is perceived to have inadequate resources to implement the management plan.
Economics vs Conservation	The trend of state wildlife management authorities needing to become financially self supporting leads to a situation where they move away from their primary goal of conservation. The need to generate funds becomes a powerful motivating force when decisions regarding tourism are taken.
Boundary issues	There are several unresolved boundary issues in the Gonarezhou and these may impact on the tourism programme. These include some prime areas adjacent to the park.
Slow progress in Sengwe	Although the Sengwe corridor area has been gazetted, the area still needs to be demarcated and there appears to be no firm date for this clearance to be completed.
Slow GLTP progress	The GLTP is a vital component of the tourism programme for the Gonarezhou but progress is slow, sporadic and sometimes driven from the top without reference to the individual parks.

Table C.8: TOURISM PRODUCT threats, issues and concerns facing the Tourism Programme

Issue/Concern	Description
Poor GLTP linkage	The Sengwe corridor is the official linkage between the Kruger and Gonarezhou National Parks, the link is tenuous at best. There are also areas to the north of the “official” corridor which, although they do not have much wildlife, are scenic and perhaps some thought should be given to their inclusion in the corridor.
Poor image of Zimbabwe	Zimbabwe has a poor image with regards to tourism in many parts of the world. This has resulted in a significant downturn in visitors during the past decade and this is also reflected in Gonarezhou. However, many of the visitors to the park are from South Africa who may be less influenced by the internal politics of the country.
Poor marketing	Marketing of Gonarezhou is limited at present and there is no concerted drive to improve the awareness of the park and what it has to offer.
Unrealistic investor expectations	Gonarezhou is a difficult area in which to make a success of tourism. The lack of access, poor roads, short season, the heat and other factors mean that an operator needs to be committed in order to create a successful business. There is a perception in some circles that tourism is an easy way to make money and it should be clear that this is not the case in Gonarezhou under the current circumstances.
Poor tourism monitoring	Until recently there has been little monitoring of tourism. Once this tourism plan goes to the implementation stage it will be vital the industry and the market itself is monitored to define with the future direction of the tourism product in Gonarezhou

Table C.8: TOURISM PRODUCT threats, issues and concerns facing the Tourism Programme	
Issue/Concern	Description
Little hunting & photographic integration	The Gonarezhou is the source for all the trophies taken in the adjacent hunting areas. There is little integration between these two activities and this may become a problem when tourism levels increase.
Park fees	The park fees have recently been increased and many members of the Zimbabwean public feel that access to the park is now out of reach
Product not diversified	
Little revenue from tourism	Low tourism numbers and the low cost of camping in the park means that income to the park from tourism is low.
Little accessible information	Although a great deal of information exists for the park, little of is in accessible form for tourists
Harsh and hot environment	<p>Gonarezhou is a challenging environment for tourism, especially in the summer months. More than 50% of visitors come to the park in July, August and September. Once the rains begin numbers drop significantly. In addition, the excessive temperature prior to the rains makes the park an uncomfortable destination.</p> <p>Diseases such as malaria and bilharzias are common in the area and it is likely that a percentage of visitors will become infected.</p>
Large parts of the park unutilised	There are large parts of the park which are unutilised. This is due in part to the current state of the road network, but also to the limited game viewing opportunities found in many parts of the park.
Extensive areas with poor game viewing	Related to the above concern is the fact that there are large parts of the park with limited game viewing opportunities.
Tourist carrying capacity	Tourist “carrying capacity” is not clearly defined, either inside or outside the park.
Poor GLTP linkage	The physical linkage to the GLTP is through the Sengwe Corridor. At best this is a tenuous linkage and complicated by the minefield which still needs to be cleared.
Reservation problems	Booking the Swimuwini lodges can be a problem and much of this can be attributed to communications.
Issues with leases	Many of the leases issued by the ZPWMA suffer from being unclear and ambiguous and this was also true of the previously issued 14 leases for Gonarezhou. The leases need to be tightened up to protect both the investor and the authority.

C.3 GUIDING PRINCIPLES

The following guiding principles were elaborated for the Tourism Programme after consideration of the issues and concerns, the identified opportunities and a review of national and international policies, Acts and initiatives. The guiding principles are listed below before being described in more detail.

1. A wide-ranging view will be taken during planning
2. Utilisation of the park and its resources will benefit surrounding communities
3. The wilderness character of the park will be the driving force behind tourism
4. Permanent developments must be peripheral
5. Tourism will be diversified and will concentrate on a low volume-high quality integrated product
6. Mabalauta will be the focus for GLTP linkage
7. Gonarezhou should be a learning and enriching experience
8. Tourism development will be phased
9. Tourism development will be adaptive

1 A wide-ranging view will be taken during planning

Local, national and international conservation/tourism linkages must be supported. The GLTP is an important and significant regional development that has been approved by the highest levels of government in Zimbabwe, Mozambique and South Africa and this base should be consolidated. The tourism programme must consider all facets of the industry, including the surrounding hunting industry (in both Zimbabwe and Mozambique), and the potential for international linkages within the GLTP.

2 Utilisation of the park and its resources will benefit surrounding communities

Currently there are few benefits to the surrounding communities resulting from tourism activities inside the park. However, it must be noted that the park is surrounded by hunting concessions who rely on the park for trophy animals. Twenty to thirty elephants are shot annually in the concessions adjacent to the park in Zimbabwe by visiting sport hunters and it is likely that these animals originate from within Gonarezhou. The trophy fees for these and other animals generate income for the communities surrounding the park. In addition, there are two community linked lodges on the eastern boundary of the park that rely on the park for many of their activities.

3 The wilderness character of the park will be the driving force behind tourism

The wilderness character of the park will be the competitive advantage for Gonarezhou within the GLTP and, if carefully exploited, is likely to generate the greatest sustainable financial returns and prestige for the park in the long-term. The tourism plan must not compromise on the wilderness qualities of the park for short-term gains. . Wilderness, or the perception of wilderness, is expected to be a significant part of any marketing drive for the park and almost half of the park has been placed in this category

4 Permanent developments must be peripheral

In keeping with Wildlife Policy (1992) all permanent and other substantial developments should be on the periphery of the park or, where possible, outside its boundaries. For the Gonarezhou, permanent developments are those that use concrete at any stage, including plinths onto which tents will be erected.

5 Tourism will be diversified and will concentrate on a low volume-high quality integrated product

Traditionally known as a low budget camping destination, especially in the north, the time has come for the tourism product to be diversified and more focussed. This tourism plan will encourage a low-volume, high-quality approach to tourism and a range of products and activities will be on offer.

It may be necessary to define the “low-volume” approach. Low volume doesn’t mean that the philosophy will be to decrease tourist numbers. Rather it means that fewer tourists will generate a higher income per visitor. This will ensure that the wilderness of Gonarezhou will endure into the future.

6 Mabalauta will be the focus for GLTP linkage and a higher tourist density than the rest of the park

The Great Limpopo Transfrontier Park agreement was signed by the heads of state from three countries in 2002. The Mabalauta area is expected to be the focus for this linkage through the Sengwe Corridor. A crossing point over the Limpopo is proposed which will extend the season and allow a free flow of tourists between Kruger and the Gonarezhou.

As this area will be the main linkage for the GLTP it will also be developed to support a higher density of tourists than the rest of the park.

7 Gonarezhou should be a learning and enriching experience

Most of Gonarezhou is a challenge for conventional tourism. Much of the park has low levels of wildlife; the climate at certain times of year can be debilitating; access is limited during the rains and the straight roads can be uninteresting. However, the park contains hidden secrets for those who know where to look and this aspect needs to be conveyed to visitors. Visitors need to come away from Gonarezhou with a more acute appreciation for the wilderness and the relatively harsh environment. The Gonarezhou experience will be an adventure for those who make the effort to seek it out.

8 Tourism development will be phased

Development of tourism in Gonarezhou will be phased. This plan does not advocate a plethora of sites ready for the tendering process. Rather it recommends the paced development of facilities, which can start off small and then evolve into something more permanent once the economic environment can support it.

9 Tourism development will be adaptive

An open mind should be kept with regard to the development of facilities and activities, as long as they fit into the overall plan for the park. Any proposals for activities will be subjected to a trial period to assess suitability and problems prior to being incorporated into the tourism product for the park. It will be important to define the procedure by which the ZPWMA decides if a trial was successful or not.

C.4 PERMITTED TOURISM DEVELOPMENTS

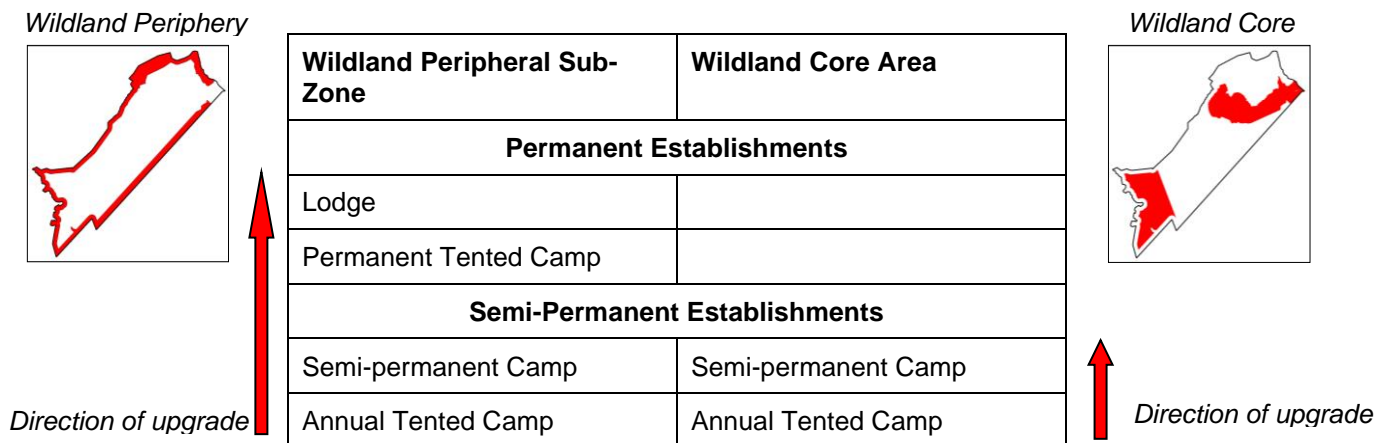
C.4.1 Introduction

Gonarezhou will be marketed as a “wilderness park”. This is to ensure that it develops a unique brand for itself within the GLTP and does not attempt to compete with the Kruger National Park. In order for this to be effective there must be strict rules about the types of development permitted inside the park, and more specifically, inside the designated Wilderness Zones. This section defines the permitted tourism developments for Gonarezhou National Park.

Tourism accommodation in Gonarezhou will be of four main types. These are

- Permanent structures (only in the Wildland Peripheral Sub-Zone)
- Semi-permanent structures (in Wildland Zones – both Peripheral and Core areas)
- Campsites (All parts of the park)
- Other Sites (Wildland Zones)

Developments will be phased within the first two groups (permanent and semi-permanent). For example, a site could progress from being an annual tented camp to becoming a semi-permanent camp. However, a semi-permanent camp cannot change grouping and start becoming a permanent structure, unless it is within 2.5 km from the park boundary. Similarly, a permanent tented camp could become a lodge once the economic circumstances are conducive for this type of development.



The option of semi-permanent camps being ZPWMA owned camps should be investigated. In addition, joint venture options should be explored where the ownership reverts to parks. One of these will be established near Chipinda Pools and will serve as an example of this type of camp and also of a joint-venture type of arrangement.

There are some important points to note regarding accommodation facilities inside the Gonarezhou National Park and these are noted below.

- In addition to the zone plan a “conservation gradient (see Fig. 1)” has been defined for the park based on distance from the boundary. Based on this the Wildland Peripheral Sub-Zone has been established which is approximately 2.5 km from the boundary. Permanent tourist accommodation developments will only be permitted within this zone (excluding the Junction Special Conservation Area).
- No concrete structures will be permitted within the wilderness zones (Nyavasikana station excepted as this is a ZPWMA station and a historical anomaly. It cannot be converted for use by tourists.)

- Semi-permanent camps and annual camps will be permitted further than 2.5 km from the park boundary but they have to be inside the Wildland Zones. The definition of semi-permanent reflects that fact that the use of concrete and cement will be avoided. This will reinforce the concept that there are significant advantages for a developer to locate the camp within 2.5 km of the park boundary.
- Camps will need to be located so that they can be serviced by existing airstrips. The construction of new airstrips will be avoided where possible.
- Silenced generators (or mains power when feasible) will be permitted at camps in the Wildland Peripheral Sub-Zone. All power systems in other camps (i.e. those in the Wildland Core Zone) has to be supplied through alternative renewable power sources. This will help the marketing of the park as an environmental destination.
- Water for any camps away from the rivers will be a major concern. Where possible the camps will need to take cognisance of existing boreholes and see if they can be rehabilitated prior to permission being granted for a new drill-hole. Camps will be permitted to maintain approved small water areas for birds and small wildlife and these will not be in excess three metres in diameter. Any camp using water as an attractant for wildlife must ensure that a monitoring programme is established.
- Leases will vary with the type of camp but the minimum lease for any camp will be five years. As the camps become more permanent the duration of the lease increases.

Traditionally, Gonarezhou has defined its campsites in a different way to the rest of the Zimbabwean national parks. In this plan these definitions have been revised and others added. The details are found in the following sections (3.5.2 and 3.5.3). However, it is useful to have a summary (Table C.9).

Table C.9: Brief overview of proposed accommodation facilities

Type	Previous Name	Brief description
Wilderness Bushcamp		No facilities
Exclusive Campsite	Bushcamps or Undeveloped campsites	Toilet and braai area only
Transit Campsite		Similar to above but less exclusive
Developed Campsite	Developed Campsites	Ablutions, water, shade, attendant
Annual Camp		Entire camp removed during rains
Semi-permanent camp		Can remain all year. Restrictions on building materials
Permanent Camps/Lodges		Fewer restrictions than above, Larger size
ZPWMA Lodges		In development zones only

C.4.2 Permanent / Semi-Permanent Camps

Permanent structures will only be permitted within the Wildland Peripheral Sub-Zone (approximately 2.5 km from the park boundary). This policy will be to encourage investment closer to the edges of the park as there will be a significant relaxation of regulations within the 2.5 km zone adjacent to the park boundary. It should be noted that this does not include the Junction Special Conservation Area.

In addition, the policy will be to encourage investors to build permanent camps and lodges outside the park. This gives them significantly more freedom with building styles and these external developments are expected to benefit the surrounding communities more than if they were located inside the park. This is in keeping with the Wildlife Policy.

Table C.10: Permanent and semi-permanent structures permitted for tourism inside Gonarezhou NP	
Camp Type	Description and Comments
Permanent Camp/Lodge	<p>Permanent camps are permitted in the Wildland Peripheral Sub-Zone. The maximum size of these camps will be 24 beds with only 12 essential staff permitted to live on site. Families and other staff must be accommodated outside the park. Appropriate low noise level generators permitted. Underground cabling permitted if power brought in from outside. Also underground cabling in camp area. Gas or electricity to be used for cooking and heating water. Moulded fibreglass above ground swimming pools permitted. EMA approved EIA required.</p> <p>This category also includes the ZPWMA lodges which are located at Swimuwini and under construction at Chipinda Pools. The ZPWMA lodges are structures of variable capacity built and managed by the Authority. Water and power provided by the Authority (when possible).</p> <p>Lodges only permitted on sites within 2.5 km of the park boundary. However, and where possible, investors will be encouraged to locate outside the park. EMA approved EIA required. Design specifications need to be approved by PWMA and these can be site specific. Maximum size on application but 50 beds recommended.</p> <p>Usually one level, permanent structures of concrete and stone. Can be steel reinforced cement foundations with permanent hard walls; can be a continuous structure with reception, gift shop, dining room, bar, and offices under one roof with interior plumbing and power; can be a series of one level, separated, permanent, steel reinforced cement bedroom structures (cottages etc); swimming pool optional; only essential staff housing; essential parking and storage space permitted on sites within the park. Where feasible staff accommodation should be outside the park. Underground cabling if power brought in from outside. Also underground cabling in camp area. Appropriate, low noise level generators permitted.</p> <p>If located in the park then biodegradable trash buried and combustable materials burned by tour operator. Non-combustable materials removed from the park by tour operator.</p> <p>Four Lodge sites have been loosely identified at the following locations.</p> <ul style="list-style-type: none"> • Chilo (already in existence) • Save Gorge (near Ndali Gate) • Mwenezi River • Runde River (near the Runde Bridge)

Table C.10: Permanent and semi-permanent structures permitted for tourism inside Gonarezhou NP	
Camp Type	Description and Comments
Semi-Permanent Camp (4 Sites) Chipinda Masassanya Dam Mafuku Nyamtire	<p>Semi-permanent tented camps are permitted at identified sites in the Wildland Zones. They will not be permitted in Wilderness Zones. Maximum size is 12 client beds with 6 essential staff permitted to be accommodated on site. Ideally these camps should be 6 to 8 client beds with 4 to 6 staff. No concrete is permitted at these camps, even for floors. Raised wooded floors are preferred, the supports of which can be secured with well packed rocks. Gas must be used for cooking and either gas or solar systems for water heating. Aesthetic wood fires will be permitted.</p> <p>EMA approved EIA required. However, the ZPWMA will develop a template and guidelines for this type of camp. If these guidelines are complied with then EMA approval is virtually guaranteed.</p> <p>If the camp is to remain open throughout the year then a provision must be made for a caretaker to remain on site during the rains. This is to protect the investment and stop illegal use of the structures.</p> <p>No generators will be permitted at these camps and power needs to be supplied through alternative renewable power sources. Toilet systems need to be based on removable septic tanks with rock based soakaways. All developments in these camps need to be approved by ZPWMA on a case by case basis.</p> <p>Biodegradable trash buried and combustible materials burned by tour operator. Non-combustables removed from the park by tour operator.</p> <p>Leases will be for 5 years, with two roll-overs, if all conditions are met.</p>
Annual Camp (5 sites) Mahove Tsetse Site Benji River Gweni Malihandava	<p>Annual camps are permitted in designated areas in the wilderness Zones. All traces of these camps must be removed on an annual basis. Generally they will be erected after the rains (around April) and removed prior to the next rainy season (by the end of November, or earlier).</p> <p>Maximum size is 12 client beds with 6 essential staff permitted to be accommodated on site. Ideally these camps should be 6 to 8 client beds with 4 to 6 staff. No concrete is permitted at these camps, even for floors. Raised wooded floors are preferred, the supports of which can be secured with well packed rocks. Chemical toilets will be encouraged. Gas must be used for cooking and either gas or solar systems for water heating. Aesthetic wood fires will be permitted.</p> <p>Biodegradable trash buried and combustible materials burned by tour operator. Non-combustables removed from the park by tour operator.</p> <p>As the camp must be completely removed on an annual basis the ZPWMA will consider the possibility of the camp being able to change position from year to year, within a pre-defined area. This will allow the operator to react to changing water regimes within a particular area.</p> <p>The lease is recommended for five years and the fees for annual tented camps will be lower than for a semi-permanent camp, as this will help to attract new entrants to the industry.</p>

Figure C.1: Camps in the Gonarezhou National Park



Notes:

- Four Lodge site areas have been identified, one of which is “operational” – Chilo. The other three lodge sites are recognized as having value in the future, once tourism numbers and other market forces are in place. These are Save Gorge, the Mwenezi river and the Runde River (site currently used for hunting is on disputed ground).
- Mahenyas is marked as a semi-permanent camp but is outside the park
- Mahove is in the north bank of the Runde while the Tsetse site is on the south bank
- Gulugi refers to the ZPWMA lodges under construction
- Chipinda Pools refers to a semi-permanent site adjacent to the developed camp site

C.4.3 Campsites, View Points, Platforms etc

Many visitors to the park are expected to camp in one of the five different types of campsite (Table C.11). Only two of these – the developed campsite and the exclusive campsite are currently available in the park.

The current pricing structure for the exclusive campsites and public campsites needs to be inverted. At present it is more expensive to stay in the public campsites than the exclusive campsites. As the exclusive campsites offer privacy and a taste of the wilderness they should be priced significantly higher than the public campsites. This concept should be clearly outlined in the marketing material.

In addition, both the exclusive campsites and the public campsites are sold by site but charged per person. In other words if a site is taken by one person the ZPWMA stand to only make 10% of the value of the site and it is not available for other customers. In future anyone taking a exclusive campsite will be required to pay for a minimum of 5 people.

Table C.11: Campsites permitted for tourism inside Gonarezhou NP	
Type	Description
Overnight Fly Camp	These will be part of a walking trail system that will be developed in both the Wilderness and Wildland Zones. Access will only be on foot and supply by vehicle will not be permitted. Sites are not tied to a specific locality but used site locations must be given to ZPWMA. It is expected that initially sites will vary considerably but, once operators and ZPWMA staff become more familiar with the areas, they will become more fixed. Only for single night occupancy. All litter to be removed. Wood can be collected in the immediate vicinity
Wilderness Bushcamp	These are only in the Wilderness Zones. Recommended that there are four in Pombadzi and five in Guluene. Site identified but no facilities available. User to bring and remove everything, including all litter. Chemical toilets to be encouraged. More expensive than other campsites but differential price structure to encourage use of more remote areas. Only to be occupied for a maximum of 10 days by registered operators and their clients or by members of the general public on application. Maximum number of guests is set to 10.
Exclusive Campsite	Individual sites to be occupied a maximum of 10 people. Long-drop toilet provided. Braai site comprising of a metal stand with fire place. All litter to be removed and bags provided from reception. Wood to be purchased at collection points. Exclusive campsites will be more expensive than the developed campsites. Visitors will be paying for the exclusivity rather than for site developments. Maximum stay 21 days (specified in the general ZPWMA Regulations). A minimum of five people needs to paid for. For example, if only two people use the site, they still need to pay for five people.
Transit Campsite	Initially two sites identified in the Guluene Wilderness Zone. Probably near pans but sited discreetly away from the pan. Onus on tourist for cleanliness but they could be linked to the Annual Camps in the same area. These sites only to be used for two nights maximum as they are transit camps for 4x4 trails. Can only be used after registering either at Chipinda or Mabalauta. Visitors should also check out either through a ZPWMA station or an official gate. Facilities on offer will be minimal (similar to an Exclusive Campsite) but they will be no guarantee that the user will have exclusive use. Individual sites could be discreetly located a short distance away from each other.

Table C.11: Campsites permitted for tourism inside Gonarezhou NP	
Type	Description
Developed Campsite	Generally run by ZPWMA. Maximum 6 people per site. Water borne sewage and showers in ablutions. Hot water generally available. Where possible water provided to individual sites. Wood available on site for purchase. Attendant always on site for protection and maintenance. Where appropriate each site can have a gazebo shelter. Animal proof refuse containers. Currently at Chinguli, Chipinda and Mabalauta.

There will be a number of picnic sites and view points throughout the park (Table C.12). Camping is not permitted at these sites with the exception of the platform at Manyanda Pan. This platform was constructed in the 1980s? along with similar ones at other sites.

Table C.12: Other structures permitted for tourism inside Gonarezhou NP	
Type	Description
Developed Picnic Site	Designated site with shade structure. ZPWMA gazebo shelters where necessary. Long drop at least. Braai site
Un-developed Picnic Site	Designated site but with limited facilities. Details still need to be finalised.
Viewing Platform	Currently only two still functioning at Manyanda and Nyamugwe pans. In the past other locations were at Tambahata and Chidhlambani pans. Toilet on site. Camping permitted only at Manyanda.
View points	No facilities but some kind of demarcation. Sign? No fires. No camping.

C.4.4 Firewood

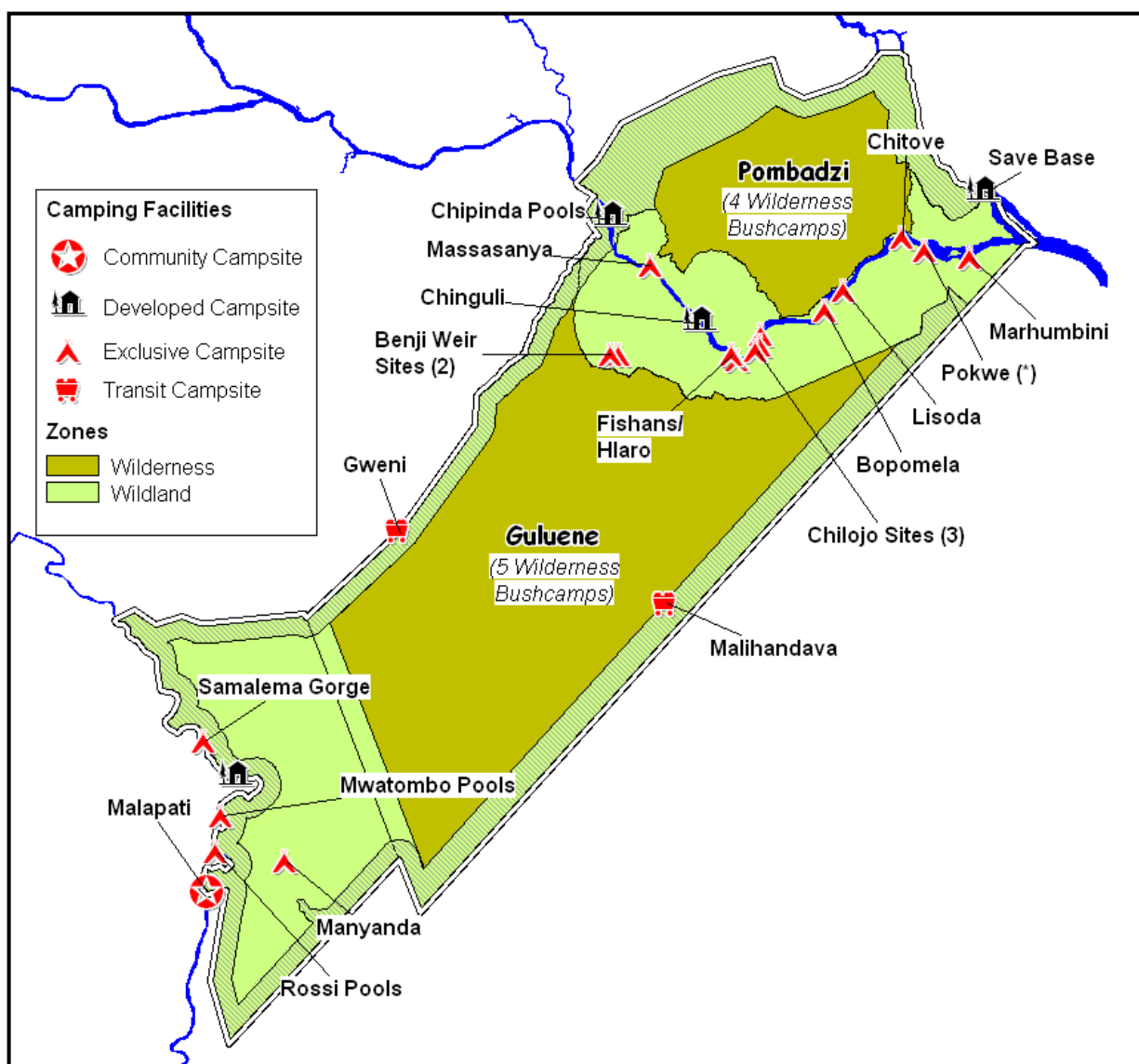
Camping visitors will not be permitted to collect firewood at will. Firewood will be issued by the ZPWMA. Visitors are entitled to a free initial load, after which they need to pay for wood. Wood will be for sale at the following collection points

- Chipinda Pools
- Chinguli
- Save Runde Base Camp
- Mabalauta

A ticketing system is proposed which is paid for at Chipinda or Mabalauta and then the tickets exchanged for wood at Chinguli or Save Runde Base. This will alleviate the change problems and the keeping of cash at remote locations.

Camps will either buy firewood from the ZPWMA or bring this in from outside.

Figure C.2: Campsites in the Gonarezhou National Park



Notes

- Five Wilderness Bushcamps are permitted in the Guluene Wilderness Zone and four of these camps are permitted in the Pombadzi Wilderness Zone. They do not appear on the map as the final positions have not yet been defined.
- A Wilderness Bushcamp will be permitted on top of the Chilojo Cliffs on application. This site must not be visible from below and can only be occupied for one night. The site will be to the east of the two current viewpoints.
- There are 4 developed campsites
- There are 13 Exclusive Campsites in the Chipinda area and four in the Mabalauta area
- The two Transit Campsites will fall under the control of the annual camp operators at Gweni and Malihandawe. They will be used for transit traffic and the facilities will be similar to an exclusive site but they may well be occupied by more than one party
- Pokwe will be a trial where several sites are located relatively close to one another. This will allow larger groups to camp in the same area (sites are currently limited to 10 persons)

C.5 MANAGEMENT INFRASTRUCTURE

Management infrastructure in the Gonarezhou National parks consists of the following:

Infrastructure Type	
Communications	Management
<ul style="list-style-type: none">• Roads (also for tourism)• Airstrips• Radio Masts	<ul style="list-style-type: none">• Staff Accommodation• Offices• Forward Camps

Management infrastructure should be kept to a minimum in Wilderness Zones where possible. However, it is recognised that it may be necessary to maintain this infrastructure in these zones which may have the effect of compromising them.

C.5.1 Roads

It is recognised that the road network in Gonarezhou was not designed with tourism in mind. It is a matter of priority that the layout of the entire road network is revisited and realigned, if necessary. It is also imperative that this is carried out not only with tourism in mind, but also to improve management of the park.

C.5.2 River Crossings

Dry season crossing points for tourists will be defined for the Runde at Chipinda, Fishans, Bopomela and Gayseni. These will be the official crossing points and all other points will be illegal. The official crossing point for the Mwenezi inside the park will remain the Malapati Bridge.

C.5.3 Signage

In keeping with the concept of restricting concrete in the park, a numbered road junction system using discrete wooden posts in conjunction with a map issued to visitors on entry, would help to promote the wilderness aspects of the park.

Signage indicating the way to the park should be placed at appropriate places on roads from Beit Bridge, Rutenga and Chiredzi. These signs should also reflect the status of the GNP in the GLTP. The GLTP should also be reflected in the signage at the entry gates.

C.5.4 Communication Points

There is a need for communication points where tourists could report sightings, illegal activities or problems (e.g. vehicles stuck or broken down). These will be located at Chinguli and the Malugwe area. These sites will have radio contact to either Chipinda or Mabalauta. The Malugwe site would require a semi-permanent presence, probably during the main tourism season. If a control point (see next section) was opened at No. 10, or once the Annual Camp at Gweni is functional, either of these could also function as the communication point.

C.5.5 Entry Points

At present there are three entry points into Gonarezhou. These are Chipinda Pools, Mabalauta and Chikombedzi. There is a need for the number of permanent manned entry points to be increased. In

In addition there is also a need for control points at sensitive areas. Three control point sites were identified but these could shift, if circumstances change.

The permanent manned entry points should be located as follows

Chipinda Pools

- Chipinda Pools
- Runde Bridge
- Ndali Road
- Save-Runde Base Camp

Mabalauta

- Boli
- Chikombedzi
- Malapati Bridge (road junction)
- Sango

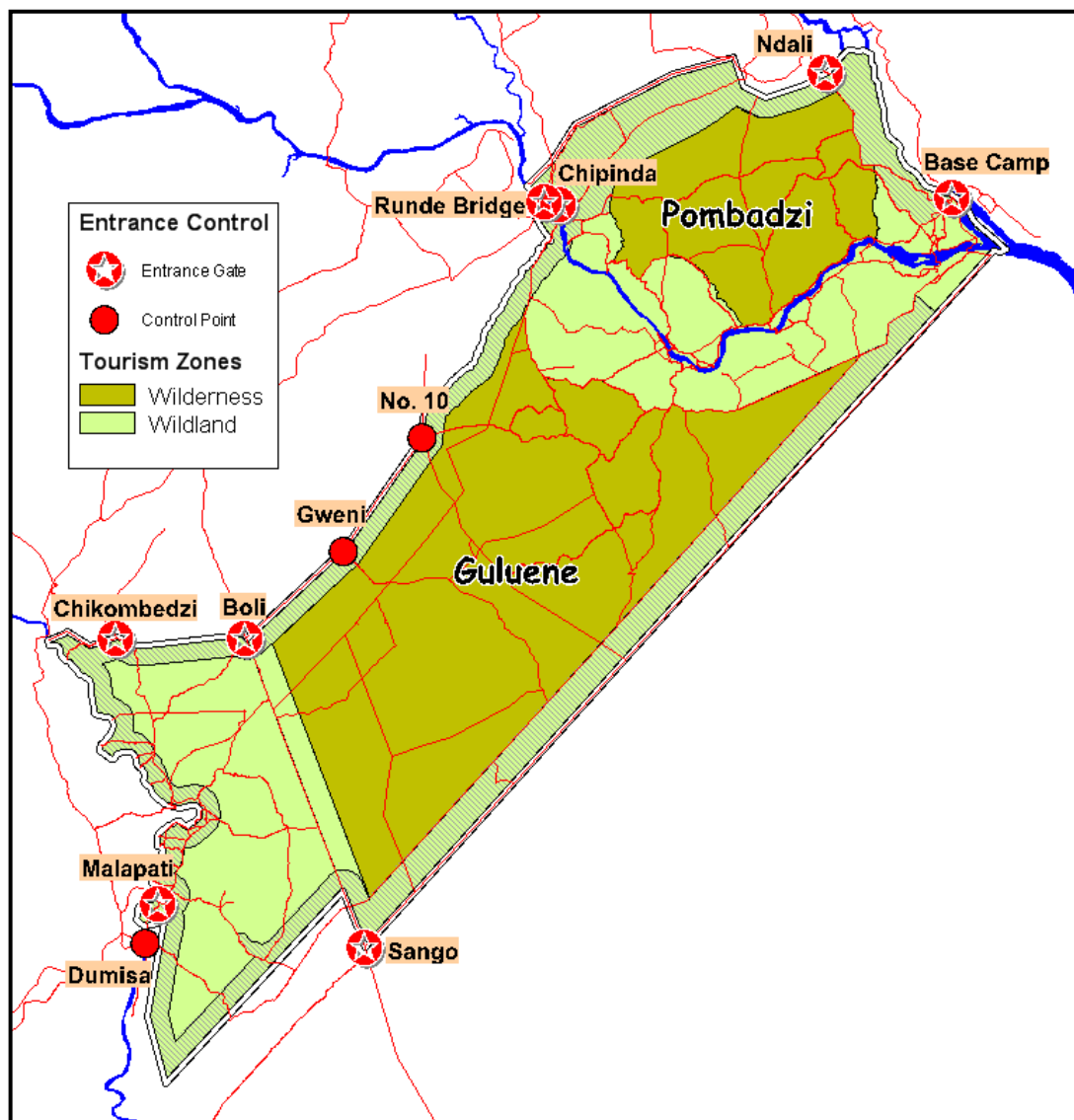
Gates will be similar to those used by the Malilangwe Trust and consist of an office, accommodation and ablution facilities. The possibility of water provision via a borehole would need to be investigated. All gates should be in radio contact with their respective headquarters.

Three control points are recommended

- Dumisa
- Gweni
- No. 10

Control points would be more temporary. Water could be provided by bowser.

Figure C.3: Entry and control points for Gonarezhou National Park



C.6 PERMITTED TOURISM ACTIVITIES

The following activities will be permitted in the Gonarezhou National Park. It is important to define these activities clearly for the avoidance of doubt in the future.

Table C.13: Permitted tourism activities for Gonarezhou	
Activity	Description
Vehicle Based Activities	
Guided game viewing by vehicles	Professionally guided drives need relevant permits and required vehicle licenses etc
Night Drives	Only through (lodge) operators on predetermined routes. This will be a future activity and regulations regarding spotlight colour and intensity need to be established.
Guided 4x4 trails	No off-road driving permitted. Overnight camping permitted in Wilderness Areas. Camping regulations defined for Wilderness Bushcamps (Table 8).
Unguided 4x4 trails	Linkages to bonafide 4x4 clubs encouraged. Many of these clubs have driver and behaviour “qualifications” and it might be good to insist that at least one member of the party is accredited in this way.
Unguided 2x4 and 4x4 game viewing by vehicles	No off-road driving permitted. The 2x4 roads need to be defined and indicated on maps.
Non-Vehicle Based Activities	
Unguided walks	Only permitted in designated zones – currently Chivilila, Nyamutongwe Plateau and Marhumbini. Others may be identified in the future.
Interpretive Walks	Short unguided walks around identified key attractions.
Stretch Points	Places where it is possible to get out of the car. People should stay within 50 meters of the vehicle. These are unmarked spots
Picnic and braaing	At designated sites. Similar to the above category but cooking is permitted. Limited walking (100 meters from the site) is permitted.
Fishing	<p>150 m from booked camping spot. These are as follows</p> <p>Chipinda Pools</p> <ul style="list-style-type: none"> • Chipinda Pools • Chivilila • Chinguli • Chitove • Save Runde Base Camp <p><i>People fishing at these sites must have a booking for the associated campsite</i></p> <p>Mabalauta</p> <ul style="list-style-type: none"> • Makokwani • Nyavasikana <p><i>People fishing at these sites need a permit from the Mabalauta Office</i></p> <p>Limited ‘bag’ of six fish (see Fishing “Code of Conduct”)</p>

Table C.13: Permitted tourism activities for Gonarezhou	
Activity	Description
Overnight camping	Permitted at the Developed Campsites, Exclusive Campsites, Wilderness Bushcamps and Transit Campsites. Overnighiting at established accommodation facilities such as tented camps (annual, semi-permanent and permanent) and lodges is not included here.
Bush Dinners/meals	Very popular in many other areas. Often part of a night drive and run by an established camp. Sites need to be identified and agreed upon.
Guided walks	<p>The concept of trails (both day and overnight) through interesting parts of the park will be introduced during the implementation of this plan, mainly aimed at the Wilderness Zones.. The routes will be experimental at first and the location of the overnight sites for the Wilderness Bushcamps and overnight Fly Camps will be part of the process. Camping regulations are defined for Fly Camps and Wilderness Bushcamps (see Table 8).</p> <p>Trials can be carried out either by registered tour operators with the relevant permits or by ZPWMA staff. However it is a priority that the ZPWMA staff are trained as they will be guiding members of the public into potentially dangerous situations. In addition, they will also be able to provide a better quality service if they are able to inform and educate the visitors. Finally they need proper equipment, specifically appropriate firearms, if they have the need to handle potentially dangerous situations involving large animals such as elephant, buffalo and hippo. ZPWMA should not compromise on the quality of staff allowed to do walks. If no suitable staff are available then no walk will be available.</p> <p>As a first step the following trail areas have been identified.</p> <p>Overnight trails</p> <ul style="list-style-type: none"> Selected rivers in the Pombadzi Wilderness Area – Nyamunyo, Sijililo, Muwawa, etc Runde gorge Lipakwa-Nyamture area (but the Nyamtire site to be specifically avoided) Gonakudzingwa- Nyamugwe Pan <p>Day Trails</p> <ul style="list-style-type: none"> Red Hills Area – <i>Booking essential plus ranger or operator accompaniment</i> Nyahongwe Area – <i>Booking essential plus ranger or operator accompaniment</i> Nyamtongwe Plateau – <i>No booking and unescorted walking permitted</i> Chivilila Area - <i>No booking and unescorted walking permitted</i> Marhumbini - <i>No booking and unescorted walking permitted</i>
Others	
Access to Traditional Sites	These sites need to be defined. If possible guided by a community member but training and indemnity issues need to be resolved. Selected sites could be operator/camp affiliated.
Mountain Biking	This activity may be considered in the future.
Horse safaris	This activity may be considered in the future. If so, horses to be stabled in development areas or outside the park. Regulations for care of horses and for both day and overnight trips need to be defined.

Table C.13: Permitted tourism activities for Gonarezhou	
Activity	Description
Specialist Safaris	Specialist safaris such as those focussing on birds, or amphibians etc will be encouraged

Activities Specifically not Permitted in the Gonarezhou National Park

- Ballooning
- Micro-lighting
- Aerial viewing by light aircraft or helicopters
- Off-road driving
- Elephant back safaris

Table C.14: Summary of permitted developments and activities by zone.	
Zone	Permitted Activity/Development
Wilderness Zones	<ul style="list-style-type: none"> • Overnight camping by licensed operators and their clients • Overnight camping by general public with ZPWMA ranger accompaniment • 4x4 access • Guided walks
Wildland Zones Core Areas	<ul style="list-style-type: none"> • Annual Tented Camp • Semi-Permanent Camp (none designated in this plan but upgrade at annual sites possible in the future) • Camping at designated sites • Picnicking • 4x4 access • 2x4 access • Guided walking • Unguided walking • Fishing
Wildland Zones Peripheral Area – approx 2.5 km from boundary	<ul style="list-style-type: none"> • Lodge • Permanent Camp • Annual Tented Camp • Semi-Permanent Camp • Camping at designated sites • Picnicking • Guided walking • Unguided walking • Fishing

C.6.1 Activity “Codes of Conduct”

The following “Codes of Conduct” have been formulated to inform visitors about appropriate behaviour while camping, walking, picnicking or driving. These must be made available to visitors and should be regarded as enforceable regulations.

These Codes of Conduct can be amended from time to time, if deemed necessary.

Exclusive Campsite Code of Conduct

The exclusive campsite is at the core of the Gonarezhou experience and it there is a need for some regulations to ensure that it continues to be so.

- Walking around your camp is permitted but unless you are part of an organised walking tour please do not venture too far
- No radios or generators are permitted
- Maximum stay is 21 days
- Please use the toilets provided
- Please bury your ash when you are leaving
- The use of gas for cooking is encouraged
- All wood to be purchased at one of the collection points. It is an offence to collect wood in the vicinity of the camp
- All litter to be removed in the bags provided

Walking Code of Conduct

- All litter to removed. At overnight camps combustible material may be disposed of in the fire but you must ensure that it is completely burned
- Human waste must be buried and all toilet paper burnt in the same scrape
- Avoid brightly coloured clothes. More to ensure that you do not disturb other visitors rather than the wildlife.
- Campfire to be properly extinguished and ash to be buried

Fishing Code of Conduct

- Booked campsite visitors can purchase a fishing licence (designated fishing campsites are Chipinda Pools, Chivilila, Chinguli, Chitove and Save-Runde Base Camp on the Runde and Save rivers and at Makokwani and Nyavasikana on the Mwenezi river)
- Fishing by day visitors is not permitted.
- A fishing licence has to be obtained for *every* day that a person intends to fish. A maximum of two rods/person/licence.
- Fishing allowed for 150 m either side of the specific camping site for which a person has booked.
- No fishing from picnic sites or any other day visitor site except at Makokwani and Nyavasikana on the Mwenezi River.
- The Park encourages catch-and-release of all fish caught, especially of predator species such as tigerfish.
- No drying or smoking of fish in the Park; gutting of fish must be done at the pool and not at the campsite.
- A maximum of 6 fresh fish can be taken home per fishing licence (24 max per site)

Picnic Site Code of Conduct

- Fires only permitted in ZPWMA braai sites (e.g Rossi Pools). Wood to be purchased at collection points
- Cooking on gas will be encouraged
- Walking permitted within 100 m radius

4x4 Code of Conduct in Wilderness Areas

- Ensure that your vehicle is mechanically sound
- Always travel with a minimum of two vehicles
- Remain on the tracks at all times
- All litter to be removed
- All human waste to be buried, toilet paper burnt
- When camping follow the Camping Code of Conduct
- Ensure that ZPWMA personnel at either Chipinda Pools or Mabalauta knows your movements
- Carry wood with you that has been purchased from a collection point. Collection of wood from along the trail is not permitted.

C.7 LIMITS OF ACCEPTABLE USE

Defining the carrying capacity for the Gonarezhou is a topic that has repeatedly surfaced during the planning process. Carrying capacity, when referring to tourism, is a concept that has largely been discredited. This is mainly because the limits to tourism use are VERY subjective and relate to a number of factors, some of the important ones being the visitor perception and expectations. It is more meaningful to define a limit of acceptable use

Limits of acceptable use is a tool for defining how much use of an area will be permitted and generally refers to tourist numbers. These numbers are always a compromise between conservation and income generation and are usually set conservatively to compensate for inadequate data on which to base decisions. Another defining factor is the quality of the “tourism experience”.

Monitoring the effects of tourism is a vital component when defining the limits of acceptable use. It is believed that the limits to acceptable use may change in response to changing circumstances, degradation of the environment and the demands of the market. What is acceptable today may well be unacceptable tomorrow and vice-versa.

In this management plan limits of use have been set using a two-pronged approach. Firstly, infrastructure limits have been set by defining accommodation facilities in the zones. Secondly, the types of activities permitted in each zone are listed with definitions of these. The following table (Table C.15) sets some base limits of acceptable use for the different zones within Gonarezhou.

Table C.15: Draft limits of acceptable use for Gonarezhou	
Zone	Limits of Acceptable Use
Pombadzi	<ul style="list-style-type: none"> • No permanent developments • Four groups at any one time • 40 visitors at any one time • 12 vehicles at any one time
Guluene	<ul style="list-style-type: none"> • No permanent developments • Four groups at any one time • 40 visitors at any one time • 12 vehicles at any one time
Save-Runde	<ul style="list-style-type: none"> • 50 vehicles in both zones at any one time
Runde South	
Mabalauta	<ul style="list-style-type: none"> • 50 vehicles in the zone at any one time

Note: These numbers may be temporarily increased at the discretion of the Area Manager. For example to accommodate a large group on request or on special occasions.

This page left intentionally blank so that Zone tables are adjacent to the zone maps in Section C.8



C.8 ZONE DEVELOPMENT SUMMARY

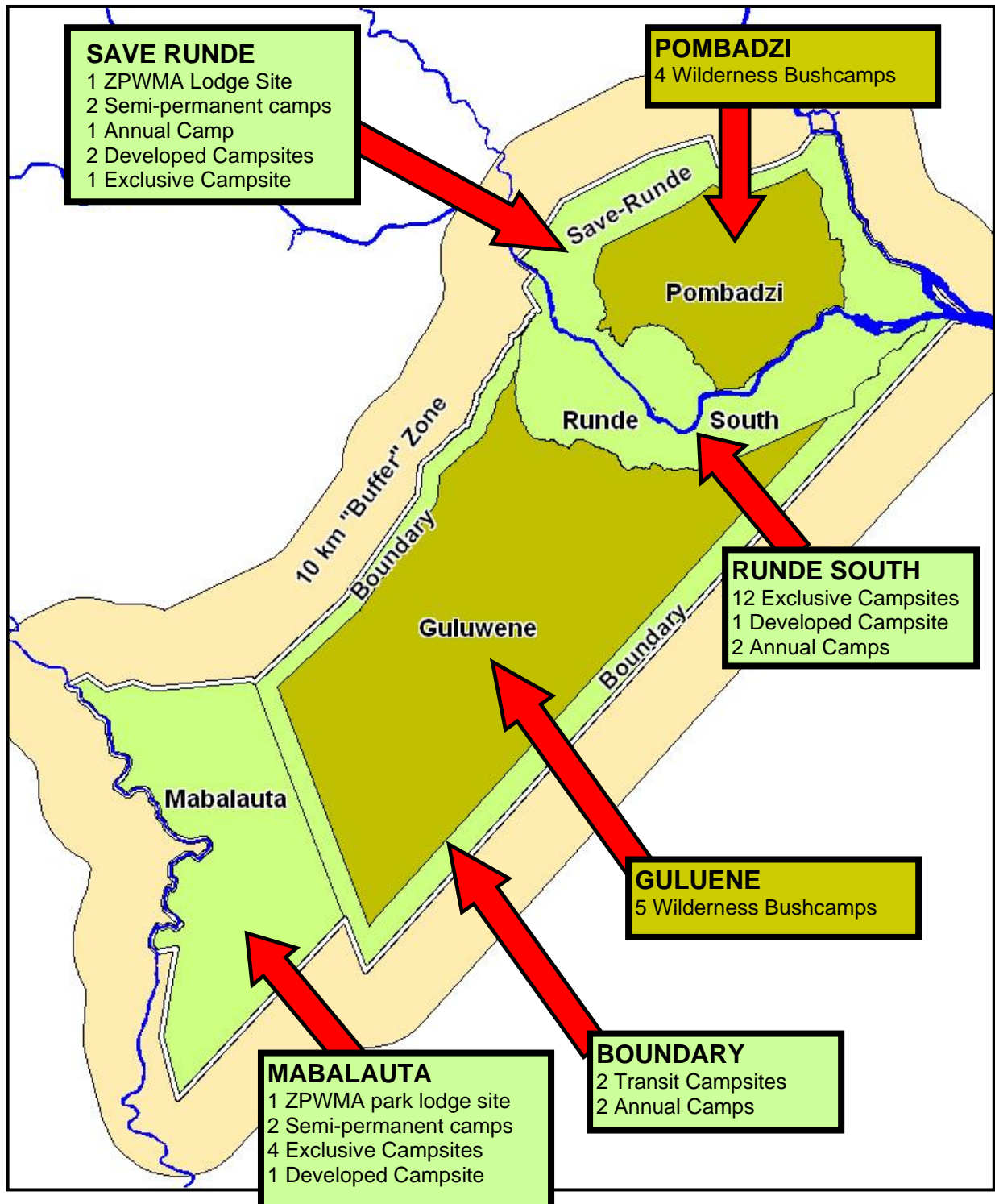
C.8.1 Overview

The number of “beds” available in the park is set to almost double (Table C.16 and C.17). However it must be realised that the development of this plan for Gonarezhou is expected to be phased and the capacity reached during the life of this plan and not immediately. The market will be the driver of the process and small operators should be encouraged to start with the less developed style of camps to ensure that large failures don't occur which will leave the park with unutilised and inappropriate structures. The following pages outline the proposed developments on a zone-by-zone basis.

Table C.16: Summary of accommodation developments by zone		
Zone	Tourism Development	“Beds”
Pombadzi	4 Wilderness Bushcamps	40
Guluene	5 Wilderness Bushcamps	50
Save-Runde	2 ZPWMA Lodges	8
	3 Annual/Semi-permanent camps	36
	2 Developed Campsites (Chipinda, Save-Runde Base)	78
	1 Exclusive Campsite	10
Runde South	2 Annual/Semi-permanent camps	24
	12 Exclusive Campsites	120
	1 Developed Campsite (Chinguli)	36
Mabalauta	9 ZPWMA park lodges	28
	2 Annual/Semi-permanent camps	40
	4 Exclusive Campsites	48
	1 Public Campsite	24
Boundary	2 Transit Campsites (Gweni and Malihandava Pans)	24
	2 Annual/Semi-permanent Camps	24
Totals		590

Table C.17: Summary of developments by type		
Type	Sites	“Beds”
Wilderness Bushcamps	9	90
Exclusive Campsites	17	170
Transit Campsites	2	24
Developed Campsites	4	162
Annual Camps	5	60
Semi-permanent camps	4	48
ZPWMA Lodges	2	36
Totals	46	590

Figure C.4: Overview of tourism developments by zone



C.8.2 Wilderness Zones

There are two Wilderness Zones in the Gonarezhou National park, one north of the Runde River (Pombadzi) and one south of the Runde (Guluene). This section provides some detail on the proposed developments in these zones.

POMBADZI Wilderness Zone: 580 km²	
Rationale	To conserve the Pombadzi catchment with its grasslands and upland areas. This area has also been considered for a rhino re-introduction programme.
Boundaries	<p>Western Boundary: Masassanya River to Main Chipinda road then down to the Pombadzi access road, then along this road to the Sijililo River, then down this river to the Runde access road</p> <p>Northern Boundary: Essentially follows the crest of the Chivonja range and then 2.5 km from park boundary in the Ndali area</p> <p>Southern Boundary: Access road along the Runde river to the Mutandajeva River</p> <p>Eastern Boundary: Follows Mutandajeva River to the Ndali-Save Junction Road, then along this road to 2.5 km from park boundary</p>
Sub-Zones	None
Existing Developments	<ul style="list-style-type: none"> • None • 120 km internal tracks • 40 km Boundary tracks
Proposed New Developments	<ul style="list-style-type: none"> • Four Exclusive Bushcamp sites with no associated developments • Track upgrades • Access tracks to sites
Permitted Activities	<ul style="list-style-type: none"> • 4x4 trails • Guided walks
Notes	Should a rhino reintroduction programme be considered it may have implications for this zone. The location of management infrastructure to support the reintroduction would need to be considered in conjunction with the Sustainable Tourism Programme.

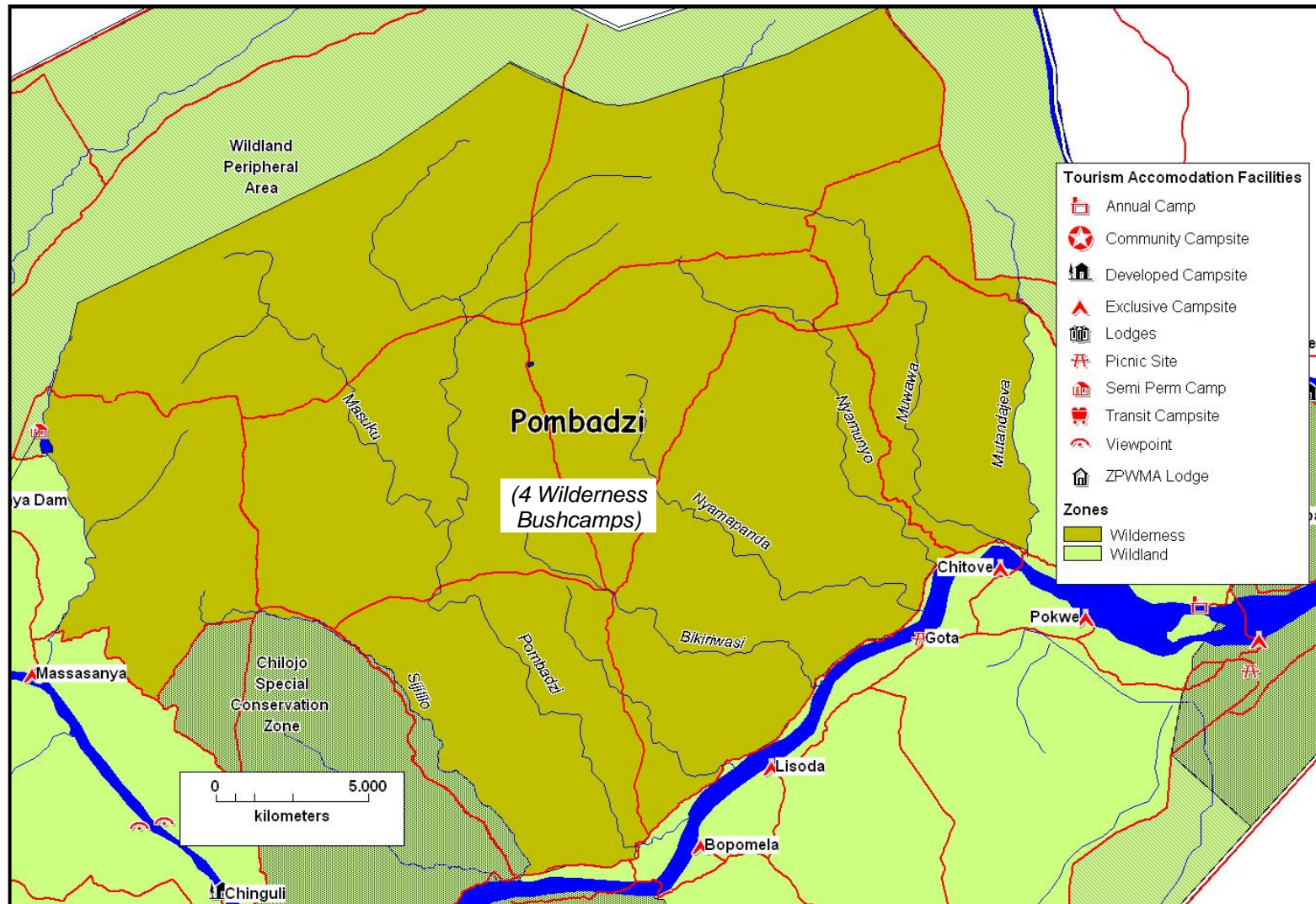
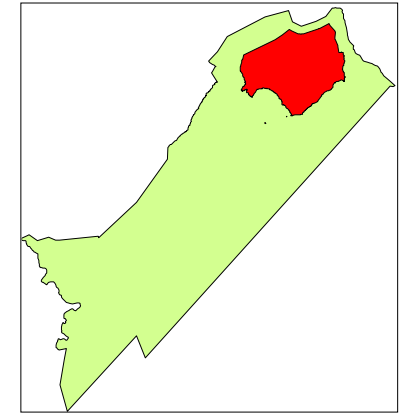


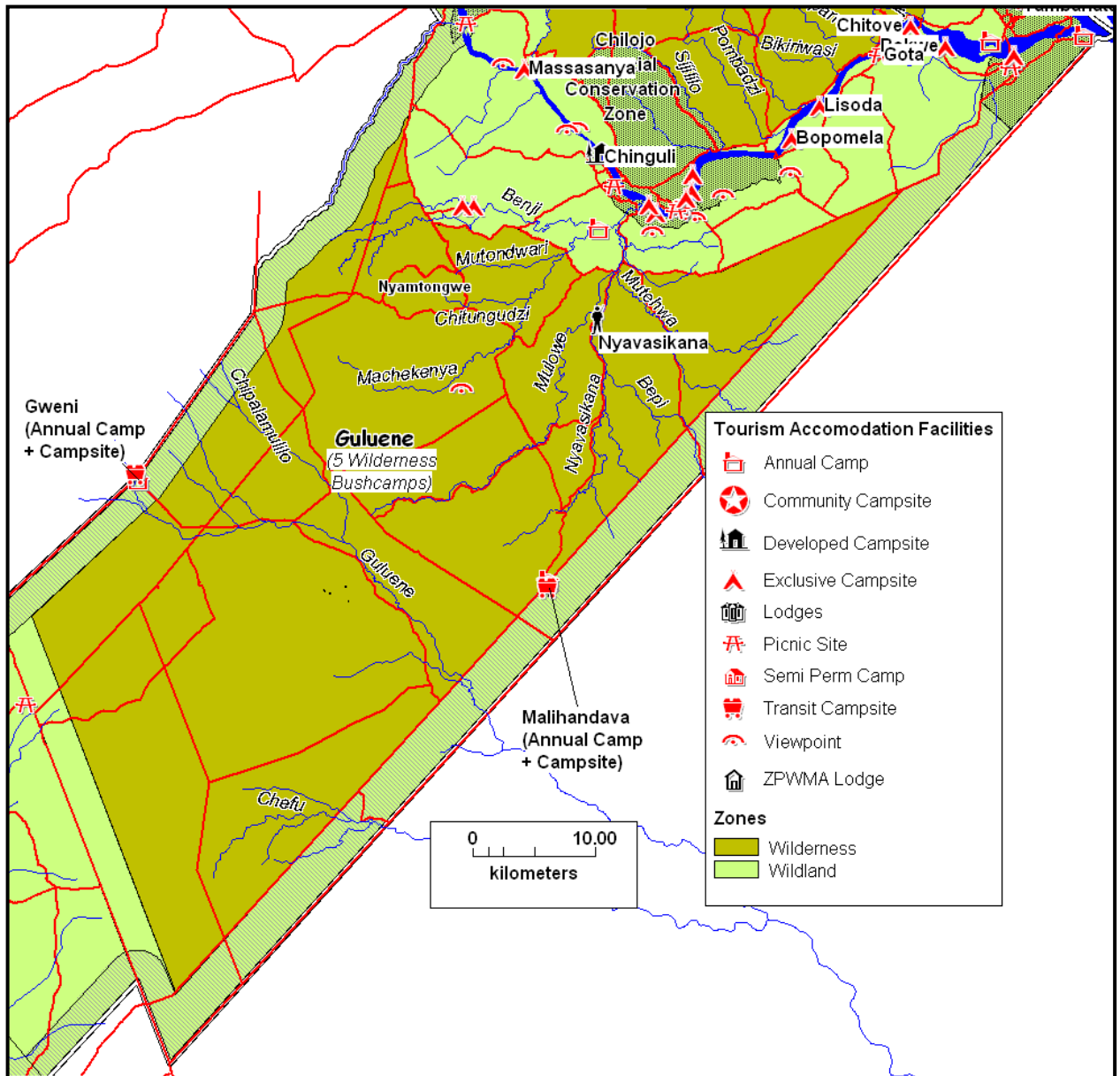
Figure C.5:
Pombadzi
Wilderness Zone



Notes:
Wilderness Bushcamp
sites are not shown

GULUENE Wilderness Zone: 1,850 km²	
Rationale	To conserve the pan systems on the sandveld areas and to provide an exclusive wilderness experience.
Boundaries	Northern Boundary: The access track running south of Benji Weir and the Chilojo cliffs Southern Boundary: 2.5 kilometers from the Boli to Sango railway line Eastern and Western Boundaries: 2.5 kilometers from the park boundary
Sub-Zones	None
Existing Developments	<ul style="list-style-type: none"> • Nyavasikana Base Camp (abandoned) • 340 km internal tracks • 55 km boundary tracks
Proposed Developments	<ul style="list-style-type: none"> • None • Track upgrades • Track re-alignments
Permitted Activities	<ul style="list-style-type: none"> • Guided and unguided 4x4 trails. Guided trails can apply to stay at identified Wilderness Bushcamp sites. Unguided trails have to stay at designated sites in the Wildland Peripheral Sub-Zone (Gweni and Malihandava Pans). • Guided walking with overnight stops • Walking on Nyamtongwe Plateau
Notes	<p>Transit 4x4 trails will be confined to the Wildland Peripheral Sub-Zone where possible. However, it may be necessary to use some roads to allow access to Nyamtongwe plateau and also (for example) along the Nyavasikana River to the Runde. Use of these roads will be by permit only, which will be available at Chipinda Pools and Mabalauta. Use of these roads by visitors without a permit will be an offence.</p> <p>The Nyavasikana Camp compromises the Wilderness Zone. The camp has been abandoned for many years and some decisions need to be taken regarding its future. Perhaps these are more relevant to other programmes in the General Management Plan.</p>

Figure C.6: Guluene Wilderness Zone



Notes:
Wilderness Bushcamp sites are not shown

C.8.3 Wildland Zones

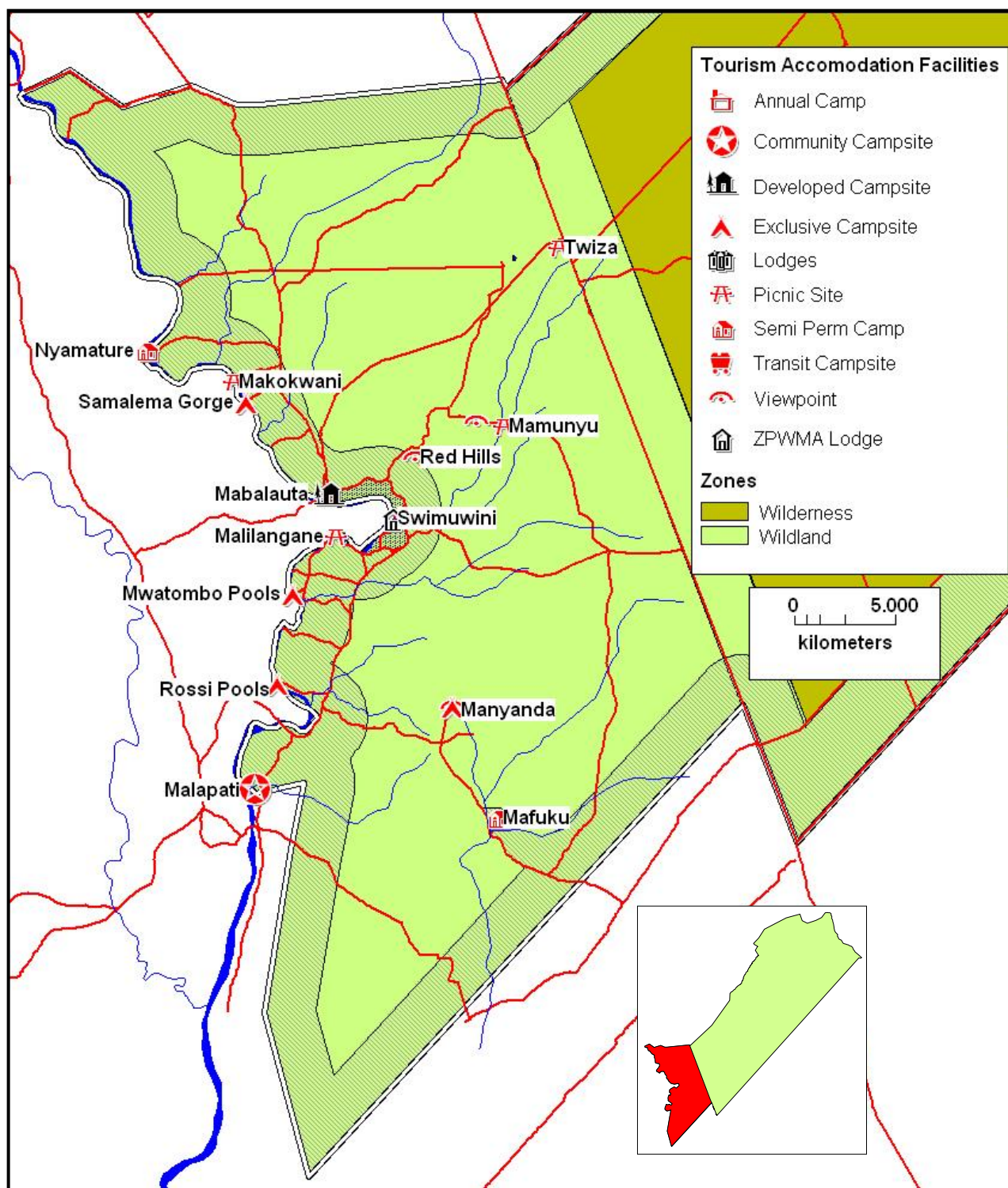
This section details the developments in the Wildland Zones which are

- Mabalauta
- Save Runde
- Runde South
- Boundary

Details about the sub zones within these zone types are also given. These include the Chilojo and Junction Special Conservation sub-zones, the Nyahongwe Walking sub-zone and the Chipinda Pools and Mabalauta Development sub-zones.

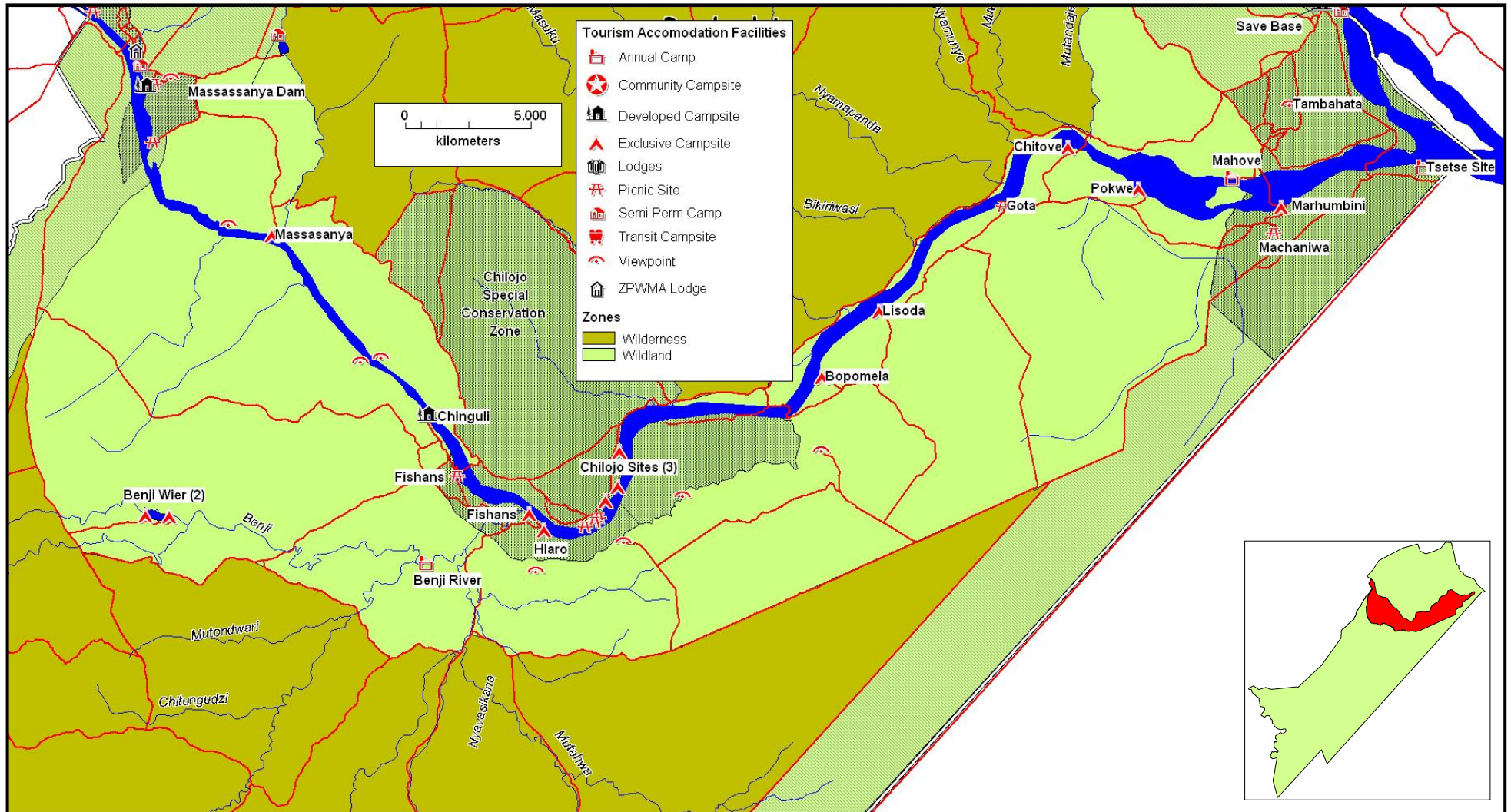
MABALAUTA Wildland Zone: 900 km²	
Rationale	To allow general visitor access to the Mwenezi river and other attractions
Boundaries	Most of the zone is the park boundary. The western boundary is the Rutenga to Sango railway line
Sub-Zones	Mabalauta Development Zone
Existing Developments	<ul style="list-style-type: none"> • 9 ZPWMA park lodges • 1 Developed Campsite • 4 Exclusive Campsites • 250 km internal tracks • 34 km boundary road (Boli to Sango)
Proposed Developments	<ul style="list-style-type: none"> • 2 Semi-permanent camps • Community Campsite (Malapati)
Permitted Activities	<ul style="list-style-type: none"> • 2x4 self drives • Guided walking • 4x4 self drives • Camping
Notes	<p>The Mabalauta area will be the focus for linkages to the rest of the GLTP. As this will be the expected entry point for a higher number of visitors the area will need to cater for a greater density of tourists.</p> <p>Although termed a wildland area, semi-permanent developments and a range of activities will be permitted. In addition, permanent developments will be permitted within the Wildland Peripheral Sub-Zone (approximately 2.5 kilometers from the park boundary).</p> <p>The Mafuku site is probably inappropriate for the development of a semi-permanent camp. It may be necessary to locate another site within the zone. However, Mafuku has been included in the Wildland Peripheral Sub-Zone and hence could be a permanent camp.</p>

Figure C.7: Mabalauta Wildland Zone



RUNDE SOUTH Wildland Zone: 500 km²	
Rationale	To allow public access to the south bank of the Runde River, the Chilojo Cliffs and the Save-Runde Junction area.
Boundaries	Northern Boundary: Runde River Southern Boundary : The access track running south of Benji Weir and the Chilojo cliffs
Sub-Zones	Chilojo Nyahongwe
Existing Developments	<ul style="list-style-type: none"> • 1 Public Campsite • 13 Exclusive Campsites • Benji Weir • 160 km internal tracks • 70 km boundary tracks • Management airstrips at Machiniwa and Fishans
Proposed Developments	<ul style="list-style-type: none"> • 1 Public Campsite • 12 Exclusive Campsites • 2 Annual/Semi-Permanent Camp • 1 Wilderness Bushcamp (top of Chilojo Cliffs)
Permitted Activities	<ul style="list-style-type: none"> • 2x4 self drives • Guided walking • 4x4 self drives • Camping
Notes	<p>Walking along the Chilojo cliffs needs to be more fully defined and more viewpoints opened.</p> <p>The Wilderness Bushcamp on top of the Chilojo Cliffs will be on special application and will be open to the general public as well. The site will be to the east of the existing viewpoints and must not be visible from below (i.e. set back from the escarpment). In addition, it will only be available for one night.</p> <p>Pokwe Exclusive Campsite will be a trial where two or more sites will be identified in close proximity to each other. This will allow this area to be used by larger groups (currently each site is limited to 10 people).</p>

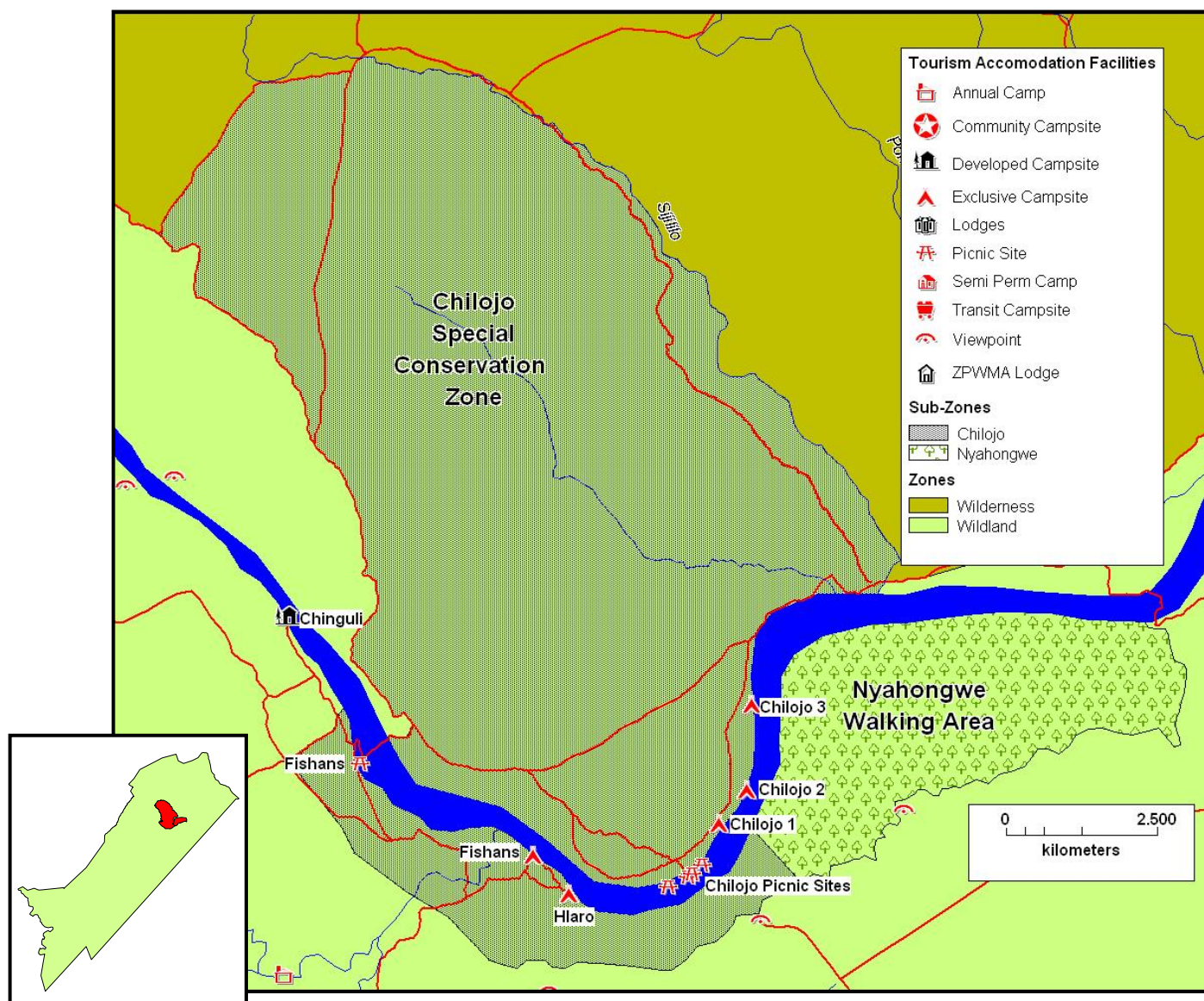
Figure C.8: Runde South Wildland Zone



CHILOJO SPECIAL CONSERVATION sub-zone: 100 km²	
Rationale	This is the scenic core of the park which allows access to several of the exceptional resources (cliff, pans, rivers, baobabs). It is also easily reached from Chipinda Pools and there is considerable pressure for development and access. Therefore it is separated out from the Save-Runde Wildland Zone so that special prescriptions can be developed. It also extends up the Sijililo Valley to improve the diversity of attractions on offer.
Boundaries	Confluence of Sijililo river upstream to access road, then along access road to main Chipinda road; then down this road to Fishans.
Existing Developments	<p>North Bank:</p> <ul style="list-style-type: none"> • Picnic Site • Two exclusive campsites near picnic site (Chilojo 1 and 2) • 40 km internal tracks • 15 km boundary tracks <p>South Bank:</p> <ul style="list-style-type: none"> • Three exclusive campsites (Hlaro, Director's, Fishans – Fishans previously being a picnic site) • 10 km internal tracks
Proposed Developments	<p>North Bank:</p> <ul style="list-style-type: none"> • Picnic Sites (at least 4) in vicinity of current picnic site • 3 Exclusive Campsites downstream of picnic sites • View points downstream of campsite area • Improved road network <p>South Bank:</p> <ul style="list-style-type: none"> • Fishans picnic site moved to near Fishans crossing • Director's Exclusive Campsite moved to Fishans picnic site; Hlaro to remain • Improved road network
Permitted Activities	<ul style="list-style-type: none"> • 2x4 self drives • Guided walking • 4x4 self drives • Camping • Picnicing
Notes	

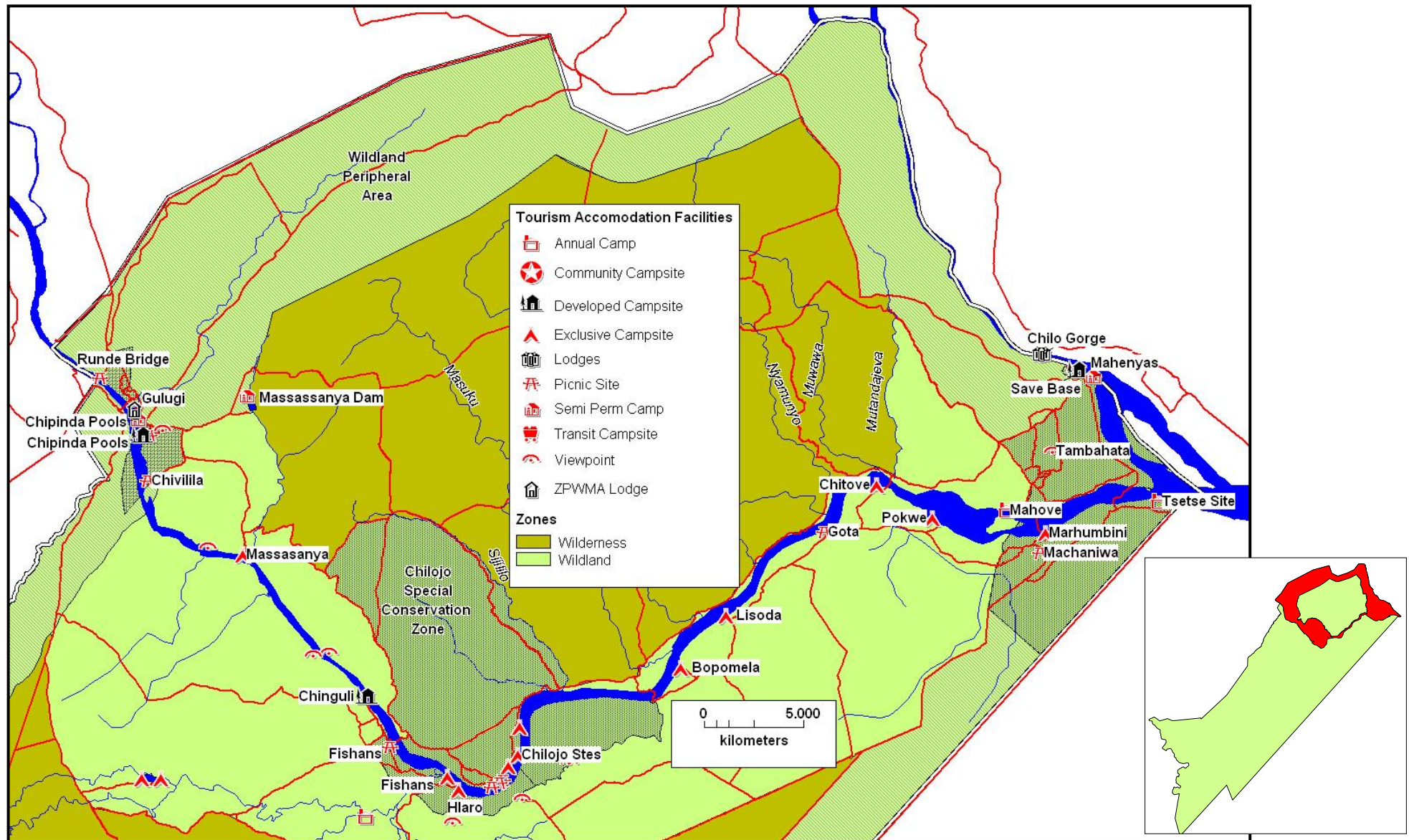
NYAHONGWE SPECIAL CONSERVATION sub-zone: 20 km²	
Rationale	The Nyahongwe is a very attractive area bordered by the Chilojo Cliffs and the Runde river. This area would provide spectacular walking near to the Chilojo Cliffs
Boundaries	North: Runde River South: Base of cliffs
Existing Developments	Two exclusive campsites currently disused because of access problems
Proposed Developments	None – exclusive campsites infrastructure to be removed
Permitted Activities	Guided walking
Notes	

Figure C.9: Chilojo and Nyahongwe Special Conservation Sub-Zones



SAVE-RUNDE Wildland Zone: 600 km²	
Rationale	To provide general visitor access to some of the more spectacular parts of the park
Boundaries	Essentially the park boundary and it surrounds the Pombadzi Wilderness Zone
Sub-Zones	Chilojo Special Conservation Zone Junction Special Conservation Zone Chipinda Development Zone Save-Runde Base Development Zone
Existing Developments	<ul style="list-style-type: none"> • 1 Public Campsite (<i>Chipinda</i>) • 6 Exclusive Campsites (<i>Falls, Chilojo [2], Mutandajeva [2], Junction</i>) • 2 Viewpoints (<i>Masassanya, Tambahata</i>) • 3 Picnic Sites (<i>Masassanya Mouth, Chilojo, Tambahata</i>)
Proposed Developments	<ul style="list-style-type: none"> • 2 Semi-permanent camps (<i>Chipinda, Masassanya Dam</i>) • Annual Camp (<i>Mahove</i>) • 3 or more viewpoints • 4 or more additional picnic sites • 3 Exclusive Campsites
Permitted Activities	<ul style="list-style-type: none"> • Unescorted walking in defined areas • Escorted walking • 2x4 self drives • Guided walking • 4x4 self drives • Camping
Notes	<ul style="list-style-type: none"> • Chilo Gorge and Mahenye Island lodges are on the boundary but operating at a low capacity at present. • Upgrade of Ndali road to Save-Runde base a priority • The current picnic site and public campsites at Chilojo will become 4 picnic sites • Three Exclusive Campsites will be developed downstream of the above site • Picnic site at Runde Bridge • Mutandajeva Exclusive Campsites to be removed

Figure C.10: Save-Runde Wildland Zone



JUNCTION SPECIAL CONSERVATION sub-zone: 75 km²	
Rationale	This is one of the most spectacular parts of Gonarezhou. It is also relatively easy to reach and there will pressure for access and development. For this reason it has been defined as a special conservation zone.
Boundaries	North: Road from Save-Runde Base to Store West: Store to Runde on southern Road Across Runde past Machiniwa airstrip South to Park boundary South an East: Follows Park boundary
Existing Developments	<ul style="list-style-type: none"> • Viewpoint • Old hide • Exclusive Campsite • 150 km internal tracks • 37 km boundary tracks
Proposed Developments	<ul style="list-style-type: none"> • 1 x Public Campsite (<i>Save-Runde Base</i>) • 1 x Annual/Semi-permanent Camp (<i>Tsetse Site</i>) • 1 Exclusive Campsite (<i>Marumbini</i>) • Picnic site (<i>Machiniwa Pan</i>)
Permitted Activities	Escorted walking 2x4 self drives Guided walking 4x4 self drives Camping
Notes	The possibility of the Annual camp being able to shift position in response to the changing water regime should be considered. Dependant on rigorous cleaning of the old site.

Figure C.11: Junction Special Conservation Sub-Zone

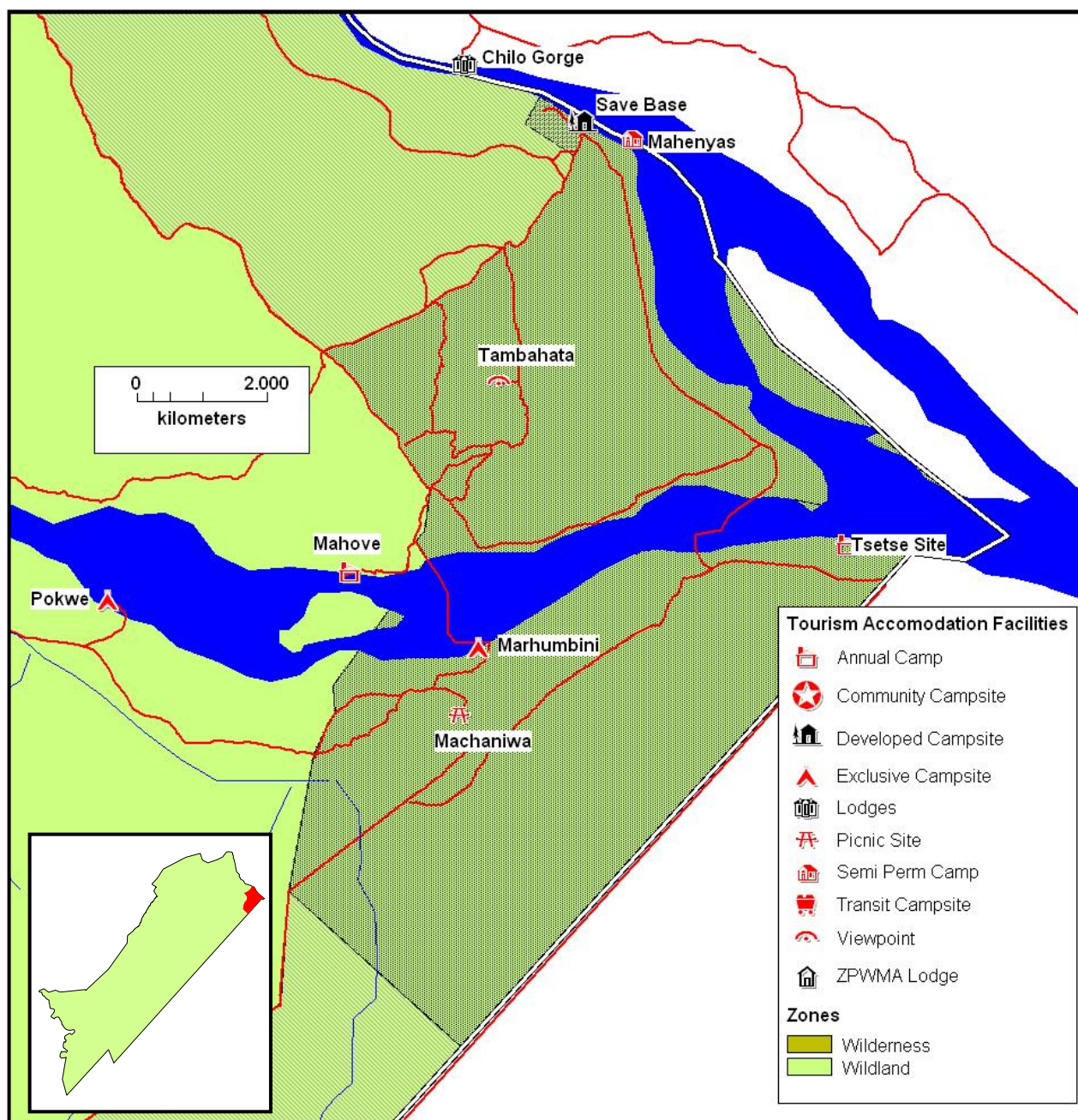
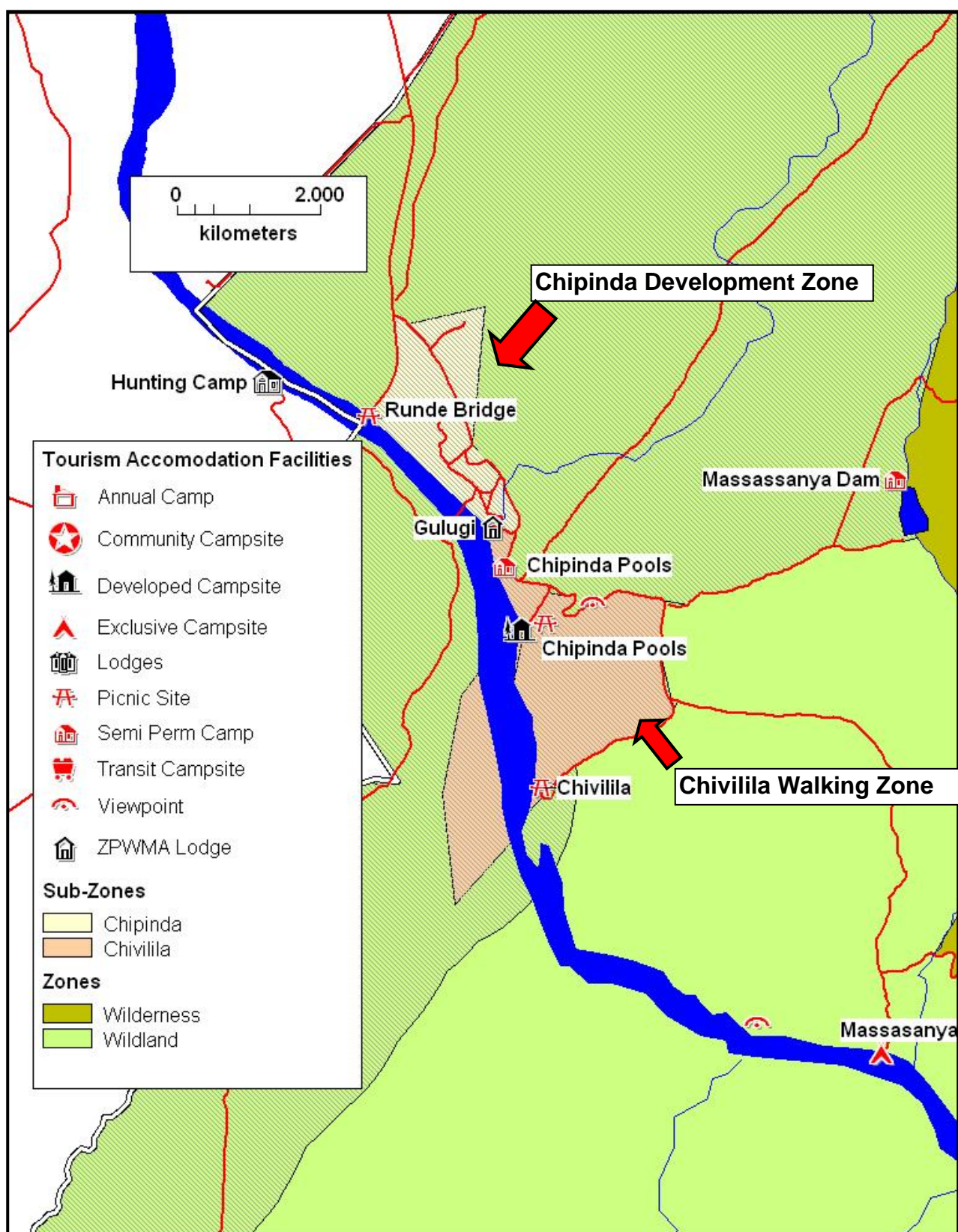
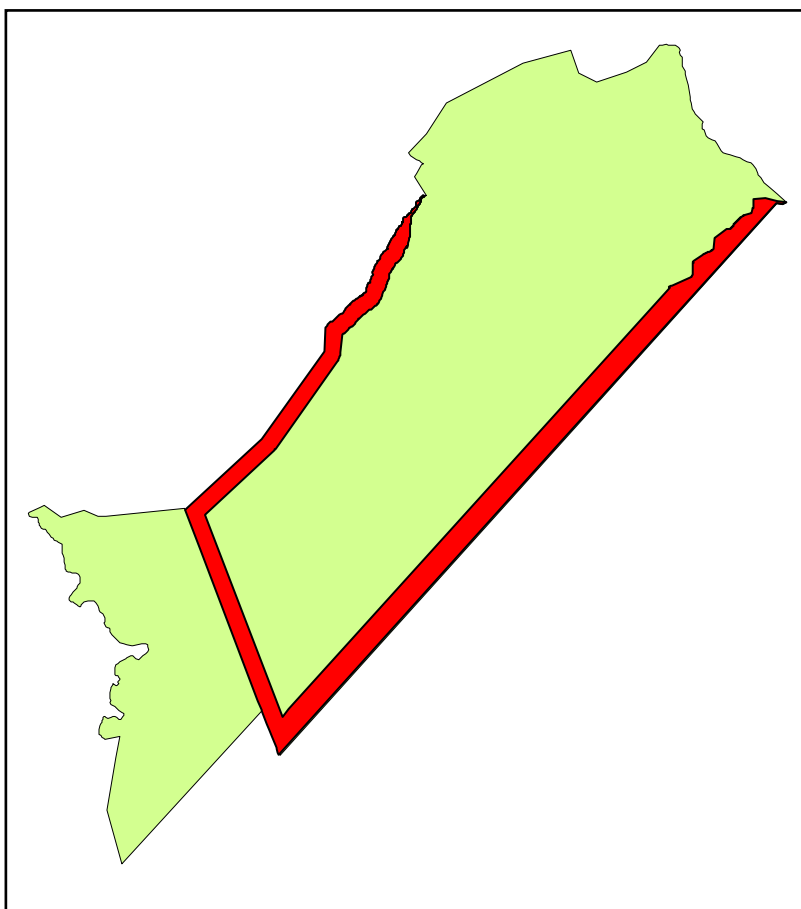


Figure C.12: Detail of the Chipinda Pools area



BOUNDARY Wildland Zone: 600 km²	
Rationale	To create a 2.5 km buffer zone between the park boundary and the Guluene Wilderness Zone. In addition, this buffer has been extended along the Sango railway line.
Boundaries	Southern Boundary: The old fence line parallel to the park boundary. This fence line and road is approximately 3.5 km from the boundary. Western Boundary: Unmarked but 2.5 km from the railway line Northern Boundary: Unmarked but 2.5 km from the existing park boundary
Existing Developments	<ul style="list-style-type: none"> • Airstrip at border B • 25 km internal tracks • 65 km boundary tracks
Proposed Developments	<ul style="list-style-type: none"> • Annual Camps at Gweni and Malihandava Pans • Transit Campsites at Gweni and Malihandava Pans
Permitted Activities	<ul style="list-style-type: none"> • Escorted walking • 2x4 self drives? • Guided walking • 4x4 self drives • Camping
Notes	



C.9 OBJECTIVES, TARGETS AND ACTIVITIES

Five management objectives have been described for the Tourism Programme. The objectives and their targets (summarised below) were defined after analysis of the threats, issues and concerns and the guiding principles. There is a text description of the components prior to presentation of the first three year activity plan. Numbering in the text provides the linkage between the summary table and three year action plan.

Objective 1: Tourism facilities and activities developed

- | Targets |
|---|
| 1.1 Accommodation sites and facilities developed |
| 1.2 Other tourist facilities improved |
| 1.3 Walking is an integral part of the GNP experience |
| 1.4 Adventure 4x4 trails established |

Objective 2: Gonarezhou wilderness brand promoted

- | Targets |
|-------------------------------|
| 2.1 Gonarezhou brand defined |
| 2.2 Gonarezhou brand promoted |

Objective 3: Educational and interpretive facilities, activities and materials developed

- | Targets |
|--|
| 3.1 Visitor interpretation facilities expanded and developed |
| 3.2 Improved visitor information available |
| 3.3 Cultural and historical sites become part of the tourism package |
| 3.4 Educational trips promoted |

Objective 4: Management and administration of tourism improved

- | Targets |
|--|
| 4.1 Visitor behaviour is appropriate |
| 4.2 Tourism statistics collected and analysed |
| 4.3 Leases for GNP improved and standardised |
| 4.4 Booking system improved |
| 4.5 Impact of tourism monitored and adaptively managed |
| 4.6 Visitor reception services improved |
| 4.7 Improved control over entry and access into the park |
| 4.8 Signage improved at appropriate points |
| 4.9 Litter dealt with appropriately |
| 4.10 Wood and water systems in place for tourists |

Objective 1: TOURISM FACILITIES AND ACTIVITIES DEVELOPED

It is imperative that many of the tourism facilities and activities defined in this plan are developed as soon as possible. However, as mentioned in the introduction, the development and advertising of the more permanent developments should be phased and related to the demands of the market. In addition, it should be noted that permanent developments will be restricted to the periphery of the park and be encouraged in the adjacent areas.

More than 60% of the “beds” proposed by this plan are camping beds and the majority of these are in exclusive sites of one form or another (40% of all park-operated “beds”).

Target 1.1: Accommodation sites and facilities developed

Action 1.1.1: Standards for accommodation facilities developed

Clear standards need to be developed for the proposed accommodation campsites and facilities within Gonarezhou. Firstly, it makes sense that all operators deliver a certain standard of service and ecological responsibility. Secondly, it could be a powerful element for the marketing strategy of the park. A first draft of the standards should be formulated and passed out for comments to operators as well to ensure that the final is practical as well enforceable.

Action 1.1.2: Sites for lodges located

Several tentative sites for lodges have been located in the boundary areas. However, at this stage, these are just points on the map. It will be important for Gonarezhou ZPWMA staff to spend some time on the ground with a view to locating more definite sites for tourism development. It could be possible to locate several alternatives within an area which can be assessed both from the tourism and ecological points of view. It is recommended that these sites be slowly “bled” into the market in response to changing circumstances.

Action 1.1.3: Annual and semi-permanent camps established

The sites for the annual and semi-permanent camps are tentative at this stage. As with the more permanent developments, the actual locations of these sites need to be established. Once this has been done then a prospectus needs to be prepared to inform potential investors about the terms and conditions that go with the operation of these sites. A strategy for dealing with demands by operators to establish artificial water points to attract wildlife must be clearly defined.

Action 1.1.4: Developed Camp sites improved

The existing developed campsites (Chipinda, Chinguli and Mabalauta) need to be improved. At all sites the ablutions are in a poor state of repair. Many of the shade areas on individual sites have damaged thatching. Water provision at the Chinguli site is sporadic and this site also has shade problems since the El Nino floods washed away some of the larger trees. There are issues with litter disposal and all water heating is with firewood on inefficient boilers.

The first step will need to be an assessment of the situation in each of the campsites and a detailed workplan and costing to be formulated. The possibility of solar heating for the showers should be assessed. Alternatives for water provision at Chinguli also need to be assessed.

In addition, a developed campsite will be constructed at the Save-Runde Base.

Action 1.1.5: Exclusive Campsites improved and expanded

The Exclusive Campsites are at the heart of the Gonarezhou experience. Currently most sites have a pit toilet and a concrete table which incorporates a fire place. It may be possible to design a less “concrete intensive” method of defining the fire place, which would be more in place with the wilderness character of the park. In this case the current concrete structures would be removed. Pit toilets should be unobtrusive, made of biodegradable materials where possible, and be renovated on an annual basis at least.

This plan calls for three more Exclusive Campsites opposite the Chilojo cliffs. These need to be physically located and demarcated and thought as to whether one should be designed with operators in mind. And whether operators should have some kind of priority system for booking this site. If so, thought needs to be given to the booking protocols for these camps (see also Target 4.4; Objective 4).

Action 1.1.6: Wilderness Bushcamps sited

The Wilderness Bushcamps will cater primarily for the wilderness focussed operator and the siting of these camps is a priority. As there will be no associated developments in the early stages of development it will be possible to try out several sites to find those that work best for the activities and with respect to resupply. Once the ideal locations have been established thought should be given to the possibilities of erecting platforms or low-key toilet facilities, if the demand is there from the marketplace.

Action 1.1.7: Fee structure clearly defined

With the variety of sites on offer, some of which are not part of the ZPWMA current product, the fee structures need to be clearly defined. Although the Authority sets estate-wide fees (See Appendix 6) it must also be realised that Gonarezhou is a difficult operating environment, especially at this point in Zimbabwe’s history. Consideration should be given to “grace periods” or some other way of encouraging investors to come and, more importantly to succeed. The fee structures will of course have a direct bearing on the income to the Authority and this must also be taken into account (Appendix 7). Fees are not defined here as this is something that will be subject to change.

Target 1.2: Other tourist facilities improved

Action 1.2.1: Road network improved

There are approximately 1,500 kilometres of road and track within the park. Many of these are in poor condition and some are old alignments that will need to be reopened. The priority listing of these repairs and upgrades should be carried out in conjunction with the need for management roads under the Operations Programme

The road network in the park has largely been developed along utilitarian lines rather than with tourism in mind and many of the roads follow old fence lines which demarcated tsetse control areas. In many cases these are not conducive to a satisfactory tourism experience and there is a need to redesign parts of the road network to make it more encouraging for tourism. Realignment should take into account the topography, the water sources and the vegetation to ensure that there is a more interesting routing for tourists. In addition, roads to campsites, picnic sites and viewpoints should also include a loop so that passing traffic does not need to drive into the campsite or picnic spot. Dead-ends should be avoided.

Action 1.2.2: Entry points expanded

There are three entry points into the park at present. These are Mabalauta, Chipinda Pools and Chikombedzi; visitors who enter the park through unmanned points are required to report to the management stations at Chipinda Pools or Mabalauta. In order to facilitate movement of tourists and to ensure that due revenues are collected, more gates need to be opened. Eight gates and three control points have been identified (Chipinda Pools, Runde Bridge, Ndali Road, Save-Runde Base Camp, Boli, Chikombedzi, Malapati and Sango; see Figure 8). This could be in response to demand so that they can be opened in stages..

Action 1.2.3: New picnic sites established and existing ones improved

This plan calls for the establishment of several new picnic sites (Old Bridge, Chivonja Hills, Chivilila, Chilolo, Twiza). There are also a number of old picnic sites that need to be improved (e.g. Mamunyu, Tambahata, Red Hills etc). As a first step there should be a clear definition of what the physical infrastructure will be at the picnic sites followed by a code of conduct for the sites. As picnic sites require little in the way of infrastructure and servicing, more sites should be identified and established during the life of this plan. Attention must be paid to the visibility of the sites from other points and to the access routes.

Action 1.2.4: New viewpoints established and existing ones improved

A number of viewpoints are recommended by this plan. In addition, there are several existing sites along the Chilolo cliffs and the Ntambambomvu Red Hills. Many of these sites can double as picnic sites. Some of the new sites will require access routes, and these need to be sited with care, given the topography. As with picnic sites the possibility of opening new sites should be considered during the life of this plan. And the visibility of sites from other points should also be considered. Where possible they should not be visible.

Action 1.2.5: New hides established and existing ones improved

There are two hides still standing – Manyanda and Nyamugwe. Decisions need to be taken about the safety of the existing structures and if they still serve their purpose, given that they were established on the basis that artificial water would be provided to the pans that they overlook. The possibility of establishing other hides at appropriate locations in the Wildland Zones should be considered.

Wright's Tower is another hide structure but the pool is overlooked has long since disappeared. The tower is now a "historical" site rather than a functional hide.

Action 1.2.6: Communication points established

In order to improve the safety of visitors two "communication points" will be established. These will be points where visitors can go to report problems and will be located at Chinguli and somewhere close to Malugwe Pan. The chosen points will be continually staffed during the tourist season and there will be radio contact to either Chipinda Pools or Mabalauta. Visitors can report problems such as mechanical failures on their vehicles but they will also be encouraged to report issues such as poaching, inappropriate behaviour by other visitors and unusual wildlife sightings etc.

Target 1.3: Walking is an integral part of the GNP experience

Action 1.3.1: Adventure trails system established

There is a possibility to develop a network of adventure trails focussing on (but not limited to) the Wilderness Zones of the park. This activity can be linked to the Wilderness Bushcamps and the Exclusive Campsites. In the longer-term it may be possible to link these trails and market a walk through Gonarezhou or something along these lines.

These trails can also be guided by ZPWMA staff. A popular trail in other parks is a full moon trail and this facility should also be on offer in Gonarezhou. However it is a priority that the ZPWMA staff are trained as they will be guiding members of the public into potentially dangerous situations. They will also be able to provide a better quality service if they are able to inform and educate the visitors. Finally they need proper equipment, specifically appropriate firearms, if they have the need to handle potentially dangerous situations involving large animals such as elephant, buffalo and hippo. ZPWMA should not compromise on the quality of staff allowed to do walks. If no suitable staff are available then no walk will be available.

The possibility of members of the public being able to access these trails should also be considered. Perhaps a license could be issued to people who the ZPWMA considers being capable of walking in the park without a licensed guide.

The following trails will be established (see also Table 11)

Overnight trails

- Selected rivers in the Pombadzi Wilderness Area – Nyamunyo, Sijililo, Muwawa, etc
- Runde gorge
- Lipakwa-Nyamture area (but the Nyamtire site to be specifically avoided)
- Gonakudzingwa- Nyamugwe Pan

Day Trails

- Red Hills Area – *Booking essential plus ranger or operator accompaniment*
- Nyahongwe Area – *Booking essential plus ranger or operator accompaniment*

Action 1.3.2: Unescorted walking areas established

Unaccompanied day trails will be permitted in the Chivilila Falls area. Other areas should also be considered when the demand increases. Walking will also be permitted along parts of the plateau of the Chilojo Cliffs and along the Nyamtongwe Plateau. Both of these areas offer magnificent views over the surrounding countryside.

- Nyamtongwe Plateau – *No booking and unescorted walking permitted*
- Chivilila Area - *No booking and unescorted walking permitted*
- Marhumbini - *No booking and unescorted walking permitted*

Target 1.4: Adventure 4x4 trails established

Action 1.4.1: Gonarezhou 4x4 trails established

The 4x4 market is expected to be one of the main users of the wilderness areas of the park, and especially of the Guluene Wilderness Zone. Initially these will be guided trails but the possibility of allowing unguided users access should also be considered. There are many 4x4 clubs in South Africa (which be the market for this activity in the short and medium-term) and many of these have some kind of accreditation system to ensure that their members behave responsibly when in the bush. Links should be established with these clubs to see the level of interest and the standards required by their accreditation process. Linkages with these clubs would also be a powerful marketing tool.

Action 1.4.2: Linkages to TFCA trails encouraged

4x4 trails are an up-and-coming activity in both the Kruger and Limpopo national parks and Gonarezhou should liaise with the management authorities in these parks about the possible linkages for this activity. There will also be possibilities for these trails to use areas outside the parks (e.g. the Sengwe Corridor) as well. Some proposals have been put forward by the GLTP Working Group and these are shown in Appendix 8.

Objective 2: GONAREZHOU WILDERNESS BRAND PROMOTED

This plan focuses on the development of Gonarezhou National Park as a wilderness destination and it is important that this brand is effectively marketed and promoted. The importance of good marketing to the success of the plan cannot be overemphasised as it requires that Gonarezhou National Park becomes a unique destination in the region.

Target 2.1: Gonarezhou brand defined

Action 2.1.1: Professional development of the GNP brand

An effective marketing strategy that emphasises and promotes the wilderness character of the Gonarezhou National Park will play an important role in the success of the park, which depend on the development of a unique brand of tourism. The strategy and individual plans should be developed professionally and in the first instance this would entail the identification and engagement of a suitable Public Relations consultant. The choice of consultant is critical as they will need to be dedicated and knowledgeable.

Aspects that need to be considered in any brand identification and subsequent marketing are the exceptional resources and especially the wilderness qualities of the park. Seasonal aspects to marketing should also be researched as this can lengthen visitor stays in the park.

Target 2.2: Gonarezhou brand promoted

Action 2.2.1: Marketing strategy implemented

The marketing strategy can take many forms and these include internet, sales agents, tourism consultants, trade shows and printed materials. An important step will be the identification of the target market and this is expected to be South Africa and the “overseas” market. The material on the ZPWMA site needs to feed into the marketing strategy and be updated regularly (see Appendix 9).

Action 2.2.2: Operators to prequalify

It will be important that all facilities and activities on offer in and around the park subscribe to the brand, as it is very easy to erode the perception of the brand in the marketplace if there are operations that do not maintain the required standards and ethics. It may be necessary to set minimum standards for operators to maintain the standards. This could be through an agreed pre-qualification system.

Objective 3: EDUCATIONAL AND INTERPRETIVE FACILITIES, ACTIVITIES AND MATERIALS DEVELOPED

In keeping with the objectives for the Parks and Wildlife Estate, as outlined in the Wildlife Policy, education and interpretation are important functions for protected areas. The key areas for this programme are the development of interpretation facilities on the ground, the composing and dissemination of written materials and the education of the public, especially schools.

Target 3.1: Visitor interpretation facilities expanded and developed

Action 3.1.1: Interpretation centres established

Interpretation centres will be established at both Chipinda Pools and Mabalauta. As a first step, existing interpretation centres in the region will be reviewed and lessons learnt from these ventures. This will include other interpretation centres in the GLTP (especially those in Kruger National Park). Staff within the ZPWMA will need specific training in display layout and this may be an authority-wide learning procedure. In addition, Gonarezhou staff will need training in interpretation of displays, and be able to explain the displays in English and local languages.

Design of the interpretation centre and the displays will be a key to ensuring that they remain interesting and relevant and do not become little visited museum displays.

Action 3.1.2: Mini interpretation sites

There are a number of sites within the park that should be viewed as mini interpretation sites. These include sites of ecological, geological, archaeological and cultural significance. Appropriate and unobtrusive markers should be designed that refer back to a free information sheet provided to visitors on entry. As GPS units are becoming more common visitors could upload these marker sites into their GPS units as well.

Target 3.2: Improved visitor information available

Action 3.2.1: Visitor map updated

An excellent map published by the Lowveld Natural History Society is still in use. However, this map is dated and some of the information is incorrect. The map and the information on it needs to be redone using new information and it should also reflect the developments proposed in this management plan. Therefore the map should only be commissioned once the road network has been upgraded and other tourism facilities have been established. Periodic revisions will need to be undertaken of the map.

Action 3.2.2: Guide book published

Many parts of the Gonarezhou National Park are not “in your face” experiences. Rather the land gives up its secrets slowly and one way for visitors to become more engaged in the landscape is to be more knowledgeable about it. It is recommended that a guide book is prepared for the park. Initially this could be a photocopied small information sheet but it is recommended that a proper guidebook be written. The Kruger Park has many of these guidebooks that cater for all sectors of the tourism market and these could be used as examples.

Action 3.2.3: Other interpretive materials available

Other ways of informing the public should be considered. GPS ready maps could be developed so that they can be installed on visitor GPS. These could relate to other written informational materials. Good, detailed maps of the park should be on display at the entrance gates and other key locations, as could a summary of this management plan.

A professional DVD should be commissioned, should funding be available. This will help to publicise the park and should be on sale at the entrance gates. The possibility of local language versions should be investigated which could be used to improve the perception of the park in neighbouring communities.

Target 3.3: Cultural and historical sites become part of the tourism package

Action 3.3.1: Cultural and historical sites identified and assessed

There are a number of cultural and historical sites within the park but they have never been formally identified. It will be a priority to assess the current state of knowledge about these sites in the ZPWMA database and then to schedule visits to sites with relevant community members. The sites should be categorised as the community may prefer that some are not visited by tourists.

Action 3.3.2: Cultural and historical sites added to interpretive material

Once the sites have been assessed those that can be accessed should be added to the interpretive material for visitors. In addition, there should be clear guidelines for visitors that will protect the sites.

Target 3.4: Educational trips promoted

Action 3.4.1: Day and overnight trips for schools

Accommodation for school groups in the park will be a problem, but day trips should be promoted, where possible. However, the possibility of constructing some “dormitory” style accommodation must be considered in the two main developments Zones (i.e. Chipinda Pools and Mabalauta). This would allow large school groups to overnight in the park and so gain more from their visit by being able to spend more time in the park.

Objective 4: MANAGEMENT AND ADMINISTRATION OF TOURISM IMPROVED

Tourism is the engine for the economic survival of the park, given the ZPWMA mandate to become financially self sufficient. Management and administration of tourism needs to be efficient and fair to ensure that the environment is conducive towards ensuring that the tourist businesses survive. But it also needs to ensure that sufficient revenues are collected to be able to run the park effectively.

In addition, the day-to-day management and administration of tourism within the park needs to be improved.

Target 4.1: Visitor behaviour is appropriate

Action 4.1.1: Regulations/Codes of Conduct finalised and distributed

The draft codes of conduct contained within this plan need to be finalised and expanded. Once this has been done a system to ensure that all visitors are aware of the rules needs to be implemented. The regulations should be displayed at the entry gates and the possibility of these being printed on the reverse side of permits should be considered.

Action 4.1.2: Regular checks at campsites

Target 4.5 recommends the establishment of a tourism monitoring unit. This unit should also visit campsites regularly to ensure that they are kept clean and that visitors are not engaging in inappropriate behaviour. They should also check for other infringements of the regulations such as off-road driving.

Target 4.2: Tourism statistics collected and analysed

Action 4.2.1: Standard tourism data collated and analysed

There are two main entry points into the Park – Chipinda Pools and Mabalauta. Once more gates have been opened a system to ensure that the individual gate data is collated properly needs to be implemented. The possibility of employing a tourism officer should be considered. The tourism data should include information of which sites are used.

Action 4.2.1: Visitor satisfaction data collated and analysed

A visitor satisfaction form has been devised and is currently in use (see Appendix 10). The data collected on this form needs to be compiled in such a way that it is possible to summarise the “mood” of the visitors, their likes and dislikes etc. This will be important information to further tailor the Gonarezhou product to ensure that the park remains competitive as a destination.

Target 4.3: Leases for GNP improved and standardised

Action 4.3.1: Leases standardised

The current leases for tourism concessions in the Parks and Wildlife Estate are often poorly written and ambiguous. It will be important that the quality of leases for operators are tightened up for the protection of both the Authority and the concessionaire. It is recommended that a legal expert carries out a small consultancy to review some of the current leases and recommend a standard draft lease for the future. This needs to be carried out in conjunction with the relevant offices in the ZPWMA HQ.

Target 4.4: Booking system improved

Action 4.4.1: Communications improved

The lack of communications between Mabalauta and other stations (Chipinda Pools, Masvingo and Harare) has led to problems with the booking system. While this document was being written a Vsat system was installed in Mabalauta and this will greatly improve the situation. The installation and maintenance of a Vsat system is covered under the Park Operation Programme.

A workable solution regarding booking of Exclusive Campsites and Wilderness Bushcamps needs to be implemented. Generally speaking, the Wilderness Bushcamps are orientated towards operators but can be used by the general public on application. Similarly, the Exclusive Campsites can also be used by Operators. A viable and fair booking system needs to be put in place and perhaps some lessons could be learnt for a similar situation in Mana Pools. NP.

Action 4.4.2: Long-term booking system established, tested and modified

As this plan advocates several new accommodation facilities and access to trails and zones, it will be important to ensure that the booking systems for the camps and the activities is able to cope with the expected demand. A trial system should be established that has links between Chipinda Pools and Mabalauta and modified through experience.

Target 4.5: Impact of tourism monitored and adaptively managed

Action 4.5.1: Monitoring framework to assess impact of visitor use developed

Thresholds of potential concern with regards to visitor use and impacts will be developed over time, and data collected which can feed back into adaptive management system. This will be developed in conjunction with the Ecology Programme. Monitoring methods that will allow management to react prior to a problem become too large need to be carefully devised. Monitoring should also be extended to cover the visitor satisfaction surveys.

Action 4.5.2: Tourism monitoring and assistance unit established

Staff and equipment will be procured to establish a tourism monitoring and assistance unit which will monitor visitor use, quality of experience and impact, and render assistance to tourists where necessary. As a first step a terms of reference must be developed for the operation of the unit. Training of monitoring unit staff in customer relations, knowledge of zonal and Park-wide prescriptions, monitoring and reporting procedures will be conducted. Staffing and equipment for this unit is covered under the Operations Programme.

Target 4.6: Visitor reception services improved

Action 4.6.1: Improve reception facilities for Chipinda Pools and Mabalauta

Reception facilities at both Chipinda Pools and Mabalauta will be assessed, maintenance conducted and necessary upgrading carried out. Radio communication will be provided between reception facilities and all entrance gates.

Action 4.6.2: Improve reception services

A staff establishment needs assessment will be carried out, and a request and motivation procedure for placement of additional personnel where necessary will be carried out. Ongoing training of

reception staff in customer relations and administrative procedures will take place. See also the activities under the Park Operations Programme.

Target 4.7: Improved control over entry and access into the park (see Section 3.5.5)

Action 4.7.1: Open gates at appropriate sites

There are currently three official entry points into the park – Chipinda Pools, Mabalauta and Chikombedzi. New gates need to be established at Runde Bridge, Ndali Road and Save-Runde Base Camp in the Chipinda Pools area. In the Mabalauta area gates need to be established at Boli, Malapati Bridge and Sango. Radio communication will be provided between reception facilities and all entrance gates. Gates will also require permanent accommodation facilities, water and ablutions (the toilets both for staff and visitors).

Action 4.7.2: Establish control points at sensitive points

In addition to the permanent entry gates mentioned above, control points need to be established at sensitive points. At present these sites have been identified at Dumisa, Gweni and No. 10. The control points will be less permanent than the gates and can be moved, closed or new ones established if necessary.

Target 4.8: Signage improved at appropriate points

Action 4.8.1: Signage standardised and improved

Currently there are a number of sign designs in the park. Many of these are huge structures and probably not in keeping with the wilderness aspect of the park. There needs to be agreement on the style of signage (and this could differ between zones – e.g. smaller and less obtrusive in wilderness zones) and where these should be located. A numbered road junction system which relates to a map is probably a good design for the wilderness areas. Once the way forward has been established the signs need to be manufactured and erected. In some cases it may be appropriate to remove signs or change their appearance. An unobtrusive number on a durable wooden pole has been suggested for the Wilderness Zones.

Target 4.9: Litter dealt with appropriately

Action 4.9.1: System to ensure that litter from the Wilderness and Wildland zones is removed

Litter at the Exclusive Campsites could become a problem if strict protocols for dealing with this are not established. Currently visitors are given a plastic litter bag and are asked to bring all their litter out with them. This system should be continued but visitors should also be asked to separate out glass and tins. Much of the biodegradable material can be disposed of in the campfires. No receptacles for rubbish should be provided at the campsites as this will encourage visitors to use them. Chinguli is a developed campsite but the same system should apply here. Litter should not be left at the campsite. Can crushers should be available at the Developed Campsites.

The leases for the annual, semi-permanent and permanent sites will specify how they must deal with their litter.

Action 4.9.2: System to ensure that litter in the Development sub-zones is dealt with

One problem with asking visitors to bring their rubbish out is that it now becomes the Authorities' problem to deal with it in the Development Zones. This must now be added to the litter being generated from the Developed Campsites and by the management staff. Appropriate systems must be developed to ensure that the litter footprint is as small as possible. This should include a system of separating the litter so that cans can be crushed and biodegradable litter be incinerated.

Target 4.10: Wood and water systems in place for tourists

Action 4.10.1: Sustainable fuelwood system in place

Visitors will not be permitted to collect firewood at will. Firewood will be issued by the ZPWMA. Visitors are entitled to a free initial load, after which they need to pay for wood. Wood will be for sale at the following collection points

- Chipinda Pools
- Chinguli
- Save Runde Base Camp
- Mabalauta

A ticketing system whereby wood is paid for at Chipinda or Mabalauta and then the tickets exchanged for wood at Chinguli or Save Runde Base. This would alleviate the change problems and the keeping of cash at remote locations.

Visitors should be encouraged to use gas where possible.

Action 4.10.2: Water for tourists

Many of the Wilderness Bushcamps and the some of the Exclusive Campsites will have water problems. Visitors will have to carry their own. Resupply will be from the rivers and from the established campsites?

Table C.18: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 1: TOURISM FACILITIES AND ACTIVITIES DEVELOPED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.1: Accommodation sites and facilities developed	1.1.1: Standards for accommodation facilities developed	Draft formulated and passed for comments	Include operators (perhaps from other parks) in circulation list.	Standards approved by end 2010	1
		Comments received and document finalised			
	1.1.2: Sites for lodges located	Potential sites located	Photos, GPS positions, potential access routes, water supply etc	Sites located y end 2011	3
	1.1.3: Annual and Semi-permanent camps established	Potential sites finalised	Photos, GPS positions, potential access routes, water supply etc Final site plans for lease inclusion	Sites finalised and site plans drafted by end 2010	1
		Terms of operation defined	Include artificial water provision – birds only. In conjunction with 4.3	Document ready by end 2010	1
		Site prospectus prepared	In tandem with draft leases	Sites out to tender end Jan 2011	1
	1.1.4: Developed Campsites improved	Chipinda Pools improved	Thatching, gazebos, ablutions, rubbish system	Chipinda upgrade by end 2010	1
		Chinguli improved	Thatching, gazebos, ablutions, rubbish system, water supply	Chinguli upgrade by mid 2011	2
		Mabalauta improved	Thatching, gazebos, ablutions, rubbish system	Mabalauta done by end 2010	2
		Save-Runde Base site established	Thatching, gazebos, ablutions, rubbish system, water supply	Site operational by mid 2011	2
	1.1.5: Exclusive Campsites improved and expanded	Agreement on design and facilities	Removal of concrete?	Updated design implemented in all sites by mid 2011	2
		Chilojo sites located and established		Chilojo sites operational by end March 2011	1

High priority = 1; Low priority = 3

Table C.18: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 1: TOURISM FACILITIES AND ACTIVITIES DEVELOPED					
Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.1: Accommodation sites and facilities developed (cont.)	1.1.6: Wilderness Bushcamps sited	Preliminary siting of Wilderness Bushcamps	Invite an established operator to participate	Ongoing but draft plan by end 2011	2
		Final sites chosen by trial and error	Will become clearer as the areas are better known	Ongoing	2
	1.1.7: Fee structure clearly defined	Draft fees defined in conjunction with HQ	Adaptive management but percentage scale of costs for different sites established	Ongoing but percentage scale agreed by end 2010	1
1.2: Other tourist facilities improved	1.2.1: Road network improved	Plan for road upgrades formulated	To be done in conjunction with Operations Programme.	Draft road plan by mid 2011	2
		Designated roads and tracks upgraded		Implementation schedule started mid 2011	2
		Realignment of tourism roads to take advantage of interesting natural features		Ongoing	3
	1.2.2: Entry points expanded	Design for gates and accommodation/ ablutions finalised	Resupply, water provision, communications etc	Gate design by end 2010	1
		Gates built and operational	Ndali, Sango, Boli, Malapati, Runde Bridge, Save-Runde Base	Three gates by mid 2011, All gates by mid 2012	1
		Control points established	Dumisa, Gweni, No. 10	Control points operational by mid 2011	1
	1.2.3: New picnic sites established and existing ones improved	Picnic site definition	Loop road system to avoid dead-ends into sites	Sites located on the ground by end 2010	1
		Codes of conduct for picnic sites finalised		Document by end Nov, 2010	1
		Decisions and location of individual sites	Old Bridge, Chivonja Hills, Chivilila, Chilojo, Twiza Access roads to be considered	Sites established by end 2011	2

High priority = 1; Low priority = 3

Table C.18: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 1: TOURISM FACILITIES AND ACTIVITIES DEVELOPED					
Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.2: Other tourist facilities improved (cont....)	1.2.4: New viewpoints established and existing ones improved	Viewpoint defined (facilities, permitted activities etc)	Can they double as picnic sites?	Document by end Nov, 2010	1
		Decisions and location of individual sites	Road access problems might cause delays at some sites	First sites established by end 2011	2
	1.2.5: New hides established and existing ones improved	Decisions taken about whether this is still a valid facility	Given that pumping of pans is not recommended will hides still serve their purpose?	Decision position reached by mid 2011	2
		Existing sites upgraded	Manyanda to continue as Exclusive Campsite	If Manyanda is to be upgraded then completed by end 2012	3
		New sites considered?	Machiniwa?		3
	1.2.6: Communication points established	Gweni/No. 10 site in time	Radio comms essential	Chinguli operational by April, 2011; Gweni site dependant on other developments	1,3
1.3: Walking is an integral part of the GNP experience	1.3.1: Adventure trails system established	Preliminary trails established and tested by ZPWMA	Possible inclusion of operators to test for suitability	At least 5 trails walked and mapped by end 2011	1
		Training programme for ZPWMA rangers. Rangers also to be properly equipped	Possibility of a licensing system for general public to use trails considered (and implemented)	At least 3 rangers trained to an acceptable initial standard by mid 2011	2
	1.3.2: Unescorted walking areas established	Monitoring of usage and satisfaction of unescorted walking areas	Day walks only; No overnighing	Ongoing	1
		More areas considered based on demand		Ongoing	3
1.4: Adventure 4x4 trails established	1.4.1: Gonarezhou 4x4 trails established	Routes established	In conjunction with operators	Three defined routes mapped and established by end 2011	1
		Linkages to South African 4x4 clubs	Are there any such clubs in Zimbabwe?	Ongoing	2
	1.4.2: Linkages to TFCA trails encouraged	Liaison with Kruger and Limpopo NP authorities	Site visits to these parks?	Ongoing	3

High priority = 1; Low priority = 3

Table C.19: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 2: GONAREZHOU WILDERNESS BRAND PROMOTED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
2.1: Gonarezhou brand defined	2.1.1: Professional development of the GNP brand	Identification of PR consultant	Brand identification Seasonal aspects Varied experiences throughout the park	Consultant identified by end 2010	1
		Brand development in conjunction with ZPWMA	Operator views to be sought as well	Brand materials by mid 2011	1
2.2: Gonarezhou brand promoted	2.2.1: Marketing strategy implemented	Internet site established		Site established and "populated" by mid 2011	2
		Links to ZPWMA site		Ongoing	2
		Preparation of materials (internet, posters, pamphlets etc)		Initial materials by mid 2011, then ongoing	2
		Trade shows target and attended		Ongoing	2
		Appropriate magazines to carry advertisements		Ongoing. Advertisement layout part materials preparation	2
	2.2.2: Operators to pre-qualify	Determine what the minimum qualifications should be		Draft document by end 2010	1
Linkages to other wildlife tourism areas	Market GNP along with other attractions	Eastern highland destinations, Mozambique etc			

High priority = 1; Low priority = 3

Table C.20: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 3: EDUCATIONAL AND INTERPRETIVE FACILITIES, ACTIVITIES AND MATERIALS DEVELOPED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
3.1: Visitor interpretation facilities expanded and developed	3.1.1: Interpretation centres established	Visit to similar facilities in the region (especially in Kruger NP)	To see building, layout and interpretation designs	Visits by mid 2011	1
		Facility design	Architectural advice needed	Design by Sept 2011	1
		Building and opening of interpretation site at Chipinda Pools		Site completed end 2012	2
		Building and opening of interpretation site at Mabalauta		Site completed end 2012	2
		Display layouts	Final layouts only after building completed. Materials to be collected	Collection of materials ongoing	2
		Staff training	In house training	Ongoing	2
	3.1.2: Mini interpretation sites established	Identification of sites		Initial sites listing by end 2010	1
		Design and erection of signs		Signs at trial sites by mid 2011	2
		Informational sheet produced	Issued to visitors on request		3
3.2: Improved visitor information available	3.2.1: Visitor map updated	Ensure GIS data is of acceptable standard for map		GIS updated as required	1
		Drafting and layout of map		Draft by mid 2011	1
		Printing and publishing		Map for sale by end 2011	2
	3.2.2: Guide book published	Information assembled			1
		As a first step an information sheet prepared	Issued as part of the entry permit?	Pamphlet by mid 2011	1
		Publisher sought, funding secured	Guided by books for other parts of the GLTP	Date uncertain	2
	3.2.3: Other materials available	GPS ready electronic maps	Will need design by GIS expert	Maps ready by mid 2011	2
		Maps and posters for appropriate locations in the park	HQ, entrance gates, interpretation centres	Posters ready by end 2011	2
		Professional DVD commissioned	Possibility of local language versions	DVD by end 2012	2

High priority = 1; Low priority = 3

Table C.20: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 3: EDUCATIONAL AND INTERPRETIVE FACILITIES, ACTIVITIES AND MATERIALS DEVELOPED					
Targets	Action	Activities	Notes	Implementation Schedule	Priority
3.3: Cultural and historical sites become part of the tourism package	3.3.1: Sites identified and assessed	Desktop study		Study completed by end Nov 2010	1
		Site visits with community		Site visits completed by end 2010	1
	3.3.2: Information added to interpretive materials			Information upgraded asap	1
3.4: Educational trips promoted	3.4.1: Day trip modalities	Trial run with a local school	Park may be too remote to allow day trips to be successful	Trail carried out by end 2010	1
	3.4.2: Possibilities of overnight accommodation for large groups considered in the Development Sub-Zones (i.e. Chipinda Pools and Mabalauta)	Assessment of interest from schools		Ongoing but a report by mid 2011 leading to a decision about school type accommodation	2

High priority = 1; Low priority = 3

Table C.21: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 4: MANAGEMENT AND ADMINISTRATION OF TOURISM IMPROVED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
4.1: Visitor behaviour is appropriate	4.1.1: Regulations/Codes of conduct finalised and distributed	Regulations finalised	Becomes part of permit/informational materials	Regs finalised by end 2010	1
		Regulations displayed and distributed	Possibly part of the permit	Displayed/printed by end 2010	1
	4.1.2: Regular checks at campsites	Campsites checked and cleaned	Tourism monitoring unit	Ongoing	
	4.1.3: Checks for off-road driving, wood collection etc	Part of regular visits	Tourism monitoring unit, Also encourage visitors to report bad behaviour	Ongoing	
4.2: Tourism statistics collected and analysed	4.2.1: Standard tourism data collated and analysed	Data collated at central points	Data from new gates to be collected	Data incorporated into ZPWMA reporting schedule as soon as possible	1
		Data analysed on a monthly basis			1
	4.2.2: Visitor satisfaction data collated and analysed	Data collated at central points			1
		Data analysed on a monthly basis			1
	4.2.3: Post of Tourism Officer	Job description drawn up	In conjunction with Operations Programme	Tourism Officer in place by mid 2011 (to run tourism unit)	1
4.3: Leases for GNP improved and standardised	4.3.1: Leases standardised	Input from legal expert		Documents by early 2011	1
		Draft lease drawn up	Leases improved for both ZPWMA and lessee	Improvements part of GNP leases	2
4.4: Booking system improved	4.4.1: Communications improved	Vsat system; radios in place		Linkages operational by end 2011	1
	4.4.2: Long-term booking system established, tested and modified	Trial booking system established and modified if necessary	Good communications vital Good links to coordinate HQ bookings	Trial booking system in place by end 2010	1
4.5: Impact of tourism monitored and adaptively managed	4.5.1: Monitoring framework developed	Initial thresholds of potential concern set	In conjunction with Ecology Programme	Draft framework by mid 2011	1
		Viable monitoring system established	Regular analysis of visitor comment forms	Data incorporated into ZPWMA reporting schedule	2
	4.5.2: Tourism monitoring and assistance unit established	Terms of reference compiled	In conjunction with Operations Programme	Unit operational by mid 2011	1
		Training of staff		2 Staff trained by mid 2011	1

High priority = 1; Low priority = 3

Table C.21: Summary and Three Year Activity Plan – Sustainable Tourism Programme

OBJECTIVE 4: MANAGEMENT AND ADMINISTRATION OF TOURISM IMPROVED					
Targets	Action	Activities	Notes	Implementation Schedule	Priority
4.6: Visitor reception services improved	4.6.1: Reception facilities at Chipinda Pools and Mabalauta improved	Buildings upgraded	Radio or email links maintained	Chipinda upgrade end 2011 Mabalauta upgrade mid 2011	1
	4.6.2: Reception services improved	Staff training	Additional staff if necessary	10 staff trained (to include gate operations)	1
4.7: Improved control over entry and access	4.7.1: Gates established	Design agreed	New gates at Runde Bridge, Ndali road, Save-Runde Base, Boli, Malapati, Sango	Mabalauta gates established by end 2011 Chipinda gates established by mid 2012	1/2
		Gates built			
	4.7.2: Control points established	Design agreed	Control points at Dumisa, Gweni, No. 10	Dumisa operational by mid 2011; others by mid 2012	1/2
		Control points erected			
4.8: Signage improved at appropriate points	4.8.1: Signage standardised and improved	Designs approved	Numbered system to link with guidebook material	Signage document for agreement by end 2010	1
		Points chosen and signs erected/removed	Try to remove concrete signs from wilderness areas	Signs erected by end 2011	2
4.9: Litter dealt with appropriately	4.9.1: System to ensure litter is removed from Wilderness and Wildland Zones	Visitors become responsible for removal of litter from interior of the park	Separation system if feasible	Separation facility and system for controlling/ removal to dump by mid 2011	1
	4.9.2: System to deal with litter in Development sub-zones	Separation and efficient system for dealing with litter	Can crushers, incinerators, composting		
4.10: Wood and water systems for tourists	4.10.1: Sustainable fuelwood system in place	Ticketing system organised	Encourage the use of gas	System operational by mid 2011	1
		Sufficient wood at collection points			
	4.10.2: Water for tourists				

High priority = 1; Low priority = 3

The following table summarises the “deliverables” that can be expected to ensure that the Sustainable Tourism Programme is implemented. It focuses on things that can be “ticked off” and is expected to act as a guide to help with the implementation of this programme.

Table C.22: Plan “deliverables” summary – Sustainable Tourism Programme			
Electronic	Documents	Infrastructure	Other
Objective 1: TOURISM FACILITIES AND ACTIVITIES DEVELOPED			
DVD	Lease recommendations	Developed campsites improved	Tourism monitoring unit
GPS map	Tourism facility site specific plans	Save-Runde Developed site established	Training for ranger tourist guides
Internet site	Accommodation Standards	Standardisation of Exclusive campsites	
	Tourism facility terms of operation	Chilojo Exclusive Sites established	
	Tourism facility prospectus for potential investors	Road realignments	
	Siting of Wilderness Bushcamps	Ndali, Sango, Boli, Malapati, Runde Bridge, Save-Runde Base gates	
	Fee structure strategy document	Dumisa, Gweni, No. 10 Control points	
	Road plan/Design	Old Bridge, Chivonja Hills, Chivilila, Chilojo, Twiza picnic sites	
	Gate designs	Picnic sites	
	Siting/design of picnic sites (incl. loop road plan)		
	Siting/design of view points (incl. road plan)		
	4x4 Routes		
Objective 2: GONAREZHOU WILDERNESS BRAND PROMOTED			
	Brand materials (posters, pamphlets etc)		
	Operator prequalification standards		
Objective 3: EDUCATIONAL AND INTERPRETIVE FACILITIES, ACTIVITIES AND MATERIALS DEVELOPED			
	Interpretation Centre and layout designs	Interpretation Centre Chipinda Pools	Visits to regional examples of interpretation centres
	Interpretation materials (posters, signs, pamphlets etc)	Interpretation Centre Mabalauta	Staff training at gates/reception facilities
	Mini interpretation site report (sites, sign designs,	Signs at selected sites	

Table C.22: Plan “deliverables” summary – Sustainable Tourism Programme

Electronic	Documents	Infrastructure	Other
	information sheet etc)		
	Updated tourist Map	School group type accommodation in the future?	
	Tourist information sheets		
	Commercial guide book?		
	Cultural site study		
Objective 4: MANAGEMENT AND ADMINISTRATION OF TOURISM IMPROVED			
	Codes of conduct	Communications between gates, HQ, stations	Practical, successful tourism booking system
	Tourism data reports	Improved reception services Chipinda Pools	Tourism monitoring unit (see also Obj. 1
	Legal report on lease improvements	Improved reception services Mabalauta	Training of reception staff
	Standardised leases for tourist sites	Signs erected at specified locations. Inappropriate signs removed	Litter removal responsibility of tourists
	Tourism monitoring system	Litter handling facility at HQs.	
	Terms reference for tourism monitoring unit	Wood collection points	
	Signage report (placement, design etc)		
Objective 5: NATIONAL AND REGIONAL CO-OPERATION IN THE TOURISM INDUSTRY PROMOTED			
	Contentious area boundary reports		Hunting workshop
	Hunting report		
	Craft group reports		
	PPCP report		
	Cross border trail feasibility studies		

C.10 ENVIRONMENTAL IMPACTS AND MITIGATION

This section provides a brief summary of the possible environmental effects of some of the activities and developments that will be carried out by this programme. Possible mitigation measures are also outlined. All major developments such as roads and camps must have an environmental assessment. However, in the case of tracks and campsites it may be enough to draft an environmental statement rather than carrying out a full, legally compliant, environmental assessment which can be expensive and time consuming.

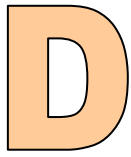
Table C.23: Mitigation measures for the Sustainable Tourism Programme		
Development/Activity	Potential Impact	Mitigation Measures
Roads (internal tracks)	<ul style="list-style-type: none"> • Erosion • Opening up of new areas 	<ul style="list-style-type: none"> • Proper drainage • Correct alignments • Adherence to limits of use
Semi-permanent camps and Lodges	<ul style="list-style-type: none"> • Site degradation • Litter • Aesthetic aspects • Permanent presence (positive) 	<ul style="list-style-type: none"> • Professional EIA • Tight leases • Proper policing
Unescorted walking	<ul style="list-style-type: none"> • Increased risks to visitors 	<ul style="list-style-type: none"> • Suitable information available
Escorted walking	<ul style="list-style-type: none"> • Increased risks to visitors 	<ul style="list-style-type: none"> • Trained staff
4x4 access to remote areas	<ul style="list-style-type: none"> • Degradation of wilderness • Information about illegal activities (positive) 	<ul style="list-style-type: none"> • Education of visitors • Policing
Opening up cultural sites to visitors	<ul style="list-style-type: none"> • Defiling of sites by visitors • Loss of spiritual value to community 	<ul style="list-style-type: none"> • Education of visitors • Policing • Defining which can be visited
Safari hunting	<ul style="list-style-type: none"> • Over-hunting • Killing of iconic GNP animals • Benefits to communities (positive) 	<ul style="list-style-type: none"> • Realistic quota setting • Policing

D

PARK OPERATIONS, ADMINISTRATION AND INFRASTRUCTURE PROGRAMME



Staff on parade



PARK OPERATIONS, ADMINISTRATION AND INFRASTRUCTURE PROGRAMME

D.1 PURPOSE, BACKGROUND AND KEY COMPONENTS

D.1.2 Programme Purpose

Park Operations, Administration and Infrastructure Programme Purpose:

Transparent, accountable and efficient administration and management of human, financial and physical resources to support the Gonarezhou National Park's purpose

D.1.2 Background

The Park Operations Programme is the core programme for the management of Gonarezhou National Park. This is the foundation on which effective protection of the environment and utilisation of its resources through tourism depends. If the Park Operations Programme is not successful then it is likely that the park will fail to achieve its objectives outlined in the other three programmes.

Gonarezhou is unusual in management terms as it is effectively two parks. Management is carried independently in two different sectors – Save-Runde, with its headquarters at Chipinda Pools and the Mabalauta Sector with its headquarters in Mabalauta. Centralised control is only found at the regional level in Masvingo. Both HQ stations have sub-station, Chipinda Pools at Save-Runde Base and Mabalauta at Malapati. The Malapati station has a significant input into the management of safari hunting in the Malapati Safari Area. Finally severe financial constraints led to the development of permanent staff housing at Nyavasikana under Public Service Investment Programme (PSIP). This undesirable development was seen to be the only viable option for maintaining law enforcement effort at the time.

An organisation is only as good as its staff and a strongly motivated team mean that the chances of plan implementation are greatly increased. A key component of the Park Operations Programme is the improvement of morale on the field stations. Training of staff to improve their effectiveness is also an important part of improving morale

A perennial problem for many management authorities is insufficient staff and Gonarezhou National Parks is no exception. However, increasing staff numbers without a corresponding increase in the housing, equipment and other resources to enable them to carry out their duties effectively, would be counterproductive. At worst it could strain the existing facilities and equipment without improving the management effectiveness of the station. In addition, many of the current staff houses are in need of renovation and upgrade.

Illegal use of natural resources in protected areas is an ongoing and perennial problem and the Gonarezhou is no exception. Currently both stations carry out extended patrols (7-14 days) and day patrols, but at a relatively low level. Many parts of the park are difficult to access, especially during the rains and this means that illegal activities can be difficult to detect. Types of illegal activity include poaching with weapons, snaring, illegal fishing, removal of plant products etc. Although protection of resources is a key issue for the Biodiversity and Natural Resources Management Programme the day-to-day execution of anti-poaching is covered under the Park Operations, Administration and Infrastructure programme as the staff carrying out these duties fall directly under park management.

Fire is another programme cross-cutting issue. Fire records have been kept since the 1960s and they show that fire is a major issue for the park. As with anti-poaching monitoring and research of fires and their effects on the environment are carried out by the Biodiversity and Natural Resources Management Programme but the implementation of fire prevention and control activities fall under the Park Operations, Administration and Infrastructure programme.

An important, and sometimes overlooked part of park operations is maintenance. Good maintenance of equipment will extend its useable life, reducing the need for new equipment. In addition, training of staff to respect and handle equipment properly can go a long way towards reducing losses, and this includes defensive driving.

In order to effectively manage a national park a minimum amount of equipment is required and Gonarezhou does have a shortfall of vehicles and other essential equipment. The significant upgrade and redevelopment of the road system is expected to take place during the life of this plan, a task that will be greatly facilitated with proper road building and maintenance equipment.

Communications are another fundamental part of park management. Radio communications between HQs, field stations and patrols on the ground are vital to effectively combat illegal resource use, fires and to bolster the morale of the field staff. As the park is split into two separate management sectors communications between Chipinda Pools are important for management and tourism. Finally there is the issue of communications between the field staff in Gonarezhou and the higher chain of command – i.e. regional HQ in Masvingo and national HQ in Harare. Although V-Sat systems are already in place in Mabalauta and Chipinda Pools, all of these links need to function properly for park management to be effective.

D.1.3 Key Components

The Park Operations, Administration and Infrastructure programme is at the core of park management. This programme underpins the other three programmes and the key responsibilities or components of park management that this programme addresses are briefly outlined below (Table D.1).

Table D.1: Key components of the Park Operations, Administration and Infrastructure Programme	
Component	Brief Description
Staffing	Pertains to staff compliment, leave, training etc
Morale	Staff morale is a very important part of park management and these issues need to be addressed effectively to ensure that the park is properly secured
Access	Roads, tracks, bridges and airstrips. The park has approximately 1,400 km of roads and tracks. Wet season access is severely restricted because there are no reliable crossings over the Runde River.
Buildings	Construction and maintenance of offices, staff housing, laboratory, gates and outposts. This component does not include the tourism infrastructure (lodges, campsites etc) which fall under the Sustainable Tourism Programme
Communications	Telephone, radio and other communication means between the park and the outside world. Also refers to internal park communications, usually by radio.
Finances	Correct management of finances, especially as each park is striving to financially self-sufficient, is an important component of the Park Operations Programme.
Transport	Reliable transport is vital for effective management of a park. Equipment needs to be properly cared for and maintained.
Boundaries	Concerns boundary demarcations and the resolution of disagreements about boundaries.
Anti-poaching	Policing and anti-poaching is a big part of the management of a protected area. Much of it is the routine patrolling but staff also need to be able to respond to specific incidents. This activity is strongly linked to the Biodiversity and Natural Resources Management Programme.
Fire	Fire management is carried out through this programme but is also closely linked to the Biodiversity and Natural Resources Management Programme.

D.2 THREATS, ISSUES AND CONCERNS

There are a number of issues and concerns specific to the Park Operations, Administration and Infrastructure Programme. These are briefly outlined below (Table D.2), prior to being described in more detail in the tables that follow. Broad categories are used to help simplify the approach and assist with the development of the objectives (section D.4).

Table D.2: Summary of threats, issues and concerns Park Operations, Administration and Infrastructure Programme			
Management	<ul style="list-style-type: none"> • Split management • Inadequate consultation between HQ and field • Monitoring Capacity • Vehicles spend time on non-core business • Poor communications on station • Main transit route Chipinda-Mabalauta is outside the park • Poaching • Training and Ration hunting • Chitsa occupation • Fire • Shape of the park 	Infrastructure/ Resources	<ul style="list-style-type: none"> • Inadequate road network • Problematic rainy season access • Staff housing inadequate • Abandoned Nyavasikana Base • Water infrastructure in poor condition • Insufficient resources – incl. vehicles • Old fence lines • Poor communications • Power at HQ and lodges
Staffing/ Morale	<ul style="list-style-type: none"> • Insufficient staff • Challenging conditions • Insufficiently trained staff • Low morale • Loss of expertise 		

Table D.3: STAFFING AND MORALE issues and concerns facing the Park Operations, Administration and Infrastructure Programme	
Issue/Concern	Brief Description
Insufficient Staff	There are currently 110 staff assigned to Gonarezhou and these numbers are roughly split between Chipinda Pools and Mabalauta. An internal assessments recommends a further 90 staff showing that the current staffing rate is approximately 50% of the ideal rate for efficient protection and management.
Challenging Conditions	Both Chipinda Pools and Mabalauta are remote stations and the staff and their families live under challenging conditions. Neither station caters for schooling or has a dedicated health facility. Health care at Chipinda pools is provided by staff members spouses. Places to purchase supplies are not found on station.
Insufficiently trained staff	The vast majority of the staff on station are of ranger grade. The training of the staff is variable and could be improved through courses and on-the-job training.
Low morale	Although staff morale is considered to be relatively high there is room for improvement. Poor management of field staff contributes to low morale, as does selective implementation of the disciplinary code. These issues need to be addressed.

**Table D.3: STAFFING AND MORALE issues and concerns
facing the Park Operations, Administration and Infrastructure Programme**

Issue/Concern	Brief Description
Loss of expertise	Many of the more experienced staff are approaching retirement age and will be leaving soon. There has been inadequate training of younger staff to replace them.

**Table D.4: MANAGEMENT issues and concerns
facing the Park Operations, Administration and Infrastructure Programme**

Issue/Concern	Brief Description
Split management	For management purposes Gonarezhou is effectively two adjacent parks, each managed as a separate unit. The Area Manager for each station reports directly to Provincial administration in Masvingo. There is no centralised management for the park, in the park.
Vehicles used for non-core business	Related to the challenging conditions concern in the previous table. As facilities are not available on station then vehicles are used to ferry staff to the nearest centres for school, health and shopping activities.
Insufficient patrolling	The patrol schedules are below the optimum level and this is largely due to insufficient staff. For effective protection a full compliment of field staff is needed. It is also imperative to manage available staff effectively.
Boundary demarcation	Parts of the boundary are not clearly marked and, in some areas they are marked incorrectly. This is a different issue to that of boundary disputes which is dealt with under the collaborative management programme.
Training & Ration Hunting	Most national parks in Zimbabwe are issued with a ration and training quota for the feeding and training of staff. This is also true of Gonarezhou but this quota has not been used since 2007 as rations are supplied by a partner organisation.
Inadequate consultation between HQ and field	Large organisations such as the ZPWMA often suffer from poor communications between the headquarters and the field. Decisions are made at the higher levels and these are not properly communicated to management staff on the ground. In other instances ground staff feel that they are inadequately consulted prior to important decisions being taken. Until recently communications were a major problem but the installation of internet facilities at Chipinda Pools in 2008 and at Mabalauta in 2010 has greatly improved the situation.
Wounded animals	Animals wounded by safari hunters sometimes move into the park. Currently hunters make their own follow ups but ideally this should be done by Parks staff. It should be remembered that hunting is not permitted within 400 metres of the park boundary, a regulation that is sometimes overlooked. In addition, the long boundary with Mozambique also makes management of this activity difficult. A hunting protocol needs to be formulated and enforced.
Monitoring capacity	The monitoring capacity of law enforcement effort needs to be improved. There is a need to show that enforcement efforts are being successful and this can also contribute towards improved morale amongst the field staff.
Poor communications on station	There have been instances of poor communications on station, probably due to misunderstandings. This contributes to lowered morale.

Table D.4: MANAGEMENT issues and concerns facing the Park Operations, Administration and Infrastructure Programme	
Issue/Concern	Brief Description
Main transit route Chipinda-Mabalauta is outside the park	Due in part to the state of the internal roads in the park the main transit route between Mabalauta and Chipinda Pools is outside the park via Boli. This route is quicker than going through the park but it does mean that park vehicles are not traversing the park as often as they could – an important prerequisite to effective management.
Chitsa occupation	In 2000 the Chitsa people invaded approximately 100km ² of the park to the north of the Chivonja Range, near the Ndali business centre. They claim to be asserting their rights to ancestral land within the park. An examination of the history of the formation of the park, and the removal of people undertaken to achieve this, shows that they do have a strong case. It is vitally important that some resolution of this issue is reached as soon as possible. This is also a concern for the Collaborative Management Programme
Other boundary issues	Apart from the Chitsa issue there are at least two points of concern regarding the boundaries of Gonarezhou National Park, one opposite Chipinda Pools and the other in the south near Malapati. As with the Chitsa issue there will be overlap of this issue with the Collaborative Management Programme.
Poaching	Both subsistence and commercial poaching occur within the park boundaries, as do illegal use of resources such as grazing by cattle and the removal of thatching grass. This is a combined issue for both this programme and the Biodiversity and Natural Resources Management programme.
Fire	Fire is an ongoing issue in the park with significant parts of the park being burnt on an annual basis. As with poaching, this is a combined issue for both this programme and the Biodiversity and Natural Resources Management programme and more details can be found in that section.
Shape of the Park	The elongated shape of the park means that the eastern boundary, which also forms the international boundary between Zimbabwe and Mozambique, is 113 kilometres in length. This presents a management problem as this land is subject to control by a different government.

Table D.5: INFRASTRUCTURE AND EQUIPMENT issues and concerns facing the Park Operations, Administration and Infrastructure Programme	
Issue/Concern	Brief Description
Inadequate road network	<p>There are in excess of 1 400 km of roads in the Gonarezhou. However, most of these roads, though passable, are in poor condition. The road network was also established for utilitarian purposes and many roads follow old fence alignments. There is an urgent need to reconcile and improve the road network. This important activity needs to be carried out in conjunction with the Sustainable Tourism Programme.</p> <p>Some roads that were established in the past have degraded to such an extent that they are beyond repair, and there is a need for these roads to be closed down and prepared for rehabilitation. Certain roads do not have a function any more. Other roads may just need to be closed temporarily until such a time that they are upgraded.</p>

Table D.5: INFRASTRUCTURE AND EQUIPMENT issues and concerns facing the Park Operations, Administration and Infrastructure Programme	
Issue/Concern	Brief Description
Problematic rainy season access	<p>During the rainy season the park is physically split into two sections as it is not possible to cross the Runde river. The only high level bridge in the area was washed away by the El Nino floods in 2001 and crossing points are now limited to a causeway near Chipinda Pools and several unsecured sand crossing further down the river. At the peak of the wet season Mabalauta may only be accessible by travel via Rutenga.</p> <p>In addition, many parts of the park are difficult to access once the rains set in and the minor internal tracks become impassable.</p>
Staff housing inadequate	Existing staff structures are old and in need of urgent renovations, and there is a need for additional accommodation, to cater both for the current staff establishment, as well as to take into consideration future increases in staff numbers and the need to supply suitable accommodation for seasonal contract labour.
Abandoned Nyavasikana Base	Nyavasikana camp was established as a patrol base for the central part of the park but has not been used much. In recent years it appears to have doubled as a training camp. There site has a number of buildings and a borehole. The borehole used to feed a pan to the south of the camp and much of the infrastructure still remains.
Water infrastructure in poor condition	The Zimbabwe National Water Authority, (ZINWA), has traditionally been in charge of all domestic water supplies in GNP. ZINWA is still operational in Chipinda Pools but in Mabalauta, Malapati and Save-Runde Base camp this duty was formally taken over by ZPWMA in 2004. Due to a combination of an ageing and ill-maintained infrastructure and periodic shortages of key supplies, water provision are at times erratic and often insufficient to meet demand.
Insufficient resources	As with many protected areas the budgets to run the park effectively and efficiently is not available. In addition other resources are also limiting factors.
Old fence lines	All of the veterinary and cattle fences in and around the park are no longer functioning. However, some of the infrastructure in the form of poles (wooden and metal) and, in some cases, wire still remains. This is both unsightly as well as a potential management hazard.
Poor communications	Prior to 2008 communications to the main management stations was problematic as it relied on the ground based telephone lines. However, with the introduction of internet the situation has improved considerably. However, internet is not without its problems (power, downtimes, unpaid ZESA bills etc) and other communication means should be kept open for emergencies. Cell phone signal is available not far from the main stations and perhaps booster stations should be considered for emergencies.
Power at HQ and lodges	Power supplied by ZESA to the management stations and the tourist lodges at Swimuwinini is notoriously unreliable.

D.3 GUIDING PRINCIPLES

The Park Operations, Administration and Infrastructure Programme will through **addressing issues related to the human, financial and physical resources within the park**, taking into consideration the applicable national policies and legislation. It aims to ensure that GNP's exceptional resource values are maintained making use of available resources and taking stock of existing infrastructure, and ensuring its maintenance and improvement. The programme will incorporate lessons learnt from the past, and combine this with best practise gleaned from the modern conservation era for implementation of this GMP.

1. Trained and motivated staff are the most important asset for park management
2. Management and financial resources are finite
3. Park infrastructure and activities designed to cause minimal environmental impact
4. Good access and communications are vital for effective management
5. Quality and transparency

1 **Trained and motivated staff are the most important asset for management**

Staff are more likely to operate efficiently if they are well motivated. This includes fair salaries which are paid promptly, and decent living and working conditions. In addition, training is an important component for staff morale as it improves their effectiveness and value to the Authority, as well as to themselves. Furthermore adherence to the disciplinary code also helps to ensure that morale remains high.

2 **Management and financial resources are finite**

The Park Operations, Administration and infrastructure programme recognises that management and financial resources are finite, and the use of available resources need to be applied in the most effective way.

3 **Park infrastructure and activities designed to cause minimal environmental impact**

Park infrastructure, which includes roads, airstrips, headquarters communications equipment, staff quarters etc, can have an adverse effect on the environment if not properly designed and located. Conservation of the Gonarezhou's Exceptional Resource Values and biodiversity will take precedence in all management actions and decisions. All developments and activities will be designed and conducted so as to have minimal environmental impact.

4 **Good access and communications are vital for effective management**

One of the primary factors which will improve the effective management of protected areas is a good communications infrastructure. Roads and bridges need to be up to certain standard to ensure that staff are able to respond to security situations and that resupply is feasible. Investment in upgrading and maintaining these links is of paramount importance.

In addition, an efficient and reliable communications system is necessary to ensure that park management is effective. This is true both for communications between the field and the Authority headquarters in Harare, and for communications between the field headquarters at Chipinda Pools and Mabalauta and the outstations and staff out on patrol.

5 Quality and transparency

Quality and transparency will be the benchmark for infrastructure and equipment procurement, construction and maintenance. In addition, staff will set the example of best practise as park users.

D.4 OBJECTIVES, TARGETS AND ACTIVITIES

Five management objectives have been described for the Park Operations, Administration and Infrastructure Programme. The objectives, their targets, actions and activities (objectives and targets summarised below) were defined after a detailed analysis of the current management systems and an analysis of the threats, issues and concerns facing the programme. The programme Purpose and the guiding principles also played a major role during the process. Nowhere is the issue of cross cutting activities more apparent than for the Park Operations, Administration and Infrastructure Programme and some activities such as anti-poaching and fire management are defined as part of other programmes but their implementation is through this programme.

There is a text description of the objectives and their subsequent activities prior to the tabular presentation of the three year action plan, which represents the heart of the programme. Numbering in the text provides the linkage to the action plan.

Objective 1: An effective and efficient human resource base developed

Targets

- 1.1: Staff welfare improved
- 1.2: Performance and professionalism of staff improved
- 1.3: Ideal staff establishment in place

Objective 2: Appropriate infrastructure developed and maintained

Targets

- 2.1: Road and airstrip network improved
- 2.2: Staff accommodation improved
- 2.3: Management infrastructure improved
- 2.4: Communication and power supply improved

Objective 3: Adequate equipment for management activities acquired and maintained

Targets

- 3.1: Adequate equipment on station
- 3.2: Maintenance programmes developed and implemented

Objective 4: Resource protection optimised

Targets

- 4.1: Comprehensive law enforcement system improved and implemented
- 4.2: Fires prevented and controlled
- 4.3: Boundary issues resolved

Objective 5: Improved financial and management accountability

Targets

- 5.1: Financial plans and revenue collection strategies improved
- 5.2: Sustainable financing mechanisms established
- 5.3: Internal reporting systems improved

Objective 1: An effective and efficient human resource base developed

In order to manage a National Park of the size and complexity of Gonarezhou, it is essential that the people employed to carry out this task are well motivated, have the requisite levels of training and are present in adequate numbers to implement management objectives. Current staff establishment and conditions at Gonarezhou are not sufficient to meet management responsibilities.

Target 1.1: Staff welfare improved

Staff employed in the management and protection of National Parks often work in challenging environments far removed from basic amenities and services such as education, health care and transport facilities. In order to meet the demands of effectively managing and protecting the resources of Gonarezhou, it is imperative that the staff employed to do so are well motivated and that supportive structures are in place.

Action 1.1.1: Education – Strategy to improve education of staff children developed

Action 1.1.2: Education - Practical interim solution for education of Mabalauta children

Chipinda Pools has a 2-classroom school that caters for education of children up to Grade 6, with three teachers employed by Government. No education facilities are available at either Save-Runde base camp or Mabalauta. The informal strategy of staff at Save-Runde Base camp and Malapati sub-station is to leave school going children with relatives in town who have access to schools. Mabalauta staff rent houses in Chikumbedzi at their own cost to leave children during the week to attend school, and if a vehicle is available at the station it takes children in on Monday mornings, and collects them again on Friday. Logistically and financially the matter of educating of school children for staff is complex and costly, and a strategy for each station within GNP must be developed to deal with the issue of education of staff children. This is a matter of urgency.

In the interim a practical solution for Mabalauta needs to be sought and this may mean making a vehicle available to ensure that children can get to school.

Action 1.1.3: Health – Strategy to improve health-care access for Parks staff

Action 1.1.4: Health - Health and safety awareness

Action 1.1.5: Health - Hospital access assured

The approved PWMA establishment offers a position of a medical officer in both Chipinda Pools and Mabalauta which are currently filled, by spouses of staff members. The medical officers are taken to Chiredzi each month to access basic medical supplies from the Council hospital. Although supplies have not always been available in the last few years due to the economic challenges facing Zimbabwe, the position is currently improving.

It is imperative that a strategy to improve health-care access for Parks staff is developed. This could include the development of on-station facilities should this fit in with the vision for the authority and is practical from a staffing, equipment and drug supply perspective. Monthly baby clinics must be conducted at each station.

Transport for staff requiring medical attention beyond the capabilities of the facilities at station level will be provided. AIDS awareness programmes should be constantly updated and implemented. Malaria prevention programmes will be carried out, and basic first-aid training courses for field rangers conducted annually.

Action 1.1.6: General - Staff access to shops and social events provided

Transport needs for effective Park Management should make provision to provide staff transport for major social needs for example monthly re-supplies and funeral assistance and this additional demand on vehicles should be factored into the budgetary requirement of both provision of vehicles as well as running and maintenance costs.

Target 1.2: Performance and professionalism of staff improved

Staff morale is an important ingredient to the success of the management of GNP. Fair appraisals of staff, whether for promotion or for disciplinary action, is of cardinal importance to cultivate a positive working environment.

Action 1.2.1: Code of conduct implemented

PWMA has developed a detailed code of conduct complete with conditions of service and a disciplinary code. Staff will be made fully aware of content at all times, and managers will implement the code of conduct accordingly, referring to the appropriate clauses in the manual during disciplinary hearings. A transparent incentive system will be developed to encourage staff performance.

Action 1.2.2 Capacity building and training programmes implemented

Training needs in the GNP needs to be identified, and a training strategy for staff at all levels developed. Where possible suitable in-house training programmes will be developed and implemented. As a point of interest, it has been noted that there are a significant number of experienced staff who are approaching retirement age. Some method of capturing their experience and passing it onto newer and less experienced staff should be sought.

Capacity-building and training programmes are a further important part of any effective organisation. The range of duties of Park staff are wide, with certain positions requiring extensive contact with the public such as tourism officers, field rangers are often engaged in highly sensitive law enforcement operations and technical staff need to engage in specialised duties. Failure on the part of Park management to constantly appraise and provide ongoing training and refresher courses for staff could have serious public relations, legal, or safety consequences. A range of training options should be explored, inclusive of developing cost-effective in-house training programmes.

Action 1.2.3: Appraisal and incentive system developed

In order to motivate staff an appraisal and incentive system to reward staff for good performances should be established. The incentive system would need to be transparent to ensure that hard work is rewarded.

Action 1.2.4: Industrial relations harmonised

Worker's committees form an important link between management and staff and should meet regularly. Grievances should be communicated to management through the appropriate channels, and transparent and timely feedback to staff is of great importance.

Target 1.3: Ideal staff establishment in place

Action 1.3.1: General staff establishment increased

Staff shortages are often the norm in large protected areas, and Gonarezhou is estimated to running at approximately 50% of the ideal (Table D.6) However, it is recognised that it is preferable to have fewer highly motivated staff, than a higher number of employees which are not sufficiently supported. Therefore a staff assessment must take into consideration the available support structures such as accommodation and transport prior to recommending placement of additional staff. There are also cases where certain duties have not been provided for in the approved establishment, but as these duties are required at station level field rangers are currently assigned to these duties – therefore decreasing the pool of rangers that are available for law enforcement duties in the field.

Table D.6: Current staff establishment compared to approved establishment					
	Chipinda Pools		Mabalauta		
Position	Current	Approved	Current	Approved	Shortage
Area Manager	1	1	1	1	0
Senior Wildlife Officer	2	4	1	4	5
Wildlife Officer			1	0	0
Senior Ranger	2	4	2	4	4
Ranger 1	5	14	9	13	13
Ranger 2	1	12	8	20	23
Ranger 3	19	35	16	29	29
Senior Ecologist	1	1	0	0	0
Ecologist	1	2	0	0	1
Senior Ranger–Scientific Services	0	1	0	0	1
Ranger 1-Scientific Services	0	1	0	0	1
Ranger 2-Scientific Services	1	2	0	0	1
Ranger 3-Scientific Services	0	2	0	0	2
Medic	1	1	1	1	0
Clerk	0	1	1	1	1
Reservationists	0	1	2	2	1
General hand	3	4	1	4	4
Lodge attendant	0	2	3	4	3
Linen attendant	1	2	1	2	2
Handy man	4	0	0	0	0
Ranger 3 - (Stores man)	1	0	0	0	0
Ranger 3 - (Workshop assistant)	2	0	1	0	0
Ranger 3 - (Drivers)	1	0	2	0	0

Table D.6: Current staff establishment compared to approved establishment					
	Chipinda Pools		Mabalauta		Shortage
Position	Current	Approved	Current	Approved	
Ranger 3 - (Gate attendants)	2	0	0	0	0
Ranger 3 - (Night watchman)	2	0	2	0	0
Ranger 3 - (Radio operator)	1	0	2	0	0
Ranger 3 - Commercial services	5	0	0	0	0
TOTAL	56	90	54	85	91

Where possible additional staff will be recruited as per Table D.6 but only if there is sufficient housing and equipment to ensure that these additional staff are efficient and do not become a burden on the system. The Authority will also be updated on death, AWOL, resignations, long-term illness and retirement of staff on a quarterly basis, and request for suitable replacements if needed.

Action 1.3.2: Rhino re-introduction staffing when required

Additional staff beyond the approved staff establishment is needed if the proposed reintroduction of rhino goes ahead in the Save-Runde Subsector (Table D.7).

Table D.7: Additional staff that will be needed for rhino reintroduction	
Position	Rhino IPZ (shortfall)
Senior Wildlife Officer	1
Senior Ranger	1
Ranger 1	5
Ranger 2	5
Ranger 3	20
Radio operator	1
TOTAL	33

Total shortfall of staff therefore if a rhino reintroduction goes ahead is for an additional 124 staff members.

Objective 2: Appropriate infrastructure developed and maintained

Gonarezhou National Park has a history of relatively low financial input in infrastructure development and maintenance. Extensive upgrading and expansion is needed for staff domestic water supplies, accommodation facilities and administrative centres. The road network needs a major review with regards to functionality and relevance of existing roads, as much of the network was initially developed for the tsetse control efforts and alongside veterinary control fences, and are not necessarily suitable for current and planned management and tourism activities. Furthermore, many of the current roads are in a bad state of disrepair, and assessments with regards to cost-effectiveness of repairing or rehabilitation of roads need to be made. Current tourism facilities are also in need of maintenance and upgrading, and further development in line with the tourism development plan will need to take place.

Where deemed appropriate internal environmental assessments will be carried out prior to construction of infrastructure. However, should larger projects be considered it may be necessary to carry out an environmental assessment which includes a larger stakeholder input with final approval through the Environmental Management Authority.

Target 2.1: Road and airstrip network improved

This management target is arguably the biggest single management cost and annual activity with over 1400 km of roads that need to be maintained, and is critical for both effective management and tourism activities.

Action 2.1.1 Road plan developed

Some roads that were established in the past have degraded to such an extent that they are beyond repair, and there is a need for these roads to be closed down and prepared for rehabilitation. Certain roads do not have a function any more. Other roads may just need to be closed temporarily until such a time that they are upgraded. Unmanned entrance roads to the GNP need to be closed to the public. A comprehensive road management action plan will be drawn up, with decisions made about roads that are to be closed, maintained, realigned or new roads that need to be established taking into consideration current management and tourism needs. This plan will also include a costing and priority listing.

It is imperative that this plan is drawn up in conjunction with the Sustainable Tourism Programme as a key part of the tourism plan is to ensure that the road network is more interesting for visitors. However, management and tourism needs have to be balanced.

Action 3.3.2 Road plan implemented

The implementation of the road plan will require a significant financial and labour input. The Frankfurt Zoological Society already has road building equipment on hand that is awaiting importation into Zimbabwe and this equipment will ensure that the plan translates into action. An annual maintenance plan for all roads will be drawn up at the same time and implemented.

Action 3.3.3 Maintenance of airstrips

The Park is serviced by a network of airstrips for both tourism and management purposes. At this time no new airstrips are recommended but a maintenance schedule must be drawn up and implemented.

Table D.8: Airstrips in Gonarezhou					
Name	Type	Length	Surface	Condition	Use
Chipinda Pools	All weather	1 000m	Gravel	Good	Mgmt/Tourism
Mabalauta	All weather	900	Grass	Fair	Mgmt/Tourism
Fishans	Dry season	800 m	grass	Fair?	Mgmt only
Chalanda	Dry season	800 m	grass	fair	Mgmt only
Border B	Dry season	1 000m	grass	fair	Mgmt only
Pokwe	Dry season	600m	grass	bad	Mgmt only
Malapati	All weather	1 000m	grass	fair	Mgmt/Tourism

Target 2.2: Staff accommodation improved

Existing staff structures are old and in need of urgent renovations, and there is a need for additional accommodation, to cater both for the current staff establishment, as well as to take into consideration future increases in staff numbers and the need to supply suitable accommodation for seasonal contract labour. The current housing situation is summarised in Table D.9 and this forms the basis for house renovation and construction.

Table D.9: Current houses and house shortages in Gonarezhou					
Locality and house types	Currently Available	Number vacant	Current shortage	Approved establishment shortage	Total new houses needed
Chipinda Pools :					
Managers House	4	0	1 (E21)	0	1
F13	5	0	1	0	1
F15	11	0	4	16	20
R 27	4	0	0	0	0
R 26	8	0	5	8	13
Single quarters (# rooms)	28	0	40	0	40
Mabalauta :					
Managers House	4	1	0	0	0
F13	5	0	0	0	0
F15	6	0	4	4	8
R 27	4	0	0	0	0
R 26	4	0	0	6	6
Single quarters (# rooms)	31	0	0	17	17

Action 2.2.1 Additional houses constructed

Action 2.2.2 Additional houses constructed for rhino re-introduction programme

Action 2.2.3 Appropriate maintenance for staff housing

A significant number of new buildings are required to house the proposed staff increases. In addition the re-introduction of rhino will require further staff and accommodation and this requirement is briefly summarised below (Table D.10).

Table D.10: Additional housing needed at Chipinda Pools to cater for increase of staff associated with rhino reintroduction	
House Type	Additional housing
Managers House	1
F13	1
F15	10
R 27	0
R 26	5
Single quarters (# rooms)	20

For all buildings, old and new, a maintenance schedule needs to be drawn up and adjusted annually.

Target 2.3: Management infrastructure improved

An assessment of the status of buildings in Gonarezhou reveals that a number of them are in need of renovation. In addition some new building will need to be constructed (Table D.11).

Table D.11: Other buildings and infrastructure shortages in GNP				
Station	Type	Existing	Condition	Requirements
Chipinda Pools	Office	1	good	Renovate, and construct research block
	Workshop	1	good	Need for additional storage room
	Butchery		poor	Renovation needed
	Aircraft hangar	1	poor	Need additional hangar and renovation of the existing hangar
	Storeroom	1	poor	Need additional expanded storage facility
	Radio room	1	good	
	Tourist office	1	good	Need expansion and improvement
	Clinic	0		Construction required
Base camp	Office	0		Construction required
	Radio room	1	poor	Needs renovation and extension
Mabalauta	Office	1	fair	Needs renovation and extension
	Workshop	1	poor	Needs renovation and extension
	Butchery	1	fair	Needs renovation
	Storeroom	1	fair	Needs renovation and extension
	Radio room	0		need new one
	Clinic	0		need new one

Table D.11: Other buildings and infrastructure shortages in GNP				
Station	Type	Existing	Condition	Requirements
Malapati	Office	1	poor	Needs construction
	Storeroom & radio room	1	poor	Needs renovation and extension

Action 2.3.1 Renovation and new management building needs prioritised

Critical renovation needs must be identified, and a work plan developed to start with renovations and buildings in a prioritised and systematic manner. All infrastructure developments should be subject to environmental impact assessments prior to the start of construction, and be designed in such a way to blend in aesthetically and sensitively with the environment in order to comply with the Park's value system.

Action 2.3.2 Upgrade of existing management buildings

Action 2.3.3 New management buildings constructed

Once the plan has been prioritised and costed renovations and building should begin as soon as possible, funds permitting. A key element in all of this will be the timing of the rhino re-introduction programme.

Action 2.3.4 Domestic water supplies improved

The Zimbabwe National Water Authority, (ZINWA), has traditionally been in charge of all domestic water supplies in GNP. ZINWA is still operational in Chipinda Pools but in Mabalauta, Malapati and Save-Runde Base camp this duty was formally taken over by ZPWMA in 2004. Due to a combination of an ageing and ill-maintained infrastructure and periodic shortages of key supplies, water provision are at times erratic and often insufficient to meet demand. A preliminary analysis of the current status of the GNP domestic water supply was made, and is presented in the table below.

Table D.12: Status of the water supply infrastructure in GNP				
Location	Responsible authority	Source	Type of storage facility	Working status and suggested action
Chipinda Pools	ZINWA	River	Cement roofed reservoir	Serviceable, but mother line needs replacement
Save-Runde	ZPWMA	Borehole	Cement reservoir without roof	Unserviceable – pump and engine needs total replacement
Mabalauta	ZPWMA	River	Plastic tanks	Unserviceable – pump and engine needs total replacement
Swimuwini	ZPWMA	River	Plastic tanks	Unserviceable – pump and engine needs total replacement
Malapati	ZPWMA	River	Plastic tank (too small)	Unserviceable – pump and engine needs total replacement

The engines and pumps at all stations except for Chipinda Pools will be replaced, a larger tank procured for Malapati, and the mother line replaced at Chipinda Pools. Supplies of key consumables such as fuel for pumps and water purification chemicals will be maintained so as to ensure constant supply of safe water for consumption.

Water supply infrastructure is in many cases, especially where water is pumped from the river, very visible and placed at scenically attractive sites. Therefore all structures associated with the water supply system will be evaluated with regards to aesthetic impact, and appropriate structures erected and modification of current infrastructure carried out where needed.

Target 2.4: Communication and power supply improved

Action 2.4.1: Communication systems operational

Staff on patrol needs to be in constant contact with a centralised command centre for safety and monitoring purposes. A Very High Frequency communications system that covers 100% of the park using a handheld radio should be installed, after obtaining the necessary licenses from the regulatory authorities. A repeater station has been erected on Makandima Hill which gives good coverage over most of the Save-Runde Sector. In addition a repeater has been erected on the Red Hills in the Mabalauta Sector. Efforts should be made to improve the system to ensure that all parts of the park are reachable by radio. In addition the maintenance of such a system is important and powering and monitoring of the repeaters will be a vital activity as they must not be interfered with. Proper training on both the use and basic maintenance of radio equipment will be provided.

Communication systems between the two HQs (Chipinda Pools and Mabalauta) and between the HQs and regional and national management HQs also needs to be improved. Currently email is a relatively reliable means of communication but can be subject to outside influences, such as the lack of power, non-payment of bills etc.

Action 2.4.2: Power systems operational

Power at both Mabalauta and Chipinda Pools is problematic. Both stations are connected to the ZESA grid but the supply is erratic and completely unreliable. Management at both stations should collaborate with ZESA to improve supplies.

In addition, both HQ need to ensure that backup systems in the form of generators and inverters are available for key elements of park management. One of the more important of these is the internet system, as management is becoming more and more reliant on this. In addition, backup cooking and lighting systems need to be made available at Swimuwini as the tourist accommodation has been established for a reliable 220v supply which is often out for considerable periods.

Objective 3: Adequate equipment for management activities acquired and maintained

Target 3.1: Adequate equipment on station

Action 3.1.1: Detailed equipment inventory

An inventory of all current equipment in stock, with indication of serviceability and costs associated with any repairs needed will be done, and a database created to keep track of stock. A preliminary analysis was carried out during the formulation of this management plan (Table D.13 and D.14) but this will need continual updating.

Table D.13: Equipment inventory and shortages			
	Chipinda Pools	Mabalauta	
Type	In stock	In stock	Total shortage
Land Cruiser	5	2	2
Tractor	3	1	1
Tipper Truck	1	1	0
Truck	1	0	1
4 Wheel Trailer	1	1	1
Tipper Trailer	2	0	1
Mower	2	1	1
Tow Grader	2	1	0
Water Bowser	2	2	2
Compacter	1	1	0
Front end loader	0	0	1
Dozer	0	0	1
Boat	1	0	0
Firefighter	2	1	1
Backpack spray (fires)	10	0	30
Welding machine	1	1	0
Motorized grader	0	0	1

Table D.14: Radio equipment analysis for GNP								
	Repeaters	shortage	Handsets	shortage	Vehicles	shortage	Base	shortage
Chipinda	2	1	16	6	3	5	2	1
Mabalauta	1	1	13	5	1	1	2	1

A phased procurement programme needs to be developed to ensure the availability of adequate equipment linked to the various planned management programmes in the 3-year activity plan.

Action 3.1.2: Purchase/acquisition of vehicles and other moveable equipment

Based on the inventory above a phased acquisition programme for vehicles and other moveable should be devised. Sufficient radios should be purchased to ensure that the communications system works as planned. As hand-held radios are likely to be damaged in field use there should also be some backup sets available. Fire-fighting and workshop equipment also needs to be purchased and replaced if necessary

Action 3.1.3: Purchase of patrol equipment

The equipment needed for a patrol (both long and short-term) is outlined below (Table D.16). The patrol needs specialised equipment, but the individuals within the patrol also need standard equipment which is issued through the central management authority. The amount of equipment (including backups) that needs to be on station to ensure that patrols can be effective must be determined (see also the patrol schedules (Target 4.1). Adequate and appropriate weapons and ammunition are also required.

Table D.16: Equipment needed for patrols		
Group	Individual	
<ul style="list-style-type: none"> • 1 x VHF radio per group • 1 x GPS per group • 1 x basic first aid kit • 1 x light tent (or big tent for group) 	<ul style="list-style-type: none"> • 1 pair boots • pair socks • pairs field overall • x water bottle • 1 mosquito net • 1 ground sheet • 1 sleeping mat 	<ul style="list-style-type: none"> • 1 sleeping bag • 1 web belt • 1 bush hat • 1 backpack • 1 bivvie /raincoat • 1 pair of handcuffs

Action 3.1.4: Purchase of monitoring and recording equipment

This action is directly related to activities under the Biodiversity and Natural Resources Management Programme. Monitoring programmes will need specialised equipment which includes computers, cameras, GPS, software and sundry laboratory equipment. These need to be costed and a phased schedule for their purchase detailed.

Target 3.2: Equipment maintenance

A maintenance programme for all equipment will be developed and integrated into the annual Park operational plans. An important part of the care of equipment is ensuring that staff know how to use it correctly and training on specialised equipment for users should be considered part of this target.

Action 3.2.1: Maintenance of vehicles and other equipment

Chipinda Pools has a well equipped workshop with some practical and efficient mechanics. This workshop is for the whole park and it is not considered necessary to develop a similar facility at Mabalauta. Vehicles will be maintained and serviced according to a programme. Sufficient consumables to ensure that the services are carried out correctly needs to be on hand. Repair work will be undertaken on an ad-hoc basis as necessary.

Action 3.2.2: Training staff in proper use and care of equipment

As mentioned above if staff are trained in the correct use of expensive equipment and especially vehicles, this equipment can be expected to last a lot longer. At the very least designated drivers should have to undergo relevant training courses.

Objective 4: Resource protection optimised

The elongated shape of Gonarezhou, with a 113 km international boundary, makes it a challenging management unit where regulations are concerned. Illegal snaring, fishing and grazing of livestock from the eastern, southern and northern boundaries are some of the biggest challenges and threats to the biodiversity of the Park, whilst armed poaching from Mozambique needs to be addressed. It is important to strike a balance between the type of tactics that are used to enforce the law, and the relationship with the neighbouring communities. Further threats and potential impacts towards the natural resources that need to be addressed by GNP management includes regulation of man-made fires, monitoring of wildlife off take outside the Park's boundary, and potential negative impact of tourism.

Target 4.1: Comprehensive law enforcement system improved and implemented

In order to meet the challenge of regulating the illegal off take of natural resources within the Park's jurisdiction, it is imperative that a multi-pronged approach to law enforcement is adopted. Not only should emphasis be given in developing and implementing a comprehensive and standardised patrolling system for rangers inside the Park boundary, supported by the provision of adequate patrol equipment and rations and the establishment of a communications system with coverage extending throughout the Park, but there is also need to recognise that the Park's law enforcement efforts cannot take place in isolation and that collaboration with relevant authorities, inclusive of community structures, needs to take place.

Action 4.1.1: Improved and standardised patrol system

The GNP has large areas which are not accessible by vehicle, but which are frequently used by illegal dealers. The backbone of the patrolling system must therefore consist of rangers on foot patrols, supported by vehicles employed for deployment, upliftment and rapid response. Ongoing monitoring of law enforcement effort and results is essential, with regular feedback to management and field staff. For this system to be effective, data collection in the field must be consistent and accurate,

A law enforcement database will be set up and a system of regular input and analysis of data developed in conjunction with the research division which will provide the necessary monthly and quarterly reports on which to base planning of future deployment strategies. Again, the system is only as good as its maintenance and the data needs to be entered accurately into the database and analysed at regular intervals.

The possibility of developing a paper based recording system as a backup to electronic records will be developed. This system will also allow field staff to easily see the results of their efforts rather than having to wait for data to be analysed, which is important for morale.

An intelligence network will be developed and maintained around the GNP to enable managers to be more proactive and specific in their intervention.

Action 4.1.2: Routine patrols carried out

The goal for Park Management will be to achieve an average of 18 man-days on patrol duties/month for each field ranger (Table D.15). A programme dealing with the intensity and spatial distribution of deployment of rangers will be developed for each sub-sector, which will be discussed and adapted at quarterly management meetings by the GNP management team, based on a review of the results and achievements of the previous quarter, using information from the databases.

Table D.15: Monthly LE table with current and target efforts				
Type of law enforcement activity	Chipinda Pools		Mabalauta	
	Current	Target	Current	Target
Patrols – Extended (7 - 14 day)	5	20	6	20
Day patrols (local Patrols)	5	60	20	60
Mobile Patrols (rapid response)	1	5	2	5
Tourist monitoring	0	4	0	4
Meetings with police and community	0	1	0	1
Monitoring of hunting quotas	0	1	0	1
Observation Posts	n/a	n/a	n/a	n/a
Follow-ups	n/a	n/a	n/a	n/a
Informers	n/a	n/a	n/a	n/a
Cattle sweeps	n/a	n/a	n/a	n/a

The routine patrol schedule will be guided by the analysis of data provided by the Biodiversity and Natural Resources Management Programme.

Action 4.1.3: Reactive enforcement

Reactive enforcement activities will be carried out as required. This will be in response to reported incidents (e.g. gunshots, animal carcasses, cattle incursions, intelligence information etc). Reactive enforcement information will also be collected for the enforcement databases.

Of prime importance, especially with respect to the Great Limpopo Transfrontier Conservation Area, is the issue of cross-border follow-ups. The protocols and permissions for this need to be formalised.

Action 4.1.4: Adequate patrol rations (and equipment) provided

Foot patrols take place in a remote and rugged environment, often under dangerous conditions. In order to maintain staff morale and safety it is important that staff is issued with the most appropriate equipment and rations. A minimum set of required equipment (see 3.1.3) and rations per patrol group have been established for field patrols in the park. The basic rations and equipment listing per patrol is listed below (Table D.16)

Table D.16: Equipment and rations needed for each long-term patrol (Subject to change)				
Equipment		Rations		
Specialised	Basic		person/ day	4 person/ 10 days
<ul style="list-style-type: none"> • 1 x VHF radio per group • 1 x GPS per group • 1 x basic first aid kit • 1 x light tent (or big tent for group) 	<ul style="list-style-type: none"> • 1 pair boots • pair socks • pairs field overall • x water bottle • 1 mosquito net • 1 ground sheet • 1 sleeping mat • 1 sleeping bag • 1 web belt • 1 bush hat • 1 backpack • 1 bivvie /raincoat • 1 pair of handcuffs • 	Mealie Meal	500g	20kg
		Kapenta	25g	1kg
		Soya Mince	25g	1kg
		Beans	100g	4kg
		Rice	100g	4kg
		Salt	20g	800g
		Cooking oil	35ml	1.4 litres
		Sugar	100g	4kg
		Tea	15g	600g
		Curry powder	5g	200g
		Tomato paste	25g	1 tin/day
		Matches		2 boxes

Action 4.1.5: Collaborative law enforcement with other enforcement agencies and stakeholders

Park management acknowledges that law enforcement can, and should not, take place in isolation, and it is therefore important to involve stakeholders in the region e.g. police, judiciary establishments and community authorities for planning and implementation purposes at all times. It will be necessary to identify relevant stakeholders and to participate in, or form where necessary, appropriate forums for stakeholder discussions and collaboration.

A security plan is being developed for the Great Limpopo Transfrontier Park with the participation of ZPWMA. Field staff should have an input into this process and its subsequent implementation.

An important part of enforcement is prosecution and park staff must follow up all cases correctly otherwise offenders may be excused or receive light sentences. A database of the outcomes of all prosecutions needs to be maintained on station.

Target 4.2: Fires prevented and controlled

Different fire strategies are effective and appropriate for different geographical areas and management objectives. It is perceived that the combination of regular annual hot fires and elephant damage in the past has changed the habitat in parts of the park. Fire management strategies can be both proactive and reactive. Proactive fire management strategies include graded fire breaks and strip burns along roads and rivers, and reactive fire management strategies refers to situations where a fire team reacts to an already existing uncontrolled fire with the intention of putting it out using water and fire beaters, or by burning back from an existing road, fire break or river. In all the above cases special equipment and/or trained personnel is required.

Action 4.2.1: Proactive fire management

An important component for pro-active fire management will be the annual fire management plan which will be prepared in conjunction with the Biodiversity and Natural Resources Management Programme.

Graded firebreaks without proper water drainages can lead to erosion and should best be avoided. An annual fire meeting will be held at the end of each wet season, in order to analyse the fire strategy for the coming year, dependant on a review of the successes and failures of the previous fire season and incorporating a spatial and time analysis of the areas that had burnt. Rainfall in the intervening period and subsequent fuel load will be taken into account in the planning exercise. This meeting will determine which roads are to be utilised for strip burns that specific year. This activity will follow after the slashing of all management roads has been completed, and will take place at the start of the dry season between May and July. If the same road will be used as the previous year for a strip burn, it should ideally be done on the alternate, but this may depend on the prevailing wind direction at the time of performing the burn. Staff and equipment will be prepared in a timely fashion prior to the start of the dry season.

Action 4.2.2: Reactive fire management

In the dry season, especially in the late hot dry season, there is need for quick reaction to respond to fires. An observation post with radio communications on Makamandima needs to be installed. A team of people need to be on standby at all times, and a duty roster drawn up, inclusive of weekends and holidays, and equipment such as water bowsers, beaters and backpack sprays need to be ready for deployment at all times. Adequate personal protective gear and water bottles should be issued to all staff involved in fire fighting.

Target 4.3: Boundary issues resolved

Action 4.3.1: Legal advice on boundary description

There are several contested parts of the Gonarezhou boundary. Given that there have been some unspecified land swaps in the past it is imperative that any attempt to resolve these issues begins with a level playing field. The first step would be to engage some legal advice to ensure that the Authority is on strong legal ground when it comes to contesting and negotiating with communities. The Gonarezhou park description often refers to other land descriptions and hence can be unclear

Action 4.3.2: Chibwedziwa boundary resolved

The Matibi II disputed area is a small parcel of land directly across the Runde river from the Chipinda Pools headquarters. The Gonarezhou National Park description avoids the issue by referring to the description of the Matibi II Communal Land. The Matibi II Communal Land description reads as follows:

The area of land bounded by a line drawn from the confluence of the Makambi and Lundi rivers down the Lundi River to its confluence with the Chingwesi river and up that river to its confluence with the Mazvikota River;

According to this description the contested area is indeed part of Matibi II. However, this land is overlooked from the tourism areas of Chipinda Pools and hence it is important to give it some kind of conservation status. Negotiations with Council over this issue are long overdue.

Action 4.3.3: Ndali/Chitsa boundary/invasion resolved

The Chitsa people have occupied part of the northern area of the park, near the Ndali business centre. This issue has become political and the Authority is not able to deal with it at a local level. Some resolution of this issue is needed for both the Chitsa people and the ZPWMA. However it is recognised that this is a long-standing and complicated issue with political overtones and care should be taken to ensure a successful outcome. It is also recognised that this has been an ongoing issue for over a decade and that there is a body of previous work on which to build.

Action 4.3.4: Sengwa boundary issues resolved

There is a disputed boundary in the south near the Sengwe Corridor. The community claims that the park boundary is the existing fence line and generally treat it as such. The Authority would be advised to resolve this issue and either enforce the legislated boundary or reach some agreement regarding use of this land by the community.

Action 4.3.5: Mahenye boundary issue resolved

The boundary description of both the park and the Ndowoyo Communal land are unclear on where the boundary is with respect to the Save river. This has led to a large island near the Save –Runde junction being used for safari hunting operations. Most elephant shot by the hunting company are taken from this island and there needs to be formal recognition of its importance to the Chipinge RDC and to the community who receive benefits from the hunting.

Objective 5: Improved financial and management accountability

The successful management of the GNP will depend largely on the provision of adequate financial and physical resources which are applied effectively and accountably.

Target 5.1: Financial plans and revenue collection strategies improved

It is the aim of this management plan to improve the ability of the park to generate more income from tourism activities through the Sustainable Tourism Programme. With perceived increase income there is a need to develop appropriate strategy to handle this revenue collection.

Action 4.1.1 Improve staff capacity to collect revenue

Staff capacity to collect and handle increased revenues will need to be improved through setting up of appropriate systems.

Target 5.2: Sustainable financing mechanisms

To ensure the long-term viability of the Gonarezhou National Park, it is imperative that not only is its long-term managing cost needs guaranteed, but that its existence also has knock-on economic benefits for the region. Given the fragility of depending on a single source of revenue, for instance photographic tourism, for covering costs, it is imperative that a suite of funding options are explored and implemented to ensure the ongoing survival of the GNP.

Action 5.2.1: Sustainable finance mechanisms explored

An assessment of the options open for developing a sustainable finance mechanism for the Park needs to be carried out, exploring issues such as ecosystem services, carbon sequestration and establishment of trust funds.

Action 5.2.2: Additional funding for specific projects sourced

Resources allocated to Gonarezhou may never be enough to address all management issues. It might be possible to identify very specific projects that fall within the development or support agenda of national or international donor or government agencies. The kind of projects envisaged under this type of funding sources could relate to species-specific funding (for instance the black rhino reintroduction), improvement of staff welfare (building of additional accommodation, clinic and school facilities). A strategy that identifies suitable projects needs to be defined and project proposals prepared and submitted.

Target 5.3: Internal reporting systems improved

There is a need for detailed reporting on all resource, inclusive of consumables such as fuel, rations and vehicle spare parts.

Action 5.3.1 Monthly reporting systems improved

Monthly returns to the Regional office under a predetermined timetable and schedule of work will be maintained. This also applies to quarterly and annual reports. A detailed inventory of all resources will be maintained, and a clear system of recording the use of all resource will be implemented.

Action 5.3.1 Improved communications between HQ and the field

The Authority has in place a standardised reporting system that runs from the field stations, through the regional HQ in Masvingo and up to the National HQ in Harare. It is imperative that communications between the field stations and the higher levels in the chain of command are effective and open. This refers to all programmes and not only for this programme.

Table D.17: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 1: AN EFFECTIVE AND EFFICIENT HUMAN RESOURCE BASE DEVELOPED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.1: Staff welfare improved	1.1.1: Education - Strategy to improve education of staff children developed	Meetings to discuss possibilities	Implementation based on strategy	Mid 2011	1
		Strategy formulated			
	1.1.2: Education - Practical interim solution for education of Mabalauta children	Dedicate driver and vehicle for transport of Mabalauta children	Temporary measure until school developments are in place	Ongoing	1
	1.1.3: Health - Strategy to improve health-care access for Parks staff	Meetings to discuss possibilities	Implementation based on strategy	Mid 2011	1
		Strategy formulated			
	1.1.4: Health - Health and safety awareness	First aid training for rangers	Suitable course identified	Annually	1
		Infectious disease awareness campaigns for all staff		Ongoing	
	1.1.5: Health - Hospital access assured	Transport to hospital facilities in Chikombedzi and Chiredzi if required		Ongoing	1
	1.1.6: General - Staff access to shops and social events provided	Monthly shopping trips for supplies co-ordinated		Ongoing	1
		Transport assistance for funeral, sporting events when possible.		Ongoing	

High priority = 1; Low priority = 3

Table D.17: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 1: AN EFFECTIVE AND EFFICIENT HUMAN RESOURCE BASE DEVELOPED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.2: Performance and professionalism of staff improved	1.2.1: Code of conduct implemented	Park management to implement provisions of ZPWMA Code of Conduct		Ongoing	1
		Regular meetings for workers' committees to address staff grievances	At all stations	Ongoing	
		Transparent and timely management feedback to staff		Ongoing	
	1.2.2: Capacity building and training	Needs identification		End March, 2011	2
		Courses (in-house and external) as required	Refresher and special needs (See Sustainable Tourism)	Annually	
		Experience and skills transfer between more experienced and newer staff	Appropriate methodology?	As soon as possible	
	1.2.3: Appraisal and incentive system developed		Needs to be transparent	Annually	2
	1.2.4: Industrial relations harmonised	Workers committee regular meetings			1
1.3: Ideal staff establishment in place	1.3.1: General staff establishment increased	Staff establishment increased as per assessment	Appropriate staff for specific tasks		1
	1.3.2: Rhino re-introduction staffing when required				3

High priority = 1; Low priority = 3

Table D.18: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 2: APPROPRIATE INFRASTRUCTURE DEVELOPED AND MAINTAINED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
2.1: Road and airstrip network improved	2.1.1: Road plan developed	Road assessment	In collaboration with Sustainable Tourism Programme	End June 2011	1
		Workshop to define plan	Phased approach for implementation. To include a maintenance schedule	End July 2011	
	2.1.2: Road plan implemented	As per plan			1
	2.1.3: Airstrip maintenance	Schedule defined and costed	Hangar maintenance as well		1
2.2: Staff accommodation improved	2.2.1: Additional houses constructed	As per assessment	See Table D.9	Ongoing	1
	2.2.2: Additional houses constructed for rhino re-introduction when required	As per assessment	To be completed before staff on station. See Table D.10	Dependant on Biodiversity Target 1.1	2
	2.2.3: Appropriate maintenance	Annual assessment		Annual assessment Feb, Ongoing	
2.3.: Management infrastructure improved	2.3.1: Renovation and new building needs prioritised	Station reports	Funding	Consolidated report by end March, 2011	1
	2.3.2: Upgrade of existing buildings	As per assessment	Table D.11	Ongoing	2
	2.3.3: New buildings constructed	As per assessment	Table D.11	Ongoing	2
	2.3.4: Domestic water supplies improved	As per assessment	Table D.12. Attention to visibility of structures	Ongoing	1
2.4: Communication and power supply improved	2.4.1: Communication systems operational	Chipinda- Mabalauta links	Reliance on email has problems during outages. Alternate via park radio system with repeaters? Cell phone booster system for emergencies?		1
		Field to HQ links			
		Repeaters operational			
	2.4.2: Power systems operational	Collaboration with ZESA		Ongoing	1
		Backup generators/inverters for essential equipment	Computers, internet, radios	Main stations by mid 2011	
		Swimuwini alternate power systems	In collaboration with Sustainable Tourism Programme	By mid 2011	

High priority = 1; Low priority = 3

Table D.19: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 3: ADEQUATE EQUIPMENT FOR MANAGEMENT ACTIVITIES ACQUIRED AND MAINTAINED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
3.1: Adequate equipment on station	3.1.1: Detailed equipment inventory	Inventory at station level	See also Table D.13	Modifications by end March 2011	1
		Prioritisation of purchasing		Report also by end March 2011	
	3.1.2: Purchase acquisition of vehicles and other moveable equipment	As per priority listing	Funding	Ongoing	1
	3.1.3: Purchase of patrol equipment	All equipment and backups on stations	Most regarded as consumable equipment	Ongoing	1
	3.1.4: Purchase of monitoring and recording equipment	Cameras, GPS, computers etc etc	See also Biodiversity and Natural Resource Management Programme	Ongoing	2
3.2: Maintenance programmes developed and implemented	3.2.1: Maintenance of vehicles and other equipment	Equipment maintenance schedule		Annual schedule, ongoing maintenance	1
	3.2.2: Training staff in proper use and care of equipment	Basic vehicle care and maintenance course	See also Target 1.2	Ongoing	1
		Use and care of other equipment (GPS, camera etc)		Ongoing	
	3.2.3: Road and airstrip maintenance schedule (see also Target 2.1)		Based on ground inspections and available budget	Annual	1

High priority = 1; Low priority = 3

Table D.20: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 4: RESOURCE PROTECTION OPTIMISED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
4.1: Comprehensive law enforcement system improved and implemented	4.1.1: Improved and standardised patrol system	Patrol data collected and entered correctly	See also Biodiversity and Natural Resource Management Programme	Ongoing	1
		Patrol data analysed		Ongoing	
		Patrol schedule based in inputs		Quarterly	
		Paper based backup system initiated		Maps by mid 2011	
		Intelligence network		As required	
	4.1.2: Routine patrols carried out	As per schedule		Ongoing	1
	4.1.3: Reactive enforcement	Responses to poaching, cattle incursion etc.		Ongoing	
	4.1.4: Adequate patrol equipment and rations provided	All patrols with sufficient equipment and rations	See Table D.16	Ongoing	
	4.1.5: Collaborative law enforcement with other enforcement agencies and stakeholders	Stakeholder meeting to facilitate collaboration		Mid 2011	2
		Collaboration with Police, other field based organisations (e.g. Malilangwe) when necessary		Ongoing	
		Collaboration with prosecution agencies, courts when necessary		Ongoing	
		Input into GLTP Security Planning and implementation		Current and ongoing	
		Database of prosecutions		Est. by mid 2011	

High priority = 1; Low priority = 3

Table D.20: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 4: RESOURCE PROTECTION OPTIMISED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
4.2: Fires prevented and controlled	4.2.1: Proactive fire management	Practical fire management plan which analyses previous years environment and management	<ul style="list-style-type: none"> • Fire guard system • Observation points (Makamandima already in place) • Early burning strategy • Communication systems • Equipment provision and readiness 	Annual updates at end of rainy season	1
		Fire guards cleared		Annual; date determined by rainfall but before June	
		Early burns		Annual; date determined by rainfall but before June	
	4.2.2: Reactive fire management	Equipment prepared and available		As required	1
		Staff on hand to reduce reaction times		Ongoing	
		Training for fire fighting staff		Ongoing	
4.3: Boundary issues resolved	4.3.1: Legal advice on boundary description	Report on contentious areas		Report by early 2011	1
	4.3.2: Chibwedziwa boundary issue resolved	Liaison with Chiredzi RDC	Land opposite Chipinda Pools	Until resolution but initiated by mid 2011	1
	4.3.3: Ndali/Chitsa boundary issue resolved	Liaison with Chiredzi RDC	Chitsa invasions. Still a political issue	Hi-level resolution needed	3
		May require higher level intervention			
	4.3.4: Sengwe boundary issue resolved	Liaison with Chiredzi RDC	Southern fence; Dumisa area	Until resolution but initiated by mid 2011	2
	4.3.5: Mahenye boundary issue resolved	Liaison with Chipinge RDC	Value of hunting to communities versus ecological implications		2

High priority = 1; Low priority = 3

Table D.21: Summary and Three Year Activity Plan – Park Operations, Administration and Infrastructure Programme

OBJECTIVE 5: IMPROVED FINANCIAL AND MANAGEMENT ACCOUNTABILITY

Targets	Action	Activities	Notes	Implementation Schedule	Priority
5.1: Financial plans and revenue collection strategies improved	5.1.1: Financial plans and revenue collection strategies explored	Analysis of current collection system and closing of potential leakages		Mid 2011	1
		Clear and accountable receipting systems	In collaboration with gates and Sustainable Tourism Programme	Ongoing	
5.2: Sustainable financing mechanisms	5.2.1: Sustainable financing mechanisms explored	Assessment of options		End 2011	2
	5.2.2: Additional funding for specific projects sourced	Strategy and funding proposals prepared and submitted		As possible	2
5.3: Internal reporting systems improved	5.3.1: Monthly reporting systems improved	Assessment of current monthly reporting systems and identification of areas of improvement		By mid 2011	1
		Monthly and annual reports of a high standard delivered timeously		Ongoing	
	5.3.1: Improved communications between HQ and the field	Field station to be appraised of developments that could affect management on the ground	Including research permits etc.	Ongoing	1

High priority = 1; Low priority = 3

The following table summarises the “deliverables” that can be expected to ensure that the Park Operations, Administration and Infrastructure Programme is implemented. It focuses on things that can be “ticked off” and is expected to act as a guide to help with the implementation of this programme.

Table D.22: Plan “deliverables” summary – Park Operations, Administration and Infrastructure Programme			
Electronic	Documents	Infrastructure	Other
Objective 1: An effective and efficient human resource base developed			
	Infrastructure designs and costings		Vehicle available for children transport
	Code of conduct finalised		First aid training courses and infectious diseases awareness
	Training needs identification document		Health workers employed (Chipinda and Mabalauta)
	Staff appraisal and incentive proposal		Transport available for hospital visits
	Education Strategy		Transport available for shopping and personal emergencies
	Health Strategy		Effective workers committee
			Ideal staff compliment – 90 + new staff
			Rhino reintroduction staff - 25
Objective 2: Appropriate infrastructure developed and maintained			
	Road plan	New and improved roads	Radios on station
	Detailed equipment inventory	Improved airstrips	Inverters/Backup generators
		75 new housing units at Chipinda Pools (see Table D.9)	
		25 new housing units at Mabalauta (see Table D.9)	
		37 new housing units at Chipinda Pools for rhino re-introduction (see Table D.10)	
		Upgraded water supplies	
		Additional repeaters	
		Building renovations (Table D.11)	

Table D.22: Plan “deliverables” summary – Park Operations, Administration and Infrastructure Programme			
Electronic	Documents	Infrastructure	Other
Objective 3: Adequate equipment for management activities acquired and maintained			
	Maintenance schedules		2 additional light trucks
			1 tractor
			Road construction equipment
			Patrol equipment
			Monitoring and recording equipment
			Staff training
Objective 4: Resource protection optimised			
Enforcement databases	Regular enforcement/prosecution reports	Firebreaks	Properly equipped patrols
	Collaborative enforcement strategy	Observation points	Collaborative enforcement meetings
	Fire management plan		Early burning
	Reports on boundary issue resolutions		
Objective 5: Improved financial and management accountability			
	Financial plans		
	Funding strategy and proposals		
	Monthly, quarterly and annual reports		

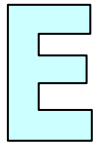
Table D.23: Mitigation measures for the Park Operations, Administration and Infrastructure Programme		
Development/Activity	Potential Impact	Mitigation Measures
Housing and other infrastructure	<ul style="list-style-type: none"> • Local development impact 	<ul style="list-style-type: none"> •
Roads	<ul style="list-style-type: none"> • Reduced wilderness perception • Improved access 	<ul style="list-style-type: none"> •
Extra staff	<ul style="list-style-type: none"> • Improved law enforcement 	<ul style="list-style-type: none"> •
More vehicles	<ul style="list-style-type: none"> • Improved law enforcement 	<ul style="list-style-type: none"> • Effective deployment
Effective law enforcement	<ul style="list-style-type: none"> • More wildlife 	<ul style="list-style-type: none"> •
Boundary issues resolved	<ul style="list-style-type: none"> • Better relations with communities • Fewer transgressions of Wildlife Act 	<ul style="list-style-type: none"> •
Fewer fires	<ul style="list-style-type: none"> • Healthier stands of vegetation 	<ul style="list-style-type: none"> •
More funding	<ul style="list-style-type: none"> • Improved protection • Improved morale • Improved infrastructure 	<ul style="list-style-type: none"> •

E

COLLABORATIVE MANAGEMENT PROGRAMME



Refuelling Frankfurt Zoological
Society aeroplane at Mabalauta



COLLABORATIVE MANAGEMENT PROGRAMME

E.1 PURPOSE, BACKGROUND AND KEY COMPONENTS

E.1.1 Programme Purpose

Collaborative Management Programme purpose:

Supportive linkages with GNP stakeholders and partners at local, regional and international levels established and maintained to safeguard the integrity of the park resource values

E.1.2 Background

In terms of the Collaborative Management Programme, Gonarezhou needs to be considered in the context of its physical location and gazettement and development history. The park is often touted as being the focal point for the regional development of a wildlife and tourism industry in the south-east lowveld of Zimbabwe. However, due a number of reasons, this has never happened. The park is surrounded by agriculturally marginal communal lands with a burgeoning population. In addition at last 30% of its boundary is also the international boundary between Zimbabwe and Mozambique. Planning for the park cannot occur in isolation and the Collaborative Management Programme is geared towards considering Gonarezhou as a regional and international asset.

Gonarezhou National Park has had a chequered history with respect to gazettement and a number of people have been evicted from parts of the park during this period. The most evident manifestation of this is the Chitsa “invasion” of the northern park of Gonarezhou. It is vital that this social history is considered when planning for the park.

In Zimbabwe, the park is surrounded mostly by Communal Lands which fall into two Districts – Chiredzi and Chipinge. Small portions of its boundaries include other conservations areas – The Malilangwe Trust in the north and the Malapati Safari Area in the south. The situation in Mozambique is less clear but the park border covers two Districts as well – Chicualacuala and Massangena. The Mozambican government has recently approved the establishment of “game farms” close to the boundary of the park and this is a potential cause for concern.

The main way in which communities benefit from the park resources is through safari hunting. In Zimbabwe, land adjacent to the park has been divided up into 12 hunting blocks and quotas are issued to these areas through a collaborative quota setting process. Elephant are the main drawcard species for foreign hunters and somewhere between 20 and 30 are shot annually. It should be noted

that although the hunting blocks are large most of the hunting takes place immediately adjacent to the park boundary and most trophies could be considered to have originated from inside the park.

Community-based natural resource management (CBNRM) has become a focus for wildlife and natural resource management in many areas in southern Africa (and elsewhere). The main objective of CBNRM is to manage wildlife and wildlife habitat for the benefit of people living in area where they have to bear the cost of sharing their lands with wildlife. In Zimbabwe, this approach is facilitated through the CAMPFIRE programme. CAMPFIRE attempts to stimulate the long-term development, management and sustainable use of natural resources in Zimbabwe's communal areas by giving people more control and responsibility for managing their resources. Although intended to cover all natural resources its main focus has become wildlife use and specifically safari hunting.

In recent years transboundary natural resource management has become a popular concept, especially in southern Africa and "Peace Parks" or Transfrontier Conservation Areas (TFCAs) are being established in several areas. Ideally there should be free movement of people and wildlife through these conservation areas that straddle international boundaries. However, the reality is proving difficult to implement, especially with regard to people.

Gonarezhou is an important part of the Great Limpopo Transfrontier Conservation Area (GLTP), which is one of the first of these international conservation areas. The GLTP agreement was signed by the heads of state of Zimbabwe, South Africa and Mozambique in 2002 to create a shared conservation and utilisation goal in the area. The GLTP is part of the wider proposed GLTFCA which includes the Zinave and Bahnine national parks in Mozambique and (sometimes, depending on the source) some conservancy areas in Zimbabwe.

Wildlife corridors, both inside Zimbabwe and as part of the Transfrontier initiative, are important and their viability and long-term prospects need to be considered.

Collaborative management has increasingly become important in park management because it seeks to create negotiated agreements between stakeholders and therefore offers possibilities for overcoming current and potential conflicts over natural resource exploitation.

- Collaborative management is driving parks to extinction if not handled carefully
- CBNRM is still developing and GNP can develop the existing framework in the context of its challenges and opportunities
- Diverse concepts and frameworks for CBNRM are needed
- Learning from other countries successes and shortfalls
- Collaborative management approach (tools) should be made available
- Collaborative management is the key to natural resource management of GNP
- Need to balance development values and conservation values
- CBNRM needs involvement of all stakeholders
- Resource sharing by all stakeholders required
- Diversity of stakeholders in wildlife resource management should be recognised
- Projects must be clearly explained to stakeholders, including time frame
- Collaborative monitoring and evaluation techniques are required

Stakeholder identification is important and should be considered an ongoing task. A preliminary listing is shown in Annex 2 but this is likely to evolve and change during the life of this plan.

Finally, the Collaborative Management Programme has to deal with partner agencies. The Frankfurt Zoological Society (FZS) has signed a long-term agreement to assist with funding of park infrastructure and activities. In addition, the agreement requires that the FZS also provides technical assistance to management and capacity building for staff.

E.1.3 Key Components

The Collaborative Management Programme has several key components which are listed below (Table E.1).

Table E.1: Key components of the Collaborative Management Programme	
Component	Brief Description
Communities	Communities living adjacent to the park are a key focus for any collaborative management programme. Unless these close neighbours view the park in a positive light, the long-term future for the conservation area will be difficult. The flow of benefits is expected to be in both directions and in return for rights such as access to park for tourism, traditional rights and other cultural reasons community members are expected to respect the boundaries and limits of use of the protected area. Key to a successful relationship will be open and transparent communications. Control of problem animals by the relevant authorities is expected to be another community benefit.
Education and awareness	Education and awareness programme are a long-term strategy for environmental protection. The benefits may not be immediately apparent and hence there is some reluctance on the part of management authorities to pursue this, but they may be the aspect that will ensure the long-term sustainability of the environment and wilderness areas such as Gonarezhou.
Boundaries	In this management plan the boundary issues are dealt with under the Parks Operations, Administration and Infrastructure Programme. However, the invasion of the northern part of the park is more than a boundary dispute and may need special methods for resolution. For that reason this component is also added to the Collaborative Management Programme
Safari Hunting	Administration and monitoring of the safari hunting industry is an important aspect of this programme and it is strongly linked to the Biodiversity and Natural Resource Management Programme. Quota setting, resource use conflicts and law enforcement activities in the surrounding areas are important activities under this component.
Corridors and Connectivity	The Gonarezhou has several potential corridor and habitat linkages to wildlife areas in both Zimbabwe and Mozambique. Assessment and maintenance of these corridor areas, in collaboration with the other three programmes in this management plan is an important component of this Programme.
Transfrontier issues	The Great Limpopo Transfrontier Park is well on its way to becoming a functional reality. Aspects of this conservation integration touches on all parts of the other three programmes but its part in the management plan is formalised in the Collaborative Management Programme.
Partner agencies	Dealing with partner agencies who are assisting with management and development of the park is another facet of this programme. At present the FZS has entered into a ten year agreement to assist

E.2 THREATS, ISSUES AND CONCERNS

There are a number of issues and concerns specific to the Collaborative Management Programme. These are briefly outlined below (Table E.2), prior to being described in more detail in the tables that follow. Broad categories are used to help simplify the approach and assist with the development of the objectives (section E.4).

Table E.2: Summary of threats, issues and concerns Collaborative Management Programme			
Communities	<ul style="list-style-type: none"> • Cultural site info unknown • Limited community participation/ involvement • Inadequate communications with communities • Human/wildlife conflicts • Encroachment • Chitsa Invasion • Few benefits to surrounding communities 		<ul style="list-style-type: none"> • No cohesive land use planning • Catchment deforestation and inappropriate land-use • Poverty of surrounding communities • Few tourism opportunities in surrounding areas • Disputed boundaries • Safari hunting • Poorly define PPCP concept • Mine fields • Unclear roles and responsibilities of partner agencies
TFCA	<ul style="list-style-type: none"> • Poor TFCA awareness • Different conservation policies in Mozambican • Poor representation from field level at TFCA meetings • Sengwe corridor problems • Slow progress of GLTP cooperation • Threatened connectivity 	Others	

Table E.3: COMMUNITY issues and concerns facing the Collaborative Management Programme	
Issue/Concern	Brief Description
Cultural site info unknown	Many documents allude to the cultural sites in the park but, apart from some incomplete documentation at Chipinda the sites are not well documented. documentation of indigenous knowledge systems
Limited community participation/ involvement	Community participation into management aspects of the park is very limited and this is strongly linked to the concern about communication channels below. Where possible, communities need to be consulted about issues that concern them.
Inadequate communications with communities	At present there is limited community participation and involvement in the management of the park. The Authority needs to ensure that communication channels are open and that regular visits are made to at least hear the community side of any issues.
Human/wildlife conflicts	Human wildlife conflicts are a problem in areas surrounding the park. During the cropping season elephants are the biggest problem followed by buffalo and hippopotamus. Lions are also perceived to be a problem in some areas and are a threat to livestock.
Encroachment	Encroachment into the park is a concern, particularly in the Sengwe area. Confusion about the boundary in this area has led to parks of the park being cultivated and used for cattle grazing.

Table E.3: COMMUNITY issues and concerns facing the Collaborative Management Programme	
Issue/Concern	Brief Description
Chitsa Invasion	The Chitsa invasion of the northern Gonarezhou is described in the Park Operations, Administration and Infrastructure Programme. This is perceived to be more of a political and management issue rather than a community issue.
Few benefits to surrounding communities	Apart from the income to the Rural District Councils from hunting there appear to be few material benefits to local communities from the park.

Table E.4: TFCA issues and concerns facing the Collaborative Management Programme	
Issue/Concern	Brief Description
Poor TFCA awareness	Generally, at the local level, there is a poor awareness of what the Great Limpopo Transfrontier Park represents, as this is a process driven from the top down
Different conservation policies in Mozambique	Almost 30% of the boundary of the park is along the Mozambique-Zimbabwe international border. There are no conservation areas in Mozambique that abut the park but the Mozambique government has established “game farms” of approximately 2 000 ha each in this area. According to Mozambican law a game farm needs to be fenced and artificial water will be permitted.
Poor representation from field level at TFCA meetings	The GLTP holds irregular meetings to discuss issues of common concern. As this is a three country agreement the meetings are often held in either Mozambique or South Africa. Generally HQ staff attend these meetings and there is poor representation from the field staff. Hence they have little input into the decisions taken at these meetings.
Sengwe corridor problems	The Sengwe corridor is the “official” linkage between Gonarezhou and the rest of the GLTP in Zimbabwe but the area has a number of problems, the most serious of which is the uncleared minefield. Another problem is that it is a poor game area and considered to be uninteresting scenically (both important from a tourism perspective)
Slow progress of GLTP cooperation	The GLTP agreement was signed in 2002 but progress towards reality has been slow. For example, even eight years later there is no agreement on some basic issues such as the fees to be charged.
Threatened connectivity	Potential corridor linkages are under threat. These include the Malilangwe/Fairange corridor to the north of the park and the linkages through the Sengwe to South Africa. Malilangwe is now completely fenced (although fences can be removed if considered appropriate). Settlement and agriculture along the Mase river in Sengwe is increasing and, if not checked will close any options for connectivity in this area. At present the Sengwe corridor is blocked by the uncleared minefield.

Table E.5: OTHER issues and concerns facing the Collaborative Management Programme	
Issue/Concern	Brief Description
No cohesive land use planning	There is no cohesive planning initiative for the south-east lowveld. We have not had sight of the Chiredzi Master Plan, and as it has not been mentioned, one can assume that it was prepared without input from Gonarezhou staff.
Catchment deforestation and inappropriate land-use	As more land is cleared for agriculture, both commercial and subsistence, in the upstream catchment areas this places more stress on the environment. There are also significant planned irrigation schemes which will further degrade the catchment environment. Some of these issues are discussed under the Biodiversity and Natural Resources Management Programme as well.
Poverty of surrounding communities	Increasing populations, low and erratic rainfall and poor land use practices in the surrounding areas have contributed towards a high level of poverty in the communal lands adjacent to Gonarezhou.
Few tourism opportunities in surrounding areas	Communities have listed possible tourism sites in their areas but some of these will be difficult to develop successfully. There are limited areas for tourism in the surrounding areas apart from safari hunting
Disputed boundaries	There are three areas where the park boundaries are unclear or disputed. These include the Ndali area (described under the Chitsa invasion issue) the Chipinda Pools area and the Sengwe area near Malapati.
Safari hunting <i>Quotas</i> <i>Monitoring</i> <i>Overhunting</i>	Most of the park is surrounded by hunting concessions, some of which are quite extensive. In addition the Malapati Safari Area lies across the Mwenezi river at Mabalauta. Much of the hunting takes place in the areas immediately adjacent to the park and the park is the source of the trophies taken in the communal lands. Monitoring of hunting is carried out by the ZPWMA and the CAMPFIRE office and quotas are set after annual quota setting meetings involving all stakeholders.
Poorly defined PPCP concept	Although PPCP is often discussed and seen as they way forward, not only for the Gonarezhou, but for other areas in the Parks and Wildlife Estate, there is no clear definition of what this means. It may be necessary for the Authority to define this for the country as a whole.
Mine fields	Already mentioned briefly under the issues concerning the Sengwe corridor the presence of this minefield remaining from the 1970s liberation war is a serious hindrance to development of the Sengwe corridor as an integral part of the GLTP TFCA.
Unclear roles and responsibilities of partner agencies	Since late 2007 an international conservation NGO has been in a cooperation agreement with the ZPWMA for the rehabilitation of Gonarezhou. In some respects the agreement is unclear about roles and responsibilities

E.3 GUIDING PRINCIPLES

The following guiding principles were elaborated for the Collaborative Management Programme. They are listed below before being described in more detail.

1. Open communications with stakeholders
2. Community involvement and participation will be encouraged
3. Cultural sites will be recognised and protected
4. Awareness of park and environmental resources will be promoted
5. Citizen and educational access will be facilitated
6. Transfrontier context will be a motivating force

1 Open communications with stakeholders

There are a number of stakeholders who have a commitment and interest in the Gonarezhou. Given the isolation of the park communications with stakeholders can falter and fragment. The park management will be committed to open engagement with all stakeholder to ensure that the park has a wide support base.

2 Community involvement and participation will be encouraged

Currently community participation in park affairs is limited. Engagement of stakeholders, and of the adjacent and affected communities in particular, needs to be improved.

3 Cultural sites will be recognised and protected

As the park was settled until the 1950s and 1960s there are a number of sites of spiritual, cultural and historical significance. These will be respected and protected and efforts will be made to document the sites before the collective memory of the people fades. In addition, efforts need to be made to ensure that indigenous and local knowledge of the park and its associated environmental systems is documented.

4 Awareness of park and environmental resources will be promoted

Awareness of the Gonarezhou, its resources and its management needs to be promoted. A first step towards this can be achieved by liaising with key stakeholders (see 7 below and 3 above). However, it is also believed that the Authority needs to be more proactive in this regard. Previously the ZPWMA was involved in active outreach and educational programmes that brought information about the park and its environment to the people.

5 Citizen and educational access will be facilitated

In keeping with the Wildlife Policy, citizen and educational access to Gonarezhou will be facilitated where possible.

6 Transfrontier context will be a motivating force

Gonarezhou is an integral part of the Great Limpopo Transfrontier Park, a conservation initiative signed by the presidents of Zimbabwe, Mozambique and South Africa in 2002. This concept is gathering momentum and it promises to a significant part of the future of Gonarezhou, particularly for tourism but also for many other aspects of park management. Accordingly, park management must keep abreast of developments in the TFCA and also ensure that they actively participate to ensure that the venture is successful.

E.4 OBJECTIVES, TARGETS AND ACTIVITIES

Five management objectives have been described for the Collaborative Management Programme. The objectives, their targets, actions and activities (objectives and targets summarised below) were defined after a detailed analysis of the current management systems and an analysis of the threats, issues and concerns facing the programme. The programme Purpose and the guiding principles also played a major role during the process.

There is a text description of the objectives and their subsequent activities prior to the tabular presentation of the three year action plan, which represents the heart of the programme. Numbering in the text provides the linkage to the action plan.

Objective 1: Communities regard Gonarezhou as a positive asset

Targets

- 1.1: Communication channels with communities improved
- 1.2: Cultural heritage recognised and protected
- 1.3: Community access to resources improved
- 1.4: Employment levels of community members increased
- 1.5: Community capacity to manage resources improved
- 1.6: Problem animals effectively controlled

Objective 2: Communities participate in, and receive benefits from, tourism

Targets

- 2.1: Photographic tourism benefits in buffer zone increased
- 2.2: Safari hunting integrated into the Gonarezhou NP

Objective 3: Stakeholder awareness of Gonarezhou and the environment significantly raised

Targets

- 3.1: Stakeholders properly identified
- 3.2: improved information about park made available to stakeholders
- 3.3: Outreach and education improved

Objective 4: Collaboration with government and other institutions improved

Targets

- 4.1: Improved communications with Rural District Councils
- 4.2: Improved communications with other government institutions
- 4.3: Improved communications with partner agencies

Objective 5: Gonarezhou becomes a key component of the great Limpopo Transfrontier Conservation area

Targets

- 5.1: Linkages with GLTP consolidated
- 5.2: Effective engagement with Mozambican stakeholders
- 5.3: Corridor linkages are maintained or enhanced

Objective 1: Communities regard Gonarezhou as a positive asset

One of the main aims of the Collaborative Management Programme is to ensure that the communities living in the surrounding areas regard the park in a positive light, rather than it being a place of conflict with the authorities and resource managers. This will be a difficult objective to reach and it is likely that the parks' fortunes in this regard will fluctuate. Six targets have been set in this first pass of the management plan but these may require adjust throughout the life of the plan, and at any review periods.

Target 1.1: Communication channels with communities improved

Perhaps the most important target will be the achievement of clear channels of communication with the communities.

Action: 1.1.1: Clear and representative communication channels established

The first step towards establishing clear and representative communications channels will be a review of the perceived community stakeholders. At this time, an evaluation of the existing structures will also be carried out to ensure that all communities are represented. The Authority will also need to agree on a practical framework for community liaison and involvement. Once this been done there will be a need to form community liaison committees and to ensure that meetings and the commitments made at these meetings are followed through. It will also be necessary for ongoing identification of community stakeholders.

Target 1.2: Cultural heritage recognised and protected

That community members were resident in the park is not contested. However, to date there has been little formal recognition of sites in the park that the communities believe to of importance, both historically or spiritually.

Action: 1.2.1: Site identification and documentation

There is some existing documentation of community sites in the park but it needs to be revised and reviewed. This exercise should be carried out in close collaboration with community members. It will be important to visit all the sites on the ground and document them with community members present. If any of the sites need protections form tourists of wild animals this will be determined during the visit and the appropriate measure carried out. Community members should indicate if any of these sites should not be open to visitation.

Action: 1.2.1: Cultural ceremonies promoted

The most famous community ceremony which used to occur in the park is the saila fishing but this has not been seen for many years. Essentially fish are caught using a barrage of reed enclosures in the larger pools and the ceremony has spiritual overtones, as well as being a source of food. If possible this ceremony should be permitted and revived. In addition, if there are any other ceremonies that the community members feel strongly about these should be investigated and their practice permitted if they do not erode the conservation goals of the park.

Target 1.3: Community access to resources improved

In the past “fortress” models of conservation have been the norm. In other words the complete exclusion of local people from the protected area. However, more recent thinking does allow limited access and use of resources within national parks, if circumstances permit. Gonarezhou management should investigate the possibility of communities accessing resources in the park. Control of this could be problematic and care needs to be taken to ensure that the privilege of access does not get abused.

Action: 1.3.1: Limited use of vegetation resources permitted

In the past community access for thatching grass has been permitted and the possibility of continuing this form of use should be investigated. In addition, the possibility of allowing limited cattle access for grazing, especially during poor years.

Action: 1.3.2: Limited use of animal resources permitted

As mentioned above the possibility of saila fishing being permitted in the park is being considered. This is a late dry season activity and essentially would remove most of the fish from a pool. The possibility of limited fishing being permitted in the late dry season in Tambahata Pan should also be considered, bearing in mind that there are many years when the pan does not hold water at all. Other resource use such as the collection of mopane worms should also be considered.

Management should be aware that allowing access to the park does carry a management cost and the benefits and disadvantages should be weighed up carefully before allowing this. Perhaps trial runs need to be carried out first to assess the practicality of such management practices.

Target 1.4: Employment levels of community members increased

In many protected areas surrounding communities benefit significantly from employment and the Gonarezhou is no exception. Local community members are employed both as the permanent staff and as casual labour on an annual basis.

Action: 1.4.1: Increased numbers of community members on permanent staff

A positive step would be to attempt to increase the numbers of local community members on the permanent staff payroll. The current numbers of people employed should be assessed with some classification of the areas from which they originate. Active steps should be taken to ensure that members of all communities are considered for posts that become available or are created, provided they have the necessary qualifications.

Action: 1.4.2: Casual labour sourced solely from local communities

Casual labour is employed from the surrounding communities on an ad-hoc basis as the need arises. These are usually not qualified people who carry out tasks related to road construction and maintenance as well as other tasks.

Target 1.5: Community capacity to manage resources improved

The CAMPFIRE programme revolves around devolving responsibility for wildlife and natural resource utilisation to the communities. However, there is a need to ensure that communities have the capacity to take on this responsibility. In the south-east lowveld there are a number of NGOs who have been assisting some communities over the years with this capacity building and indeed, the CAMPFIRE Association itself takes on this role as well. However, there is a need for the Authority to be proactive in assisting communities with capacity building, especially in fields where it is the acknowledged expert (e.g. law enforcement, wildlife management etc).

Action: 1.5.1: Needs identification

The first step would be an assessment of community capacity, in conjunction with other stakeholders (such as NGOs and Government institutions). Out of this a needs identification can be formulated.

Action: 1.5.2: Training programmes implemented

Once there is agreement on where best to assist with capacity building in-house training programmes can be established.

Target 1.6: Problem animals effectively controlled

Wildlife originating from the park does cause problems for the local communities and farmers. Crop destruction by elephant and hippo rank highly amongst the reports received. Human life and livestock is also threatened by predators such as lions and hyenas. Effective and prompt responses to complaints about problem animals can go a long way to gaining the trust of communities, not to mention the reduction of threats to crops, human life and livestock.

Action: 1.6.1: PAC Strategy developed

There are a number of agencies and individuals who become involved in problem animal control around Gonarezhou. However, it should be remembered that ZPWMA is the lead agency and takes the final responsibility for the management and control of wildlife in Zimbabwe.

A strategy for dealing with problem animals is in its formative stages and some meetings have been held. This framework needs to be built on so that all players are fully aware of the strategy to deal with human wildlife conflict.

Action: 1.6.2: Routine PAC

Routine problem animal control needs to be carried efficiently and effectively. Local communities need to feel that their complaints and concerns are being taken seriously. Gonarezhou management needs to ensure effective deployment of staff to deal with complaints.

Objective 2: Communities participate in, and receive benefits from, tourism

This topic has cross-cutting implications with the Sustainable Tourism programme but is included in the Collaborative Management Programme as it refers to mainly to activities outside the park. Obviously there would need to be significant collaboration between the two programmes as the community sites become established as, if they wished to use the park they would need to respect the zoning and activity plans developed under the Sustainable Tourism Programme.

Target 2.1: Photographic tourism benefits in buffer zone increased

To date community involvement in tourism activities surrounding the park has been limited, especially in the Chiredzi District. In Mahenye ward of the Chipinge District a successful CAMPFIRE tourism initiative was developed on the Park boundary (Chilo and Mahenye Lodges). Unfortunately, and it is hoped that this is a temporary state of affairs, it has suffered from the lack of tourism to Zimbabwe generally during the last decade.

Action 2.1.1: Community sites encouraged

A number of sites for tourism facilities and attractions have been identified by the communities and the Rural District Councils. In keeping with the philosophy of improving benefits from tourism in the areas surrounding the park, these need to be encouraged. Access to the park from community identified sites will be facilitated by establishing entry gates and repairing roads inside the park.

Action 2.1.2: Local craft markets supported

Local crafts and produce that can be marketed within the GNP/TFCA that can be supplied sustainably and with limited environmental impact must be investigated. Craft groups that can enter an agreement with ZPWMA with regards to provision of products should be identified and mentored. Outlets can be established at GNP reception facilities to market crafts and produce, and tour operators encouraged to participate in the marketing scheme. Other sites where outlets could be established should be discussed with the relevant communities.

Action 2.1.3: PPCP Policy drawn up

It is imperative that an identification process of key stakeholders, their needs and expectations are carried out. Regional policies with regards to benefit-sharing mechanisms and institutions needs to be assessed and reviewed within the context of Gonarezhou. A formal and structured PPCP/PP policy must be developed, with clear guidelines to both potential investors and communities as to the respective roles and responsibilities of stakeholders. A campaign with regards to disseminating the information contained in the PPCP policy will be conducted, and potential partners identified for involvement in PPCP/PP implementation.

Target 2.2: Safari hunting integrated into the GNP

The park is the engine driving the safari hunting industry in adjacent hunting concessions and most trophies taken in these areas originate from the park. There are 12 hunting blocks surrounding the park in Zimbabwe and at least eight “game farms” close to the park in Mozambique. The contribution of the park to economic development in the surrounding areas in this way should not be underestimated.

Action 2.2.1: Review of hunting in Gonarezhou area inside Zimbabwe

There are 12 hunting blocks adjacent to the park (including the Malapati Safari Area; See Appendix 11). These generate around US\$600,000 annually and most of this income accrues to the Rural District Councils. Major trophy species are elephant, buffalo, lion and leopard and most of the hunting takes place close to the park boundaries. A review of the hunting areas and quotas, and the revenue sharing needs to be carried out. At the very least the benefits of the park to the communities by “providing” the trophies needs to be clearly explained.

Action 2.2.2: Review of hunting in Gonarezhou area inside Mozambique

There are a number of “game farms” adjacent to the park in Mozambique. Current legislation in Mozambique requires that these farms are less than 2,500 ha and that they are fenced. It appears that there is a gap between the park boundary and the farms. It is also likely that these will be used as hunting areas. Concerns have been expressed that the fences are impractical and that trophy animals will be enticed out of Gonarezhou in the dry season with artificial water points on the farms. Linkages should be established at both the field level and higher up in the Mozambican administration to ensure that there is practical collaboration between the consumptive use programmes in both countries.

Action 2.2.3: ZPWMA is active in control and management of safari industry

Hunting in adjoining safari hunting concession areas generally takes place in close proximity to the Gonarezhou boundary. No fences are currently in place, and therefore the populations are at present contiguous, increasing the need for monitoring of off take

Gonarezhou management should be involved continuously in collaboration with ZPWMA HQ in determining the wildlife off take quota in the district. Quota setting should be based on a combination of regular standardised surveys and feedback from hunting operators with regard to trophy size, quality, and effort needed to fulfil a quota.

Escort rangers are to be provided to all hunting operations around the GNP on a cost recovery basis. There is a need for better collaboration with hunting operators in the area, and a clear policy regarding this relationship needs to be formulated and implemented. Duty rosters for escort scouts are to be drawn up, based on the hunting schedule for each operator for the year.

Objective 3: Stakeholder awareness of Gonarezhou and the environment significantly raised

It will important to ensure that the profile of the park is raised amongst stakeholders so that people are aware of what the park and its management is trying to achieve. The first step will be a clear definition of who the stakeholders are so that they can be targeted effectively.

Target 3.1: Stakeholders properly identified

Action: 3.1.1: Evaluation of community structures

The existing community representation structures will be recognised and ways to improve their effectiveness will be sought. Where necessary and with approval of stakeholders, the existing institutional framework maybe need strengthening by creating specific structures for specified purposes. The importance of the role of chiefs and headmen is recognised.

Information on existing structures will be obtained through interviews and consultations with the communities. The information obtained will be documented and disseminated to the relevant audiences and the effectiveness of the structures tested through a questionnaire. The general information on the attitude of communities towards GNP will also be established.

Action: 3.1.2: Strategy for continual engagement prepared and implemented

Based on feedback from the above a strategy for continual engagement of stakeholders will be prepared. This strategy will address all identified stakeholder and not only those from the community. I feasible committees for each relevant area will be established and regular meetings held.

Target 3.2: Improved information about the park made available to stakeholders

In order to raise profile of the park up-to-date and relevant information should be made available to the stakeholders. Apart from the regular meetings mentioned above there are other ways of ensuring that information is disseminated.

Action: 3.2.1: Regular newsletter circulated

A newsletter format should be established that is easy to update and cheap to print. It can be circulated via email and also as a print version to those stakeholders without access to electronic media. Where possible, it should be translated into the local languages in common use around the park. Clear responsibilities and allocation of tasks will be important to ensure that the newsletter is an ongoing reality.

Action: 3.2.2: Website established

The ZPWMA runs its own webpage and Gonarezhou features on this page. However consideration should be given to establishing a specific Gonarezhou website. The possibility of this linking up to other conservation properties and organisations in the south-east lowveld should be investigated. It will be important to establish a system that can be edited in-house rather than sending material off to someone else for inclusion into the website/

Action: 3.2.3: Other communication mediums explored

Radio and TV are powerful mediums in rural Zimbabwe and radio has the potential to reach a significant number of people. These mediums should be targeted and a strategy for their use formulated. This could include interviews with Gonarezhou staff and talks on specific conservation subjects.

Target 3.3: Outreach and education improved

Community outreach and education is an important part of community liaison and at present there is no specific programme in place for the Gonarezhou National Park. It should also be noted that although the ZPWMA previously was engaged in community outreach at a national level, funding constraints have led to a cutback in these services.

Action: 3.3.1: Community person employed

In order for any outreach programme to succeed it needs to be driven by a committed and dedicated person. Currently there is no post dedicated to community issues within the park. This post should be created and filled at the earliest opportunity.

Action: 3.3.2: Development of outreach strategy

A strategy for outreach needs to be developed to provide a framework and roadmap for the activities that will be undertaken. Outreach will be a long-term and ongoing activity.

Action: 3.3.3: Conservation education and awareness programmes developed and expanded

An education and awareness programme will be developed by the ZPWMA, in collaboration with communities. The exact details of this will depend on funds and materials available.

Objective 4: Collaboration with Government and other institutions improved

Although under the control and management of the ZPWMA Gonarezhou is also part of a wider governmental structure and it is important that there are good relationships in this regard. Although the park falls completely into the Chiredzi District it borders on Mahenye Ward in the Chipinge District.

Target 4.1: Improved communications with Rural District Councils

The Rural District Councils are the main government representatives on the ground and the offices for Chiredzi District are located in Chiredzi town while those for Chipinge District are in Chipinge town, which is a considerable distance from the park.

Action 4.4.1: Collaboration with Chiredzi RDC improved

Gonarezhou management currently enjoys a good relationship with the Chiredzi Rural District Council and they collaborate on hunting and human wildlife conflict issues. However there is a need to ensure that this relationship is maintained and improved through regular meeting and by ensuring that ZPWMA staff are invited to and attend meetings where conservation management issues are discussed/

Action 4.4.2: Collaboration with Chipinge RDC improved

The Chipinge RDC is not directly involved with the Gonarezhou National Park but the Mahenye ward and the council do receive benefits from the park as it is a source of trophies for the safari hunting industry. In return the council will be involved with human wildlife control issues. As with the Chiredzi RDC there is a need for improved relationships and contact between the RDC and ZPWMA management.

Target 4.2: Improved communications with other Government agencies

Action 4.2.1: Collaboration with Environmental Management Authority improved

The Environmental Management Agency maintains an office in Chiredzi and this office should be informed of all developments requiring environmental assessments in the park. In addition, ZPWMA staff should be aware of all developments occurring in the District that will have a bearing on the conservation and management of the park. This will include dams and irrigation schemes. ZPWMA staff from Gonarezhou must participate fully in any relevant environmental assessments.

Action 4.2.2: Collaboration with regional Veterinary authorities improved

Veterinary issues in the vicinity of Gonarezhou are becoming more important and their status has been elevated through the veterinary sub-committee for the GLTP TFCA. Given the concerns about the wildlife-domestic stock interface caused by the presence of the conservation areas it will be important to maintain close links with the veterinary authorities, both inside and outside Zimbabwe.

Target 4.3: Improved communications with partner agencies

Action 4.3.1: Improved communications between ZPWMA and FZS

The Frankfort Zoological Society has entered into an agreement with the ZPWMA for ten years to provide advice and material assistance to the park. Unfortunately, and probably because both partners are still feeling their way within the relationship, there have been some misunderstanding with regard to roles and responsibilities. These should be cleared up at the earliest opportunity so that both partners can focus their efforts into the continued conservation of the park and its environment.

Objective 5: Gonarezhou becomes a key component of the Great Limpopo Transfrontier Conservation Area

The Great Limpopo Transfrontier Park is an important conservation initiative for the Gonarezhou and the concept is steadily gaining ground and influence. The structure for dialogue has been established and most of this takes place through the TFCA sub-committees.

Target 5.1: Linkages with GLTP consolidated

Action 5.1.1: Input into planning process

At this stage a significant amount of energy for the GLTP is being put into planning for the combined utilisation of the area. It is imperative the Gonarezhou staff, as well as key people in the ZPWMA HQ have meaningful and significant input into this process. This is usually achieved by attendance at the meetings. In this regard it is vital that ground staff from Gonarezhou attend these meetings rather than only HQ staff.

Action 5.1.2 Buffalo Range airport upgraded

Although the upgrade of the Buffalo Range airport in Triangle is beyond the scope of ZPWMA they need to keep pushing for this with the Ministry of Transport. The development of scheduled flights into the airport, both from national and international destinations, is vital to the establishment of a sustainable tourism industry in the South-East Lowveld and for linkages to the GLTP.

Target 5.2: Effective engagement with Mozambican stakeholders

Over 30% of the park boundary is also the international boundary with Mozambique and what happens across the border may have significant impacts on the park, its wildlife and management practices in the future.

Action 5.2.1: Engagement of authorities

The first, and a vital step in terms of protocol, will be make contact with the Mozambican authorities through the Governmental structures. The land in Mozambique falls under the control of the Gaza Province but with two Districts authorities – Chicualacuala and Massangena. Responsibility for wildlife rests with Emofauna with its headquarters in Maputo. It will be necessary to ensure that all relevant authorities are contacted and this may require a visit to Maputo.

Action 5.2.3: Engagement of resource users

The Mozambican Government has issued duats (permits for land utilisation) for a number of game farms which are close to the boundary of the park. Under Mozambican legislation an game farm usually requires fencing and can develop artificial water points. Hunting is also permitted and quotas for some key species have been issued to these game farms. Elephant are currently not on quota in Mozambique because of CITES issues but this may change in the future. It will be important to make contact with these game farms and to maintain relations so that issues of common concern can be discussed openly.

Target 5.3: Corridor linkages maintained or enhanced

Action 5.3.1: Assess viability of identified Zimbabwean corridors

The Sengwe Corridor is the “official” linkage area for the GLTP. The area has been gazetted, but a great deal of work still needs to be done to ensure that it fulfils its role in the Transfrontier park. One of the most pressing issues is the clearance of the minefield. Visitors need to feel safe when using this area.

The Malilangwe Trust operates a wildlife and tourism venture on the northern boundary of the park. The entire area is fenced and operates as a “closed” ecosystem with artificial manipulation of water and wildlife numbers. Tourism is presently at a low level but if numbers increase then there will be a market for visitors wishing to see some of the key attractions in Gonarezhou such as the Chilolo Cliffs and the Runde river.

As mentioned above, the Sengwe Corridor will be the main linkage for the GLTP but it should be noted that there are significant areas of unsettled land to the west of the park, drained by the Bubyie and Malibangwe rivers. These areas could provide additional scenic linkages between the Kruger National Park and Gonarezhou.

Action 5.3.2: Local authorities made aware of options, problems

Local authorities will be key players in the development of maintenance of these corridor areas and it is important that they are kept abreast of developments. A strategy for ensuring that all players are informed will be important if there is to be any safeguarding of these areas for conservation purposes.

Action 5.3.3: Knowledge base of land adjacent to park in Mozambique improved

As mentioned in Target 5.2 at least 30% of the park boundary abuts onto Mozambique. It is important that the knowledge base about this land is improved. For example there are small isolated patches of *Millettia stuhlmanni* on the boundary in Gonarezhou but it would be good to know how extensive this vegetation type is in Mozambique. Information on the use of the area by wildlife will also be important as will information on the potential threats in the form of poaching or fire.

Table E.6: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 1: COMMUNITIES REGARD GONAREZHOU AS A POSITIVE ASSET

Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.1: Communication channels with communities improved	1.1.1: Clear and representative communication channels established	Evaluation of existing structures	An evolving task	April, 2011	1
		Community liaison committees		Mid 2011	
1.2: Cultural heritage recognised and protected	1.2.1: Site identification and documentation	Exploratory visit with relevant communities		June 2011	1
		Sites documented		June 2011	
		Site protection where necessary		Ongoing	
	1.2.1: Cultural ceremonies promoted	Saila fishing regulations drafted		Mid 2011	2
		Ceremony carried out		As possible	
		Other ceremonial activities considered	If community members feel strongly about these		
1.3: Community access to resources improved	1.3.1: Limited use of vegetation resources permitted	Thatching grass extraction regulations		March 2011	1
		Dry season grazing/watering regulations	In exceptionally dry years?	March 2011	
	1.3.2: Limited use of animal resources permitted	End of season fishing regulations for Tambahata pan when flooded	To utilise fish trapped in pan	March 2011	1
		Regulations for mopane worm collection			
1.4: Employment levels of community members increased	1.4.1: Increased numbers of community members on permanent staff	Community encouraged to apply for new posts	Ensure that communities are advised of possibilities	Ongoing	3
	1.4.2: Casual labour sourced solely from local communities	Use of casual labour for road repair, construction projects etc		Ongoing, annually	2

High priority = 1; Low priority = 3

Table E.6: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 1: COMMUNITIES REGARD GONAREZHOU AS A POSITIVE ASSET

Targets	Action	Activities	Notes	Implementation Schedule	Priority
1.5: Community capacity to manage natural resources improved	1.5.1: Needs identification	Meetings with community members	Training of GNP staff covered under Park Ops, Admin & Inf. Programme	End 2011	1
	1.5.2: Training programmes implemented	Devised as per needs identification		Ongoing	2
1.6: Problem animals effectively controlled	1.6.1: PAC Strategy developed	Workshops/meetings	Build on previous documentation. Clarity needed on responsibilities	Mid 2011	1
	1.6.2: Routine PAC	Timely responses to complaints		Ongoing	1

High priority = 1; Low priority = 3

Table E.7: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 2: COMMUNITIES PARTICIPATE IN, AND RECEIVE BENEFITS FROM, TOURISM

Targets	Action	Activities	Notes	Implementation Schedule	Priority
2.1: Photographic tourism benefits in buffer zone increased	2.1.1: Community sites encouraged	Liaison with Chiredzi RDC	Detailed reports on suggested sites	Report by end 2011	2
		Liaison with potential developers	Ensure access routes are OK		
	2.1.2: Local craft markets supported	Identification of craft groups	Will require extensive consultation	Craft group report & options by end 2011	2
		Facilitate sale points		Crafts on sale in 2012	
	2.1.3: PPCP policy drawn up	Consultant to draw up working draft		First draft by end 2011	1
		Editing in conjunction with stakeholders	Workshops, meetings		
2.2: Safari hunting integrated into the GNP	2.2.1: Review of hunting in Gonarezhou area, Zimbabwe	Liaison with Chiredzi and Chipinge RDCs			1
		Workshop on hunting sustainability	Incl. relevant stakeholders	Workshop in early 2012	
		GNP ecologists have access to hunting data	Regular exchange system established	Previous years utilisation data on station by March annually	
	2.2.2: Review of hunting in Gonarezhou area, Mozambique	Ground based local linkages in Mozambique		Difficult to put a time scale on this as dealing with Moz Govt.	1
		Linkages at higher administrative levels	Linkages via GLTFA concept, Workshop??		
	2.2.3: ZPWMA is active in control and management of safari industry	Collaboration with ZPWMA HQ	Input for quota setting	Ongoing	1
		Participation in quota setting meetings		Annually	
		Escort rangers for hunts on cost recovery basis		Ongoing	

High priority = 1; Low priority = 3

Table E.8: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 3: STAKEHOLDER AWARENESS OF GONAREZHOU AND THE ENVIRONMENT SIGNIFICANTLY RAISED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
3.1: Stakeholders properly identified	3.1.1: Evaluation of community structures	Meetings	Importance of Chiefs and Headmen recognised	Mid 2011	1
	3.1.2: Strategy for continual engagement prepared and implemented	Documentation			2
		Rotational meetings held in community areas	Care to ensure ALL parties are involved	Ongoing	
3.2: Improved information about park made available to stakeholders	3.2.1: Regular newsletter circulated	Responsibility assigned and draft issues compiled		End April, 2011	2
		Copies printed in local languages and distributed appropriately		Annual?	
		Email distribution			
	3.2.2: Website established	Gonarezhou specific website with regular updates	System so that content can be edited from GNP	Mid 2011	2
	3.2.3: Other communications mediums explored	Contact with ZBC		As possible	2
		Possibility of radio interviews with GNP staff		As possible	
3.3: Outreach and education improved	3.3.1: Community person employed	Advertisement and placement	Probably for both management HQs	Position filled mid 2011	1
	3.3.2: Development of outreach strategy	Draft strategy document prepared	May need to be a ZPWMA HQ initiative?	End 2011	2
		Implementation of recommendations		As per document	
	3.3.3: Conservation and awareness programmes developed and expanded	Programme strategy in collaboration with HQ	Long-term activity dependant on funding and materials	End 2012	3

High priority = 1; Low priority = 3

Table E.9: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 4: COLLABORATION WITH GOVERNMENT AND OTHER INSTITUTIONS IMPROVED

Targets	Action	Activities	Notes	Implementation Schedule	Priority
4.1: Improved communications with Rural District Councils	4.4.1: Collaboration with Chiredzi RDC improved	Regular participation in District fora	Need to be informed of meetings	As meetings are organised	1
		Sharing of PAC data	Already started but needs to be regular	Annual	
		Sharing of safari hunting data	Already started but needs to be regular	Annual	
	4.4.2: Collaboration with Chipinge RDC improved	Regular participation in District fora		As meetings are organised	1
		Sharing of PAC data		Annual	
		Sharing of safari hunting data		Annual	
4.2: Improved communications with other Government institutions	4.2.1: Collaboration with Environmental Management Authority improved	Scheduled visits			2
	4.2.2: Collaboration with regional Veterinary authorities improved	Scheduled visits			
4.3: Improved communications with partner agencies	4.3.1: Improved communications between ZPWMA and FZS	Meetings for open communications		Ongoing as required	1

High priority = 1; Low priority = 3

Table E.10: Summary and Three Year Activity Plan – Collaborative Management Programme

OBJECTIVE 5: GONAREZHOU BECOMES A KEY COMPONENT OF THE GREAT LIMPOPO TRANSFRONTIER CONSERVATION AREA

Targets	Action	Activities	Notes	Implementation Schedule	Priority
5.1: Linkages with GLTP consolidated	5.1.1: Input into planning process	Participation in all sub-committee and other meetings	Important that Gonarezhou ground staff attend	Ongoing	1
		Communications with Peace Parks			
		Input into Integrated Development Plan	Draft in circulation	Ongoing	
	5.1.2: Buffalo Range airport upgraded	Linkages with Ministry Transport	Dependant on outside factors	Ongoing	2
5.2: Effective engagement with Mozambican stakeholders	5.2.1: Engagement of authorities	Identification of contact institutions and individuals		Early 2011	1
		Formal meeting		Mid 2011	
		Site visits to border areas		Mid 2011	
	5.2.3: Engagement of resource users	Contacts initiated with all game farm owners	Ties in with 5.3.3	Mid 2011	1
		Identification of other stakeholders			
		Regular channels of communications opened		Ongoing	
5.3: Corridor linkages are maintained or enhanced	5.3.1: Assess viability of identified Zimbabwean corridors	Fair Range-Save corridor	Malilangwe will be a key component	Study in 2012	2
		Sengwe corridor	Minefield clearance ongoing problem	Depends on minefield	
		Other western linkages explored		Study in 2012	
	5.3.2: Local authorities made aware of options, problems	Meetings, documents, lobbying	Close cooperation with Collaborative Management Programme		2
	5.3.3: Knowledge base of land adjacent to park in Mozambique improved	Linkages with EmoFauna and other relevant authorities	In cooperation with Collaborative Management Programme	Mid 2011	1
		Assessment of environment and developments along boundary		Late 2011	

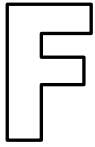
High priority = 1; Low priority = 3

The following table summarises the “deliverables” that can be expected to ensure that the Collaborative Management Programme is implemented. It focuses on things that can be “ticked off” and is expected to act as a guide to help with the implementation of this programme.

Table E.11: Plan “deliverables” summary – Collaborative Management Programme			
Electronic	Documents	Infrastructure	Other
Objective 1: Communities regard Gonarezhou as a positive asset			
	Evaluation of community structures		Community liaison committees
	Heritage site documentation		Saila ceremony carried out
	Thatching grass collection regulations		
	Mopane worm collection regulations		
	Community fishing regulations		
	Grazing regulations?		
	Community capacity needs regulation		
	PAC Strategy		
Objective 2: Communities participate in, and receive benefits from, tourism			
	Assessment of suggested sites	Site development where appropriate	Hunting workshop
	Report on craft group possibilities		
	PPCP draft policy		
	Review document for hunting		
Objective 3: Stakeholder awareness of Gonarezhou and the environment significantly raised			
Website operational	Community engagement strategy, incl. evaluation		Community liaison employee on board
	Newsletter circulated at regular intervals		
	Outreach strategy		
Objective 4: Collaboration with government institutions improved			
	Meeting minutes		Regular sharing of data

Table E.11: Plan “deliverables” summary – Collaborative Management Programme			
Electronic	Documents	Infrastructure	Other
Objective 5: Gonarezhou becomes a key component of the great Limpopo Transfrontier conservation area			
	Comprehensive TFCA Integrated Development Plan input		
	Assessment of Mozambican channels of communication		
	Report(s) on cross border visits to Mozambique		
	Corridor reports		

Table E.12: Mitigation measures for the Collaborative Management Programme		
Development/Activity	Potential Impact	Mitigation Measures
Outreach and education	<ul style="list-style-type: none"> Improved understanding of environment and park purpose 	<ul style="list-style-type: none">
Sustainable hunting	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Community access to park	<ul style="list-style-type: none"> Degradation of resources Improvement of community relations 	<ul style="list-style-type: none">
Improved resource management	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Cross border collaboration	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">



Plan Monitoring

Management Effectiveness Monitoring

Progress towards achieving the Purposes devised in each Management Programme, which essentially are a part of measuring management effectiveness, can be monitored in a number of ways. Recently initiatives to develop a number of management effectiveness assessment tools have been undertaken. The World Bank/WWF Alliance for Forest Conservation and Sustainable Use ('the Alliance') was formed in April 1998, in response to the continued depletion of the world's forest biodiversity and of forest-based goods and services essential for sustainable development. The Alliance has developed a simple site-level tracking tool to facilitate reporting on management effectiveness of protected areas within WWF and World Bank projects that is being adopted by the PASP project and thus is appropriate for BMNP. The tracking tool has been built around the application of a World Commission for Protected Areas (WCPA) Framework for assessing protected area management effectiveness (Hockings *et al.*, 2000).

The Alliance has designed the Management Effectiveness Tracking Tool (METT) to be:

- Capable of providing a harmonised reporting system for protected area assessment within donor organisations
- Suitable for replication
- Able to supply consistent data to allow tracking of progress over time
- Relatively quick and easy to complete by protected area staff, so as not to be reliant on high levels of funding or other resources
- Capable of providing a "score" if required
- Based around a system that provides four alternative text answers to each question, strengthening the scoring system
- Easily understood by non-specialists
- Nested within existing reporting systems to avoid duplication of effort.

The tracking tool has been developed to provide a quick overview of progress in improving the effectiveness of management in individual protected areas, to be filled in by the protected area manager or other relevant site staff. It is **not** an independent assessment, nor should it be used as the sole basis for adaptive management. Moreover, the tracking tool is too limited to allow a detailed evaluation of *outcomes* and is really aimed at providing a quick overview of the management steps identified in the WCPA Framework up to and including *outputs*. Thus, even if management is excellent, but biodiversity is continuing to decline, then protected area objectives are not being met. Therefore the Ecological Monitoring Programme is the key component that will inform BMNP managers on whether the condition of the biodiversity and ecological processes through the Priority Ecosystem Components.

In 2009 a METT analysis was conducted for GNP, to set a baseline for GNP management and is included below. On GMP draft completion, a new METT analysis will be conducted for future comparison. Thereafter annual assessments will be conducted.

Detailed METT for the Gonarezhou National Park including 'next steps'

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps			
Issue	Criteria	Score	Next steps
1. Legal status Does the protected area have legal status? <i>Context</i>	The protected area is not gazetted	0	Resolve the Chitsa land claim and boundary issues
	The government has agreed that the protected area should be gazetted but the process has not yet begun	1	
	The protected area is in the process of being gazetted but the process is still incomplete	2	
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3	
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? <i>Context</i>	There are no mechanisms for controlling inappropriate land use and activities in the protected area	0	Continue negotiate and implement agreements with local communities for regulated access to and use of natural resources
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	1	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3	
3. Law enforcement Can staff enforce protected area rules well enough? <i>Context</i>	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	Establish linkages with local law enforcement agencies, including judiciary, police, etc. Train local law enforcement agencies.
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	1	
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2	
	The staff have excellent capacity/resources to enforce protected area legislation and regulations	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
<p>4. Protected area objectives</p> <p>Have objectives been agreed?</p> <p><i>Planning</i></p>	No firm objectives have been agreed for the protected area	0	The 1998-2008 management plan identified the objectives for the area.
	The protected area has agreed objectives, but is not managed according to these objectives	1	
	The protected area has agreed objectives, but these are only partially implemented	2	
	The protected area has agreed objectives and is managed to meet these objectives	3	
<p>5. Protected area design</p> <p>Does the protected area need enlarging, corridors etc to meet its objectives?</p> <p><i>Planning</i></p>	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	Further planning processes are necessary.
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	1	
	Design is not significantly constraining achievement of major objectives, but could be improved	2	
	Reserve design features are particularly aiding achievement of major objectives of the protected area	3	
<p>6. Protected area boundary demarcation</p> <p>Is the boundary known and demarcated?</p> <p><i>Context</i></p>	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	The boundary is known and marked. However, the local community need to be involved in some areas where there are disputes over the boundaries.
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	1	
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2	
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
7. Management plan	There is no management plan for the protected area	0	A management plan was written and agreed in 1998. The management plan is under revision and an implementation plan is being developed.
Is there a management plan and is it being implemented?	A management plan is being prepared or has been prepared but is not being implemented	1	
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems	2	
	An approved management plan exists and is being implemented	3	
Additional points	The planning process allows adequate opportunity for key stakeholders to influence the management plan	+1	The planning processes at present are now beginning to consider the role of stakeholders in planning processes. The plan should be designed to be adaptive and updateable. A monitoring and evaluation plan needs to be constantly developed.
Planning	There is an established schedule and process for periodic review and updating of the management plan	+1	
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1	
8. Regular work plan	No regular work plan exists	0	The M&E framework needs to be developed for the annually produced workplan.
Is there an annual work plan?	A regular work plan exists but activities are not monitored against the plan's targets	1	
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2	
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	3	
Planning/Outputs			

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
<p>9. Resource inventory</p> <p>Do you have enough information to manage the area?</p> <p>Context</p>	There is little or no information available on the critical habitats, species and cultural values of the protected area	0	The M&E framework should include planned surveying. Further information should be gathered in the wilderness areas that remains relatively unknown.
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1	
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	2	
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained	3	
<p>10. Research</p> <p>Is there a programme of management-orientated survey and research work?</p> <p>Inputs</p>	There is no survey or research work taking place in the protected area	0	Research on the socio-ecological components is good, but there are gaps in knowledge among other species and ecological aspects of the area. These need to be prioritized and filled.
	There is some <i>ad hoc</i> survey and research work	1	
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2	
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	3	
<p>11. Resource management</p> <p>Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?</p> <p>Process</p>	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0	Further information regarding active management is necessary. Most importantly, the effect of invasive species and disease in wildlife is not well known.
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1	
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2	
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3	
<p>12. Staff numbers</p> <p>Are there enough people employed to manage the protected area?</p> <p>Inputs</p>	There are no staff	0	Staff numbers need to be increased
	Staff numbers are inadequate for critical management activities	1	
	Staff numbers are below optimum level for critical management activities	2	
	Staff numbers are adequate for the management needs of the site	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
13. Personnel management Are the staff managed well enough? <i>Process</i>	Problems with personnel management constrain the achievement of major management objectives	0	There need to be incentives to ensure that the staff carry out their duties optimally. Thus, even the staff that do exist are not effectively managed.
	Problems with personnel management partially constrain the achievement of major management objectives	1	
	Personnel management is adequate to the achievement of major management objectives but could be improved	2	
	Personnel management is excellent and aids the achievement major management objectives	3	
14. Staff training Is there enough training for staff? <i>Inputs/Process</i>	Staff are untrained	0	Refreshment of training would be worthwhile but staff management is a more important issue. Training could, however, be provided as an incentive for the staff.
	Staff training and skills are low relative to the needs of the protected area	1	
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2	
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3	
15. Current budget Is the current budget sufficient? <i>Inputs</i>	There is no budget for the protected area	0	Budget needs to be increased.
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	1	
	The available budget is acceptable, but could be further improved to fully achieve effective management	2	
	The available budget is sufficient and meets the full management needs of the protected area	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
16. Security of budget	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0	The budget from the regional government is relatively secure (although it has declined in the past years) but external funding is necessary to build the capacity of the protected area.
Is the budget secure?	There is very little secure budget and the protected area could not function adequately without outside funding	1	
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2	
Inputs	There is a secure budget for the protected area and its management needs on a multi-year cycle	3	
17. Management of budget	Budget management is poor and significantly undermines effectiveness	0	Budget management needs to be fully strengthened.
	Budget management is poor and constrains effectiveness	1	
Is the budget managed to meet critical management needs?	Budget management is adequate but could be improved	2	
Process	Budget management is excellent and aids effectiveness	3	
18. Equipment	There is little or no equipment and facilities	0	Equipment and facilities are present, but these requires improvement.
Is equipment adequately maintained?	There is some equipment and facilities but these are wholly inadequate	1	
	There is equipment and facilities, but still some major gaps that constrain management	2	
Process	There is adequate equipment and facilities	3	
19. Maintenance of equipment	There is little or no maintenance of equipment and facilities	0	Recurrent budget for maintenance and replacement is inadequate and needs to be improved.
	There is some <i>ad hoc</i> maintenance of equipment and facilities	1	
Is equipment adequately maintained?	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2	
Process	Equipment and facilities are well maintained	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
20. Education and awareness programme Is there a planned education programme? <i>Process</i>	There is no education and awareness programme	0	The GNP, ZPWMA and FZS have education projects that are carried out with the park authorities; these are being improved.
	There is a limited and <i>ad hoc</i> education and awareness programme, but no overall planning for this	1	
	There is a planned education and awareness programme but there are still serious gaps	2	
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	3	
21. State and commercial neighbours Is there co-operation with adjacent land users? <i>Process</i>	There is no contact between managers and neighbouring official or corporate land users	0	There is need to continue strengthening the linkages (through active participation in the joint management committee) dealing with land-use and conservation in the southeast lowveld.
	There is limited contact between managers and neighbouring official or corporate land users	1	
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2	
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3	
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? <i>Process</i>	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0	Collaboration with indigenous peoples needs to be improved (through joint management committee on which representative(s) will sit).
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2	
	Indigenous and traditional peoples directly participate in making decisions relating to management	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
23. Local communities	Local communities have no input into decisions relating to the management of the protected area	0	Collaboration with local people needs to be improved (through joint management committee on which representative(s) will sit).
Do local communities resident or near the protected area have input to management decisions? <i>Process</i>	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Local communities directly contribute to some decisions relating to management	2	
	Local communities directly participate in making decisions relating to management	3	
Additional points	There is open communication and trust between local stakeholders and protected area managers	+1	Trust needs to be improved (through joint management committee).
<i>Outputs</i>	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1	
24. Visitor facilities	There are no visitor facilities and services	0	The quality of service at the campsites, bush camps and lodges needs improvement; further facilities are necessary.
Are visitor facilities (for tourists, pilgrims etc) good enough?	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1	
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2	
	Visitor facilities and services are excellent for current levels of visitation	3	
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area	0	Cooperation needs to be improved (through the joint management committee). A marketing plan is necessary which should be done with tour operators.
Do commercial tour operators contribute to protected area management?	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1	
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2	
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3	
<i>Process</i>			

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
26. Fees If fees (tourism, fines) are applied, do they help protected area management? <i>Outputs</i>	Although fees are theoretically applied, they are not collected	0	The revenue generated by GNP would not cover recurrent costs even if they remained. With growth, GNP will be able to cross-subsidize other areas and use the excess for its own development.
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	1	
	The fee is collected, but is disbursed to the local authority rather than the protected area	2	
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3	
27. Condition assessment Is the protected area being managed consistent to its objectives? <i>Outcomes</i>	Important biodiversity, ecological and cultural values are being severely degraded	0	There is need for continued strengthening of conservation in GNP for key biodiversity and ecological processes.
	Some biodiversity, ecological and cultural values are being severely degraded	1	
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2	
	Biodiversity, ecological and cultural values are predominantly intact	3	
<i>Additional points</i> <i>Outputs</i>	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1	There is no habitat restoration underway; this should take place in severely degraded and prioritized areas.
28. Access assessment Are the available management mechanisms working to control access or use? <i>Outcomes</i>	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0	The coverage of the protected systems needs to be extended to priority areas (through mapping the highly threatened or used areas).
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1	
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2	
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	3	

Table F.1: Detailed METT for the Gonarezhou National Park including the next steps

Issue	Criteria	Score	Next steps
29. Economic benefit assessment	The existence of the protected area has reduced the options for economic development of the local communities	0	The flow of benefits to local communities is significant but the linkage needs to be made with the protected area and the wildlife. The benefits could be increased with planning. Given that the area is now part of the GLTFCA, there is need to develop innovative ways to incorporate the local communities.
Is the protected area providing economic benefits to local communities?	The existence of the protected area has neither damaged nor benefited the local economy	1	
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	2	
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3	
Outcomes			
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area	0	M&E framework needs to be planned and implemented.
	There is some <i>ad hoc</i> monitoring and evaluation, but no overall strategy and/or no regular collection of results	1	
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	2	
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3	
Planning/Process			
TOTAL SCORE		55	

ANNEX 1: GONAREZHOU PLANNING PARTICIPANTS

Composition of GNP planning teams and consultations are listed in the following Tables.

Table 1: Core Planning Team (CPT) for Gonarezhou National Park

No.	Name	Position/Organisation	Email	Working Groups			
				Biodiversity Management	Sustainable Tourism Management	Park Operations and Administration	Collaborative Management
Planners	Rachel Gwazani	Planning Officer (<i>former</i>), now the Principal for Mushandike College of Wildlife Management/ ZPWMA	gwazanir@gmail.com	✓	✓	✓	✓
	Phillip Kuvaoga**	Planning Officer (<i>incoming</i>), former Senior Ecologist-Marongora	philmadawo@yahoo.com		•	•	•
Area Managers	Evious Mpofu	Area Manager-Mabalauta/ ZPWMA	empofu3@gmail.com	✓	✓	✓	✓
	Faustino T. Madawo	Area Manager-Chipinda Pools (<i>now retired</i>), ZPWMA	madawotf@gmail.com	✓	✓	✓	✓
	Norman Monks**	Area Manager-Chipinda Pools/ZPWMA	nmonks2009@yahoo.co.uk				
Ecologists	Patience Zisadza	Ecologist, now Senior Ecologist/ZPWMA	patiencezisadza@gmail.com	✓	✓	✓	✓
	Edson Gandiwa	Senior Ecologist/ZPWMA	egandiwa@gmail.com	✓	✓	✓	✓
FZS	Hugo van der Westhuizen	Project Leader-Frankfurt Zoological Society-Gonarezhou	hugo@fzs.org	✓	✓	✓	✓
	Elsabe van der Westhuizen	Technical Advisor-Frankfurt Zoological Society-Gonarezhou	elsabe@fzs.org	✓	✓	✓	✓
	Ian Games	Consultant	igames@zol.co.zw	✓	✓	✓	✓

C** Joined the CPT in 2010

Table 2: Independent Review of the General Management Plan for Gonarezhou National Park

#	Surname	First Name	Section	Email	Organisation
1.	Prof Magadza	Chris	Full Document	cmagadza@science.ac.uz.zw	Tropical Resources Ecology Programme, University of Zimbabwe
2.	Prof Cumming	David	Full Document	ccumming@science.ac.uz.zw	University of Pretoria, South Africa
3.	Prof Child	Brian	Full Document	bchild@africa.ufl.edu	Center for African Studies, University of Florida, USA
4.	Dr Dembe	Ezekiel	Full Document	eadembe@yahoo.co.uk	Tanzania National Parks (TANAPA)
5.	Dr Tafangenyasha	Clifford	Full Document	ctafange@uzulu.ac.za	University of Zululand, South Africa
6.	Dr Games	Ian	Full Document	igames@zol.co.zw	Independent Consultant
7.	Dr Murwira	Amon	Full Document	amurwira@arts.ac.uz.zw	Department of Geography and Environmental Science, University of Zimbabwe
8.	Dr Pienaar	Danie	Full document	dpienaar@sanparks.co.za	South African National Parks (SANParks)
9.	Dr Foggin	Chris	Full document	cfoggin@kigelia.net	Zimbabwe Department of Veterinary Services ,Wildlife Veterinary Unit
10.	Dr Yoneda	Masaaki	Full Document	myoneda@jwrc.or.jp	Japan Wildlife Research Centre, Japan
11.	Dr Seek	Chris	Tourism	Chris.seek@solimarinternational.org	Solimar International, USA
12.	Dr Humke	Matt	Tourism	m.humke@solimarinternational.org	Solimar International, USA
13.	Dr Lindsey	Peter	Full Document		University of Pretoria, South Africa
14.	Dr Clegg	Bruce	Full Document	bruce@malilangwe.org	Malilangwe Trust, Zimbabwe
15.	Dr Laurenson	Karen	Full Document	Hard Copy, Soft Copy karenlaurenson@fzs.org	Frankfurt Zoological Society
16.	Dr Dzingirai	Vupenyu	Collaborative	vdzingirai@cass.ac.uz.zw	Centre For Applied Social Sciences, University of Zimbabwe
17.	Dr Huelin	Astrid	Biodiversity	astridhuelin@gmail.com	Chiredzi River Conservancy, Zimbabwe
18.	Dr Spenceley	Anna	Tourism	SpenceleyA@science.pg.wits.ac.za	University of Witwatersrand, South Africa
19.	Mr. Chimuti	Tapera	Full Document	taperachimuti@citesmike.org	Monitoring Illegal Killing of Elephants (MIKE), Southern Africa
20.	Mr Du Toit	Raoul	Full Document	rdutoit@wwfsarpo.org	Lowveld Rhino Trust, Zimbabwe
21.	Mrs Madzara	Anne	Tourism	anne@safire.org	Southern Alliance For Indigenous Resources (SAFIRE)
22.	Mr Turner	Jason	Tourism	Jason@malilangwe.org	Malilangwe Trust, Singita- Pamushana Lodges, Chiredzi, Zimbabwe
23.	Mr Wenham	Colin	Admin & Operations	colin@malilangwe.org	Malilangwe Trust, Chiredzi, Zimbabwe
24.	Mr Mugodi	Mugodi	Full Document	Hard Copy	Environmental Management Agency-Chiredzi, Zimbabwe
25.	Mr Meyer	Jannie	Full Document	Soft Copy	Lowveld Hunters, Chiredzi, Zimbabwe
26.	Hon. MP Sithole	Abraham	Full Document	Hard Copy	Save Valley Conservancy Trust, Member of Parliament-Chiredzi-East
27.	Mr Stockil	Clive	Full Document	clivess@senuko.com	Save Valley Conservancy, Chiredzi, Zimbabwe
28.	Mr Kaschula	Antony	Tourism	ant@privateguidedsafaris.org	Private Guided Safaris
29.	Mr Watungwa	Mike	Collaborative	mikewatungwa@yahoo.co.uk	Tunza Trust, Chiredzi, Zimbabwe
30.	Mr Masviele	Bensen	Full Document	Hard Copy	Chiredzi Rural District Council (CRDC)
31.	Mr Ruswa	Stanely	Full Document	Hard Copy rsuswa@zimparks.co.zw	ZPWMA-Regional Office, Northern Region
32.	Mr Gotosa	Tawanda Noel	Full Document	Hard Copy, Soft Copy nyamazana@zol.co.zw	ZPWMA Regional Office, Southern Region
33.	Mr Gondo	Muneni	Full Document	Hard Copy, Soft Copy mgondo@zimparks.co.zw	ZPWMA-HQ Finance Department
34.	Mr Chipere	Tawanda	Full document	Hard Copy tchipere@zimparks.co.zw	ZPWMA-HQ Commercial Services Division

#	Surname	First Name	Section	Email	Organisation
35.	Mr Chadenga	Vitalis	Full Document	Hard Copy, Soft Copy vchadenga@zimparks.co.zw	ZPWMA-HQ Director, Conservation Division, (<i>now Director General</i>)
36.	Mr Matipano	Geoffreys	Full Document	Hard Copy, Soft Copy gmatipano@zimparks.co.zw	ZPWMA-HQ Head Management Services
37.	Dr Madzikanda	Hillary	Full Document	Hard Copy, Soft Copy hmadzikand@zimparks.co.zw	ZPWMA-HQ Head Scientific Services
38.	Dr Mtsambiwa	Morris	Full Document	Hard Copy, Soft Copy mzmtsambiwa@zimparks.co.zw	ZPWMA-HQ Director General (<i>former</i>)
39.	Mr Pangeti	George	Full Document	Hard Copy, Soft Copy	ZPWMA Board Chairman

NB: Reviewers from who contributed their inputs, comments, edits, ideas and suggestions through a consultative process until a draft plan was produced in 2009. 95% of these reviewers actively participated working group meetings and workshops that were facilitated by the Core Planning Team (Table 1).

Table 4: Participants and Stakeholders

This table lists names of people who participated in working group meetings and stakeholder workshops conducted in the review process, inclusive with the Core Planning Team and the majority of the reviewers outlined above.

No.	Surname	Name	Organisation	Working groups			
				Biodiversity Management	Sustainable Tourism Management	Park Operations and Administration	Collaborative Management
1.	Mr. Pasinawako	A	ZPWMA-HQ, Finance Department			▪	
2.	Mr Parakasingwa,	Chakanetsa	ZPWMA, Southern Regional Office-Human Resources			▪	
3.	Mr. Muboko	Never	ZPWMA-HQ, Scientific Services				▪
4.	Mr. Lebel	Sebastian	CIRAD				▪
5.	Mr. Muti	Gwinyai	Malilangwe Trust, EU-PARSEL				▪
6.	Mr. Bovvifin	C	CIRAD				▪

ANNEX 2: IDENTIFIED STAKEHOLDERS

Identified stakeholders for Gonarezhou		
Group	Details	
Government	<ul style="list-style-type: none"> • ZPWMA • EMA • Chiredzi RDC • Chipinge RDC • Veterinary and tsetse control • Customs and Immigration 	<ul style="list-style-type: none"> • Mwenezi and Beit Bridge RDCs • Police • Army • DAs Office • Office of the President
NGOs	<ul style="list-style-type: none"> • Frankfurt Zoological Society • Wildlife and Environment Society of Zimbabwe • Lowveld Carnivore Project 	
Conservancies	<ul style="list-style-type: none"> • Malilangwe Trust • Save Conservancy • Hippo Valley 	<ul style="list-style-type: none"> • Chiredzi River Conservancy • Buby River Conservancy
GLTP	<ul style="list-style-type: none"> • South African National Parks • EmoFauna • District Authorities in South Africa • District Authorities in Mozambique • Peace Parks Foundation 	
Research Institutions	<ul style="list-style-type: none"> • Zimbabwean Universities (University of Zimbabwe, University of Science and Technology – Bulawayo, University of the Midlands, Chinhoyi University, Bindura University, Great Zimbabwe University – Masvingo, Zimbabwe Open University) • External Universities (Wageningen University) • Mushandike College of Wildlife Management • CIRAD • CNRS 	
Agricultural Sector	<ul style="list-style-type: none"> • Triangle Sugar Estates • Hippo Valley Sugar Estates • Mkwasine Estates • Mwenwezana Estates 	
Local Communities (Chiefs and MPs)	<ul style="list-style-type: none"> • Mahenye • Mtandahwe • Ndali/Chitsa • Chibwedziwa • Chingele 	<ul style="list-style-type: none"> • Chizvirzvi • Boli • Gonakudzingwa • Pahlala • Malapati
Private Sector	<ul style="list-style-type: none"> • Tour operators • Concerned local citizens • Adjacent lodges • Hunting companies 	