

ADDO ELEPHANT

NATIONAL PARK

MARCH 2008

PARK MANAGEMENT PLAN



South African National Parks would like to thank everybody who participated and had input in the formulation of this document.



AUTHORISATION

This management plan is hereby internally accepted and authorized as the legal requirement for managing Addo Elephant National Park as stated in the Protected Areas Act.

DATE: 31 MARCH 2008

Norman Johnson
Park Manager – Addo Elephant National Park

Lucius Moolman
Regional Manager – Frontier Parks

Paul Daphne
Managing Executive

Sydney Soundy
Chief Operating Officer

Dr David Mabunda
Chief Executive

Recommended to SANParks Board

Name: _____

Date: _____

Ms Cheryl Caroulus
Chairperson – SANParks Board

Recommended to the Department of Environmental Affairs and Tourism

Name: _____

Date: _____

Mr Marthinus van Schalkwyk
Minister – Department of
Environmental Affairs and Tourism



TABLE OF CONTENTS

AUTHORISATION

i.	Table of Contents	.6
ii.	List of Acronyms and Abbreviations	.7
iii.	Executive Summary	.8
iv.	Process Overview	.10

1. INTRODUCTION

1.1	Purpose	.12
1.2	Location	.12
1.3	Extent	.12
1.4	Socio-economic context	.13
1.5	History	.13
1.6	Climate	.13
1.7	Topography, geology and soils	.13
1.8	Hydrology	.14
1.9	Vegetation	.15
1.10	Fauna	.15
1.11	Marine	.17

2. THE PROTECTED AREAS MANAGEMENT PLANNING FRAMEWORK

2.1	Desired state	.18
2.2	Operating Principles and Vital Attributes of the Park	.18
2.2.1	Operating Principles	.18
2.2.2	Vital Attributes of the Park	.19
2.3	Vision for the park	.20
2.4	Setting the Details of the Desired State for the Park	.20
2.4.1	Biodiversity and Heritage Objectives	.20
2.4.2	Socio-economic Objectives	.22

3. GUIDELINES AND PROGRAMMES TO ACHIEVE THE DESIRED STATE

3.1	Biodiversity and Heritage Conservation	.26
3.1.1	Park Expansion Programme	.26
3.1.2	Sustainable/natural Resource Use Programme	.29
3.1.3	Herbivore Management Programme (including elephant management)	.29
3.1.4	Carnivore Species Management	.31
3.1.5	Damage-causing Animal Programme	.31
3.1.6	Species of Special Concern	.31
3.1.7	Water Programme	.32
3.1.8	Fire Programme	.33
3.1.9	Rehabilitation Control Programme: (including erosion and alien control)	.34

3.1.10	Cultural Heritage Resource Programme	.36
3.1.11	Marine Programme	.37
3.1.12	Island Management Programme	.37

3.2 Sustainable Tourism

3.2.1	Conservation Development Framework (CDF)	.39
3.2.2	Tourism Programme	.41
3.2.3	Marketing Programme	.43
3.2.4	Commercial Development Programme	.43

3.3 Building Cooperation / Constituency Building

3.3.1	Stakeholder Relationship Management Programme	.46
3.3.2	Environmental Interpretation Programme	.47
3.3.3	Local Socio-economic Development Programme	.47
3.3.4	Communications Programme	.49

3.4 Effective Park Management

3.4.1	Environmental Management Programme) (includes waste, energy, water, NEMA compliance	.49
3.4.2	Safety & Security Programme	.50
3.4.3	Infrastructure Programme	.51
3.4.4	Staff Capacity Building Programme	.53
3.4.5	Institutional Development and Administration Programme	.54
3.4.6	Financial Sustainability Programme	.54
3.4.7	HIV/AIDS Programme	.56
3.4.8	Risk Management Programme	.57
3.4.9	Adaptive and Integrative Strategies to sustain the Desired State for AENP	.57

4. ACTION PROJECTS58

5. REFERENCES62

APPENDIX 1: ZONING PLAN64

APPENDIX 2: MAP BOOK76

LIST OF ACRONYMS AND ABBREVIATIONS

AENP:	Addo Elephant National Park	MLRA:	Marine Living Resources Act
ASL:	Above sea level	MPA:	Marine Protected Area
BSC:	Balanced Scorecard	NBSAP:	National Biodiversity Strategy & Action Plan
CAPE:	Cape Action for People and Environment	NPES:	National Protected Areas Strategy
CBOs:	Community-based Organisations	NGOs:	Non-Government Organisations
CDF:	Conservation Development Framework	PAA:	Protected Areas Act
CMAAs:	Catchment Management Authorities	PFMA:	Public Finance Management Act
CRM:	Cultural Resource Management Policy	PPC:	Pretoria Portland Cement
EAP:	Employee Assistance Programme	RAPs:	Resettlement Action Plans
EMS:	Environmental Management System	SAHRA:	South African Heritage Resources Agency
EXCO:	Executive Committee	SANParks:	South African National Parks
gAENP:	Greater Addo Elephant National Park Programme	SBR:	State of Biodiversity Report
GGP:	Gross Geographic Product	SEA:	Strategic Environmental Assessment
IUCN:	International Union for the Conservation of Nature and Natural Resources	SEDA:	Small Enterprise Development Agency
ISCU:	Invasive Species Control Unit	SMME:	Small, medium and macro enterprises



EXECUTIVE SUMMARY

In compliance with the National Environment: Protected Areas Act No. 57 of 2003, SANParks is required to develop management plans for each of its parks. In developing the management plan for the Addo Elephant National Park (AENP), SANParks has attempted to integrate, implement and review the biodiversity conservation, tourism and constituency building components that make up its core business, whilst ensuring continual learning and compliance.

The AENP, proclaimed in 1931, is situated on the Eastern Cape coast and forms the eastern extension of the world renowned Garden Route. The Park was initially proclaimed to conserve its threatened elephant population, but later with the inclusion of the Zuurberg National Park and Alexandria Forest, the park became more focused on conserving the areas unique cluster of biomes and vegetation types, inclusive of the threatened Thicket vegetation and the adjacent marine section. The Park falls within four local municipalities (namely Sundays River, Blue Crane, Ndlambe and Ikwezi), as well as the regional Cacadu District and is adjacent to the Nelson Mandela Metro. The Park borders on five towns and several settlement areas and one communal land holding (Enon-Besheba Estate). The development of the Coega project and general upswing in the local economy has seen an influx of people and pressure on the Park. The immediate surrounding economy to the Park is based on a few main industries, namely tourism, citrus, dairy, market gardening, and livestock.

The Park falls within an ecological tension zone at the junction of five terrestrial biomes: Fynbos, Thicket, Forest, Grassland, Nama-Karoo and one azonal, as well as Wetlands. The area is also an important marine province, making the AENP a unique biodiversity and landscape Park. As the eastern extension of the Cape Floristic Region (CFR), it peripherally falls under the Cape Action Plan for the Environment (C. A. P. E), a strategic plan focused on minimising key threats and root causes to biodiversity losses. The Park has gone through considerable expansion over the last decade – today it is almost 164 000ha in size, which includes three contractual partners.

The desired visionary state for the Park was developed to guide Park management in its daily operations and longer term planning. This required the formulation of the Park's vital attributes (what makes it unique), factors determining/strengthening or threatening/eroding these attributes, and objectives to address them. Further to the Park's current zonation plan, an all-inclusive conservation development framework (CDF) for the Park that sets the limitations for development based upon regional, biological and social informants, has been finalised. This is fully in

tune with local Integrated Development Plans (IDPs) to facilitate development that takes conservation issues into account.

The AENP plans to improve its ecological and managerial sustainability through the inclusion of priority areas to straighten boundaries and remove landlocked parcels. A large marine component is also planned to further the ecological sustainability across the marine - terrestrial interface. Further contractual inclusions of private land will be sought after. The planned expanded marine protected area (MPA) will follow an independent consultative process.

With the tourism product well-established and branded, emphasis will be placed upon improving the experience and service delivery. The incorporation of the southern

Colchester section into the greater Park's ecological product and the development of the Karoo experience around Darlington Dam will be a focus of activities. Cautious development of marine experiences in and around the Bird Island cluster will be developed, as will the infrastructure on the Island. Emphasis will be placed on furthering concessionaires and contracting partners, as a means of increasing the Park's socio-economic footprint. The creation of sustainable SMMEs remains an important focus of the Park and its Global Facility Fund partner.



OVERVIEW OF THE SANPARKS MANAGEMENT PLANNING PROCESS

Process overview

South African National Parks (SANParks) has adopted an overarching park management strategy that focuses on developing, together with stakeholders, and then managing towards a 'desired state' for a National Park. The setting of a park desired state is done through the adaptive planning process (Rogers 2003). The term 'desired state' is now entrenched in the literature, but it is important to note that this rather refers to a 'desired set of varying conditions' rather than a static state. This is reinforced in the SANParks biodiversity values (SANParks 2006) which accept that change in a system is ongoing and desirable. Importantly, a desired state for a park is also not based on a static vision, but rather seeks refinement through ongoing learning and continuous reflection and appropriate adaptation through explicit adoption of the Strategic Adaptive Management approach.

The 'desired state' of a park is the parks' longer-term vision (30-50 years) translated into sensible and appropriate objectives through broad statements of desired outcomes. These objectives are derived from a park's key attributes, opportunities and threats and are informed by the context (international, national and local) which jointly determine and inform management strategies, programmes and projects. Objectives for national parks were further developed by aligning with SANParks corporate strategic objectives, but defining them in a local context in conjunction with key stakeholders. These objectives

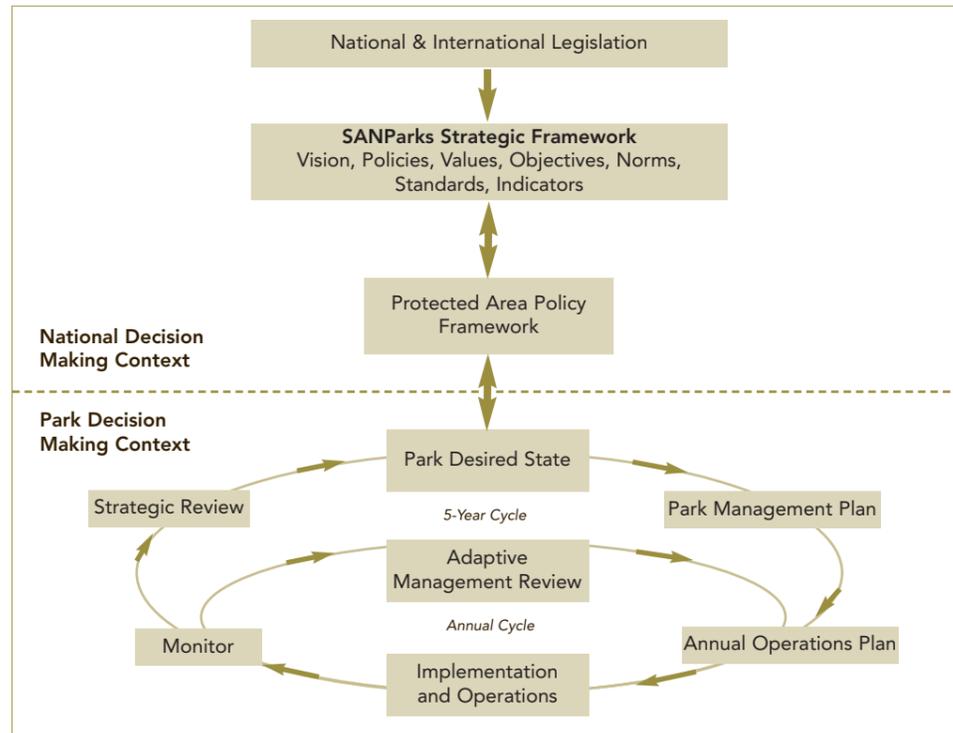


Figure 1: Protected Areas planning framework

are clustered or grouped into an objectives hierarchy that provides the framework for the Park Management Plan. Within this document only the higher level objectives are presented. However, more detailed objectives, down to the level of operational goals, have been (or where necessary are currently being) further developed in conjunction with key stakeholders and specialists.

This approach to the management of a National Park is in line with the requirements of the National Environmental Management: Protected Areas Act No. 57 of 2003 (NEM: PAA). Overall the Park Management Plan forms part of a National Planning framework for protected areas as outlined in the figure on the left.

Park Management Plans were not formulated in isolation of National legislation and policies. Management plans comply with related national legislation such as the National Environmental Management: Biodiversity Act, national SANParks policy and international conventions that have been signed and ratified by the South African Government.

Coordinated Policy Framework Governing Park Management Plans

The SANParks Coordinated Policy Framework provides the overall framework to which all Park Management Plans align. This policy sets out the ecological, economic, technological, social and political environments of national parks at the highest level. In accordance with the NEM: Protected Areas Act, the Coordinated Policy Framework is open to regular review by the public to ensure that it continues to reflect the organisation's mandate, current societal values and new scientific knowledge with respect to protected area management. This document is available on the SANParks website.

Key functions of Park Management Plans

The key functions of this management plan are to:

- ensure that the Park is managed according to the reason it was declared;
- be a tool to guide management of a protected area at all levels, from the basic operational level to the Minister of Environmental Affairs and Tourism;
- be a tool which enables the evaluation of progress against set objectives;
- be a document which can be used to set up key performance indicators for Park staff;
- set the intent of the Park, and provide explicit evidence for the financial support required for the Park.

This Management Plan for Addo Elephant National Park comprises three broad sections

1. An outline of the context and desired state of the Park and how this was determined;
2. A summary of the management strategies, programmes and projects that are required to move towards achieving the desired state (obviously these strategies, programmes and projects can extend over many years but here we present the management focus until 2012). These are also monitored following an adaptive approach to management. It focuses park management on those critical strategic issues, their prioritisation, operationalisation and integration, and reflection on achievements to ensure that the longer-term desired state is reached.
3. Presentation of a high level budget.



INTRODUCTION

1.1 Purpose

Addo Elephant National Park (AENP) was initially proclaimed in 1931 (Government Gazette No 243 dated 3 July 1931) to protect the last remaining elephants in the Addo Thicket vegetation. The adjacent Zuurberg National Park was proclaimed in 1985 with the transfer of Zuurberg Forest Reserve, initially proclaimed in 1869 with the intention of conserving a representative sample of the grassy Fynbos and under pressure AfroMontane forest patches characteristic of the Zuurberg Mountains. Zuurberg National Park was later deproclaimed and included into AENP in 1995 (Government Gazette No 16755, 13 October 1995). As the park expanded, it included the provincial Woody Cape Nature Reserve with the St Croix and Bird Islands (as per Government Gazette No 22809 dated 2 November 2001) to conserve a representative sample of the Eastern Cape's unique mix of biodiversity ranging from the marine areas and representatives of five terrestrial biomes (Thicket, Forests, Fynbos, Nama-Karoo, Grassland and the azonal Wetlands) in a landscape diverse environment with offshore islands, coastal plains, mountains and arid plains.

1.2 Location

The AENP is situated in the Eastern Cape Province, with the headquarters of the Park about 75 km north of Port Elizabeth (Appendix 2: Map 1). The Park stretches from the semi-arid plains around Darlington Dam, south and east over the Zuurberg Mountain range and into the Sundays River Valley. From here, the Park stretches south to the Sundays River mouth and then east along the coast to the Bushman's River Mouth. Included are the Bird and St Croix Islands group in Algoa Bay.

1.3 Extent

The 2230 ha AENP was proclaimed in 1931 with the express purpose of protecting the last remaining Eastern Cape elephants. The concept of the greater Addo Elephant National Park (gAENP) that emerged in the late 1990's focused on the Park's greater potential to include a unique combination of land and seascapes, biodiversity and socio-economic opportunities away from the original species-specific focus (Kerley & Boshoff 1997). This greater Park became the Park's planning domain (Appendix 2: Map 3). This planning domain spans almost 200 km in length, and about 30 km wide, and covers about 686 000 ha, inclusive of a 120 000 ha marine area (made up of the Bird and St Croix island groups), which would make it the third largest national park in South Africa.

The Park extends from its most eastward section in the Alexandria coastal dune

field and its associated forests, to the Sundays River mouth. The marine zone includes the Bird and St Croix island groups, which are of great historical and conservation value. The St Croix Island group currently supports the largest population of the vulnerable African Penguin (*Spheniscus demersus*) in the world. This is also one of the few populations of this species that showed an increase in numbers until recently, emphasising the conservation significance of this site. From the coastal strip, the Park extends inland through the elephant-dense Thicket areas to the Zuurberg Mountains, over to the Darlington Dam set in the semi-arid Karoo plains. The extent of this Park allows the re-establishment of important ecological processes essential for ensuring ecological sustainability. This extent leads to an assembly of biodiversity (representative of five of the country's seven biomes), and a linkage with an important potential marine protected area (MPA).

1.4 Socio-economic Context

The Eastern Cape Province is one of the most economically challenged provinces in South Africa, with one of the highest rates of poverty, illiteracy, unemployment and poor living conditions. The average Gross Geographic Product (GGP) per capita is less than half that of the South African average. With approximately 710 000 poor households in the Province (4,1 million people), 57% of households and 64% of individuals in the Eastern Cape live in poverty. The expansion of the Park as a catalyst for alleviating poverty and contributing to socio-economic development was motivated via a Strategic Environmental Assessment (SEA) conducted in 2003 (SEA 2003). The Park, within its extension context, impacts on four local municipalities (Ikwezi, Blue Crane Route, Ndlambe and Sundays River), one district municipality (Cacadu) and the Nelson Mandela Metro (Appendix 2: Map 1). The existing AENP already has a relatively well-developed eco-tourism industry that is making a positive contribution to the regional economy. Since conservation-related forms of land use (such as game farming and eco-tourism) have been found to be economically and environmentally more sustainable than livestock farming in thicket vegetation (Stuart-Hill & Aucamp, 1993), the expansion of the Park potentially offers further socio-economic, yet environmentally friendly, development opportunities to the Province as well as employment opportunities for local people. The fact that the Eastern Cape Province now boasts over 500 game farms, twice as many as a decade ago, is significant in terms of justifying this industry economically.

1.5 History

The Park was initially proclaimed in 1931. Its sole purpose then was to protect the Eastern Cape's eleven remaining elephants. The saving of these elephants has been the precursor to further conservation developments in the region (Hall-Martin 1980). Management in

the early years of the Park was made difficult by the fact that no elephant-proof fence surrounded it. Farmers and elephants continued to clash until, in the 1950s, Graham Armstrong invented an elephant-proof fence (Pringle 1982) so effective that it is still used around parts of the Park today. An area of 2270 ha was fenced in for the protection of 22 elephants at that time. The first official tourists drove through the Park in the late 1970s. In 1995, the Zuurberg National Park was amalgamated with the Addo Elephant National Park, increasing the extent of the Park with an area that has been protected since 1896, first as state forestry land and then, from 1995, as a National Park. Elephant numbers grew to over 400 and the Park expanded to 164 000 hectares in 2006. Since then, the development of the Park has been phenomenal. Although the Park was originally created for the protection of one species, conservation efforts have been expanded to embrace the protection of the region's unique biological diversity.

1.6 Climate

This section of the Eastern Cape is situated on the tension zone between summer, winter and all-year round rainfall. The maritime and continental climates and the altitudinal variation results in a variable type of climate (Aucamp & Tainton 1984). The Park straddles the summer rainfall area lying predominantly to the north of the Zuurberg range, and the all-year rainfall areas to the south of the mountain range. The Park's climate is best described as warm temperate. One of the major correlates of Thicket vegetation area is the absence of a pronounced seasonal pattern. During drought periods, fogs may be a source of moisture (Vlok *et al.* 2003), as is evidenced by a high incidence of bark and ground lichens. Mean annual rainfall varies from 900 mm in the Alexandria forests, to 450 mm at the AENP head quarters, to an excess of 600 mm on the Zuurberg Mountains, to 350 mm in the northern Karoo rain-shadow areas. Temperatures vary from 15 to 45°C in January and 5 to 18°C in July. There is no natural water in the major game areas of the Park and waterholes are fed by boreholes. Pans are dry except in exceptional rainfall years.

1.7 Topography, geology and soils

This area is characterised by two distinct geomorphologic terrains (Appendix 2: Map 2). Northwards are the high-lying Zuurberg Mountains and southwards are the low-lying plains. The 1 000m above sea level high-rolling Zuurberg Mountains bisects the semi-arid Karoo plains (with a height of 300 m) in the north, from lower lying (30 – 100 m asl) undulating, ancient wave-cut platforms to the south. The AENP is home to a complex mixture of geology which in turn supports a wide variety of South African vegetation types. This area is underlain by the Kirkwood formation of the Uitenhage Group. Mudstones of the Kirkwood formation give rise to deep, fine-textured, sandy clay loams, solonchic soils (Low &



Rebelo 1996), and well-drained soils of the Addo form (Macvicar 1991).

Central to the Park is the ± 1000 m high east-west orientated Zuurberg Mountains, part of the Cape fold belt which consists predominantly of quartzite and sandstone sediments. The highest point in the park is 935m asl. Immediately to the south, 30-100 m asl high ancient wave-cut platforms are made up of a mixture of conglomerates, tillites, mudstones and sandstones, while further south-eastwards towards the coast lie extensive areas of limestone. To the north of the mountains a similar geological assortment exists, except that it consists mainly of mudstone and sandstone, and no limestone deposits, all set at about 300m asl.

Soils closely follow the geology with infertile soils arising from the Cape Fold mountain quartzites and sandstones, and nutrient richer soils from the other sedimentary deposits to the south and north of the mountains. Some soils in the Addo area are particularly deep, and includes fine textured sandy clay loams, solonetic and well drained soils. The Eastern Cape has a total of 13 major soils types, with seven of them alone represented within a 100 km radius of the city of Port Elizabeth. These abrupt changes in soil composition interact with water availability and the diverse climates to produce a range of habitats conducive to supporting a wide diversity of plants and animals.

1.8 Hydrology

The Sundays River and its tributaries form the most significant river system that flows through the Park (Appendix 2: Map 2). This River is of great value for irrigation in the lower Sundays Valley and extends well beyond the boundaries of the proposed Park, with significant tributaries or at least their headwaters occurring within the proposed Park. These include the Coerney, Krom, Wit, Kabouga and the Klein Uie Rivers. Other important river systems that flow within the planning domain are the upper Bushman's River with its tributaries, the Blou and Steins Rivers (northeast), and the Boknes River and its tributaries (south east). The Sundays and Boknes Rivers are the only rivers, within the planning domain, that flow into the sea.

The Darlington Dam (previously Lake Mentz) is a 4 350ha reservoir within the park that receives Orange River water through inter-basin transfer. The Sundays River Irrigation Board manages the water release programme. Nine different types of water bodies occur in the Park, each having a complement of biotopes with characteristic flora and fauna that collectively add to the broad diversity of the Park.

The freshwater ecosystems include perennial rivers, seasonal rivers, episodic rivers, ephemeral rivers, permanent and semi-permanent vleis, seasonal vleis, springs and seeps, episodic endorheic pans, forest swamps and marshes. A number of threatened faunal species rely on these water bodies for their survival.

1.9 Vegetation

The present Park represents five of South Africa's seven biomes, namely the Nama Karoo, Fynbos, Forest, Thicket, Grassland and the azonal Wetland (only lacking the Succulent Karoo and Savannah) (Appendix 2: Map 8). This makes it the most diverse Park in South Africa and Africa.

A total of 43 vegetation units have been identified, some of these being Afromontane Forest, Coastal Forest, Eastern Mixed Nama Karoo, Central Lower Nama Karoo, Mountain Fynbos, Grassy Fynbos, Valley Thicket, Mesic Succulent Thicket, Spekboom Succulent Thicket, Xeric Succulent Thicket and Coastal Grasslands (Vlok *et al.* 2003). Expansion plans for the Park will increase this number of nationally recognised vegetation types to 13, more than any other conservation area in the country.

Landscapes vary from the short succulent Noorsveld type (characterised by the short *Euphorbia coerulescens*), karoid vegetation of the Central Lower Nama Karoo vegetation type, and Spekboom Succulent Thicket on the warm northern slopes near Darlington Dam. None of the Noorsveld was conserved prior to its incorporation into the Park. East of this lies undulating Karoo plains on relatively nutrient rich soils north of the Zuurberg Mountains. The Zuurberg Mountains consist predominantly of Mountain and Grassy Fynbos on the higher lying leached nutrient-poor sandstone-derived soils. The southern side of the mountain range has relatively nutrient-rich alluvium- and aeolian-type soils with its characteristic Xeric and Mesic Succulent Thicket. Along the moist coast, unique mixes of Afromontane and coastal forests interspersed with coastal grasslands occur.

The variation in altitude, topography, climate, geology and soil composition over a relatively short range within the Park accounts for the diverse floristic change. The vegetation varies from typical Thicket species such as *Portulcaria afra*, *Sideroxylon inerme*, and *Plumbago auriculata*, to forest species such as *Podocarpus lati-*

folius, through to typical Fynbos species on the mountainous areas to the characteristic *Pentzia* spp shrub land and Noorsveld *Euphorbia* spp. communities in the Karoo section.

Outside of this amazing biological paradise, the area has been significantly developed, predominantly for pastoral practises, with localised intensive citrus farming. Pastoral operations in this area have proved to be largely an economically and ecologically unsustainable land-use option, and remain a threat to the expanded Park vision.

1.10 Fauna

The AENP was initially proclaimed in 1931 to preserve the threatened elephant (*Loxodonta Africana*) population in the Eastern Cape (Pringle 1982). Reduced to eleven animals, the population has increased to over 450 by 2005 (Internal AENP Reports), the second largest population in South Africa. Although the Park is at the junction of five biomes, the 20 large mammalian herbivore species diversity is still less than other national parks. Fortunately the Park also harboured the last remnant buffalo (*Syncerus caffer*) population, whose offspring, because of their disease-free status are in great demand.

The rich browsing value of the Thicket vegetation accounts for the high proportion of large browsing and intermediate mammalian herbivores (of which there are ten species), such as elephant, black rhinoceros (*Diceros bicornis bicornis*), kudu (*Tragelaphus strepsiceros*), eland (*Taurotragus oryx*), and bushbuck (*Tragelaphus scriptus*). The bulk of the grazing species is made up of buffalo and zebra (*Equus burchelli*).



In accordance with the SANParks policy of reintroducing species that once occurred in the area in historical times, a programme of population re-establishment was initiated (Knight & Castley 1999). One of the most prominent introductions included the East African black rhinoceros (*D.b. michaeli*) in the 1960's, which were later replaced with the indigenous ecotype, *D.b. bicornis*, from populations in Namibia during the 1990's. In addition, after extensive studies (Whitehouse & Hall-Martin 2000), the elephant population was supplemented in 2003 with bulls from the Kruger National Park.

The elephant population has grown beyond its recommended density limits of two elephants per km² (Kerley & Boshoff 1997), leaving SANParks with the option of either expanding their habitat, or removing excess elephants. The greater Addo Elephant National Park project focused primarily on increasing the Park's biodiversity, offering the elephants the former option for the short term.

The introduction of lion into the main elephant section (and Kuzuko contractual section in 2007) was intended to complete the Big 5 eco-tourism product, in addition to their importance as process agents. Spotted hyenas have also been introduced as part of re-establishing the carnivore process in the Park in 2004, with cheetah introduced in 2007 into the Kuzuko contractual section. Species such as cheetah and wild dogs are planned for introduction into the Darlington area once the area and game populations are secured. Certain species such as hippopotamus, black rhino, oribi, lion, cheetah, wild dogs, leopard and serval, would require a meta-population management strategy.

This Park has a wide range of suitable protected habitats for terrestrial birds, including some Red Data Book species such as the ground hornbill, Cape Vulture, Martial Eagle, Stanley's Bustard, Kori Bustard, Grass Owl and Cuckoo Hawk.

The Park is important for the conservation of the region's herpetofauna – it conserves thirteen endemic species, two of which are restricted to the Eastern Cape region (namely the Tasman's girdled lizard - *Cordylus tasmani* - and the Cape legless burrowing skink - *Scelotes anguina*). The Park is also home to populations of five species of land tortoises, with 14 of the expected 15 species of frogs being Red Data Book listed species (Branch 1988).

Known important invertebrates in the Park include the endemic dune grasshopper in the Alexandria dunefields, and the endemic flightless dung beetle *Circellium bacchus* which is specially adapted to exploit the faeces of large herbivores in the dense thicket biome.

1.11 Marine

The marine section of the Park, situated in Algoa Bay, falls within the warm temperate bio-geographic marine province (Branch *et al.* 1994), and consist of the Bird and St Croix island groups and surrounding waters (Appendix 2: Map 2). This area contributes towards 9% of the South African coast and is considered to be largely a no-take or completely protected marine area.

The Algoa Bay marine environment is mostly influenced by prevailing easterly (summer) and westerly (winter) winds, driving the long shore ocean currents (Shumann & Martin 1991; Boyd *et al.* 1992). The wind and currents play an important role in sand movement and deposition in the Alexandria dune field system. The Bay consists mostly of soft bottom sediments and dispersed reefs. Dominant marine fauna can be grouped into marine mammals (seals, whales, dolphins), birds (penguins, gannets, terns), fish (migratory and reef species) and highly diverse benthic fauna on the reefs. The two island groups (Bird and St Croix Island) within the Bay are important as breeding grounds for birds and seals. A number of birds of conservation significance occur on the islands: the African penguin (*Spheniscus demerus*), comprising 22% of the world population, the Cape Gannet (*Morus capensis*), comprising 40% of the world population, the endangered Roseate tern (*Sterna dougallii*), and the endemic African Black Oystercatcher

(*Haemotopus moquini*). The group represents the easternmost breeding range for this species (Heemstra & Heemstra 2004; Griffiths 2000).

Algoa Bay also houses a large South African (Cape) fur seal (*Arctocephalus pusillus*) population. The South African fur seal's range is restricted to islands and the mainland coast between the rich fishing grounds of northern Namibia and Algoa Bay on the south-eastern coast of South Africa. This population of marine mammals also serves as a feeding area for the threatened great white shark (*Carcharodon carcharias*). Furthermore, the islands provide sub-tidal rocky habitat for extensive populations of abalone, although the stock is under pressure owing to illegal exploitation. Most reef fish species (for example red stumpnose, dageraad and red steenbras) are endemic and overexploited, with a similar situation for the surf zone fish (such as dusky kob and white steenbras), with their populations having collapsed.

The larger 120 000 ha proposed marine protected area would assist in rebuilding these stocks, as well as help protect important nursery areas for these species such as the Sundays River estuary and associated surf zone. This larger area will also offer protection to spawning areas for chokka squid (*Loligo vulgaris reynaudii*), a commercially important species, as well as protect important soft bottom areas from trawling.



THE PROTECTED AREAS MANAGEMENT PLANNING FRAMEWORK

2. THE PROTECTED AREAS MANAGEMENT PLANNING FRAMEWORK

The protected areas management planning framework that has been designed for SANParks guides Park management in setting up a management plan, implementing it and reviewing it. The essential feature of the system is the iterative way in which it will enable continual improvement in the management of the Park through annual and five-year review cycles. The first step in developing/revising a management plan is to develop the desired state of the Park.

2.1 Desired state

In order for the current and future extent of the park to be protected and managed effectively, a desired state for the AENP to guide park management in its daily operations has been developed through an adaptive planning process. The AENP process involved three workshops which included consultation with park management, scientific services, affected municipalities, tourism and community representatives.

To formulate this desired state, focus was placed on the vital attributes that make this Park unique, or at least very special in its class. Each attribute was discussed along with important factors determining/strengthening or threatening/eroding these attributes. Using this information helped focus the exact formulation of the Park objectives, which must strengthen positive determinants and weaken or remove negative ones so that objectives are appropriate to the uniqueness and special nature of this park. In this way the management plan is customized according to its local context, without detracting from some of its more generic functions along with certain other parks. This desired state will be reviewed every five years in accordance with the SANParks Biodiversity Custodianship Framework (Rogers 2003). This framework forms a bridge between the SANParks policy framework and its vision for the Park, and the medium term (five year) priorities to attain the vision in cooperation with its stakeholders.

2.2 Operating Principles and Vital Attributes of the Park

The operating principles and unique features (or vital attributes) that make the AENP what it is and potentially can be are listed below.

2.2.1 Operating Principles

SANParks has adopted eleven corporate values which serve as guiding principles around which all employee behaviour and actions are governed and shaped:

- show **leadership** in all we do.
- be guided by **environmental ethics** in all we do.
- promote **transformation** within, and outside of the organisation.
- strive for **scientific** and **service excellence** at all times.
- act with **professionalism** at all times.
- adopt, and encourage **initiative** and **innovation** by all.
- treat all our stakeholders with **equity** and **justice**
- exercise **discipline** at all times.
- show **respect** to all.
- act with **honesty** and **integrity**.
- strive for **transparency** and open **communication** at all times.

These may be modified to meet local requirements through interaction with its stakeholders.

2.2.2 Vital Attributes of the Park

Environmental Attributes

- The geology of the area supports a rich biological diversity.
- Unique vista (scenery or landscape).
- Conservation status/value of Thicket.
- Biodiversity of AENP with its 5+1 biomes and Big 5 +2 (elephant, lions, leopards, buffalo & rhino and great white sharks and whales) and unique flora.
- Ecological gradients.
- Good connection between terrestrial and marine.

Economic Attributes

- The Park is an economic catalyst locally and regionally, which drives the conservation-based economy.
- There are various empowerment opportunities through the Economic Empowerment Programme
- Stimulation of regional tourism opportunities through interactions and representations on all tourism forums.

- The Park is a very popular tourism destination.
- The Park contains biodiversity resources, especially through game sales.
- The potential exists to create sustainable Small, Medium and Macro Enterprises (SMMEs) through the Economic Empowerment and World Bank Programmes.
- The Park is generating surplus game, which assists with the management of other parks.

Socio-political attributes

- An effective Park Forum is in place and is inclusive of all representative stakeholders. This Forum establishes a good, ongoing relationship with communities, municipalities, tourism forums, formalised agriculture and relevant government departments.
- Numerous and diverse cultural heritage sites contribute to the diversity of the Park and strengthens the SANParks heritage mandate.
- A Resettlement Policy Framework (RPF) is in place, which strengthens the rights of farm workers who have lost jobs through the Park's expansion programme.
- Considerable co-ownership and benefits beyond boundaries, especially through the Mayibuye Ndlovu development trust.
- The stature and image of the AENP is strong and its exciting expansion programme is regarded as one of the most dynamic.
- The stable East Cape political environment provides security for tourism.
- A strong relationship with all spheres of government is in place and this bodes well for co-operative agreements.
- There is political support for the gAENP through the endorsement by the Minister of the Department of Environmental Affairs and Tourism (DEAT).
- Strong academic and research relations bodes well for interactive research and "new thinking" around Park issues.



This desired state will be reviewed every five years. The desired state forms a bridge between the long term policy and vision for the Park, and the medium term (five year) priorities to attain the following vision.

2.3 Vision for the park

The Addo Elephant National Park seeks to be fully integrated into the regional landscape, and conserves and enhances the characteristic terrestrial and marine biodiversity, ecological processes and cultural, historical and scenic resources representative of the Algoa Bay – Zuurberg area of the Eastern Cape region for the appreciation, and benefit of, present and future generations.

2.4 Setting the Details of the Desired State for the Park

Objectives Hierarchy for the AENP

A hierarchy of objectives for the Park has been formulated with reference to the above background information, the Park's vital attributes, perceived threats and constraints, guiding principles and the vision. These, however, will be further refined in consultation with the Park's stakeholders. The desired state per section and their objectives are listed in the Table 1, along with initiatives and the associated Park programmes to meet the objectives.

Objectives

Park specific conservation **objectives** are framed in a hierarchical order.

2.4.1 Biodiversity and Heritage Objectives:

The desired state for the AENPs biodiversity and cultural heritage objectives are to see an ecologically sustainable park representative of the unique assortment of terrestrial and marine ecological patterns and processes characteristic of the Algoa-Zuurberg area, where threats (both internal and external) to this are minimized through regional cooperation, natural/cultural resources are rationally used, and where a strong adaptive management ethos towards continuous self improvement and learning is entrenched in park operations. This would ideally see the park increase to 323 576 ha (47% of the planning domain) from its current 164 000 ha, with a 106 000 ha marine area, with viable wildlife populations, monitored via a rationalised ecological monitoring system.

Table 1: Management Objectives

High level objectives	Objectives	Sub-objectives (where required)	Initiative	Operational Plan	Project actions
REPRESENTATION and PERSISTENCE: To ensure Addo conserves a representative sample of Eastern Cape ecological patterns and processes in a contiguous arrangement by establishing a connected land-seascape, enabling natural variation in structure, function and composition over space and time.	Representation : To incorporate the spectrum of biodiversity pattern representative* of the Eastern Cape region into Addo , as well as the processes which support its long-term persistence, and to re-introduce missing elements where possible * to take special cognisance of the unique biodiversity elements of Addo, namely the convergence of 5 terrestrial and the marine biome; off shore islands; coastal dune and beach system.	Consolidation : To incorporate the spectrum of biodiversity patterns (including landscapes) representative* of the Eastern Cape region into Addo , as well as the processes which support its long-term persistence * to take special cognisance of the unique biodiversity elements of Addo, namely the convergence of 5 terrestrial biomes and the marine biome; off shore islands; coastal dune and beach system.	To develop and implement an appropriate systematic conservation plan and targets to achieve this.	Expansion plan (including systematic conservation plan)	Action 3.1.1 (i) Action 3.1.11 (i)(iv) Action 3.3.1 (iii)
		Reintroduction: To investigate possibilities for the reintroduction of locally-extinct species and to implement these in accordance with IUCN principles and guidelines.	Identify missing guilds / trophic levels and species and reintroduce where possible.	Reintroduction plan	Action 3.1.3 (iii)
	Persistence: To manage the Park to ensure the long term persistence of biodiversity, enabling natural variation in structure, function and composition over space and time.	Herbivory: Develop and implement a (mega) herbivore management plan to understand and manage the role of herbivory as a modifier of biodiversity, including the effects of major architects at different spatial and temporal scales.	Identify appropriate surrogates, set TPCs and develop an appropriate monitoring programme.	Herbivore management plan (including artificial water provision, disease management, adaptive management and monitoring - incorporates elements of flux where possible, but only specifies strategy for going forward where well considered content will not be available in time).	Action 3.1.3 (i) (iii) (iv)
		Predation: to establish and maintain large mammal predator-prey relationships and associated processes.	Monitoring of animals, especially prey species and carnivores Develop and implement breakout animal plan.	Predator management plan (Breakouts included into Damage Causing animal breakout management plan).	Action 3.1.3 (i - ii) Action 3.1.5 (i - iii)
		Threatened biota: To understand and maintain viable populations of threatened species, according to a realistic framework of threat.	Identify threatened species, determine thresholds and implement a monitoring program. Meet SANParks' obligations in terms of international agreements and conventions governing rare and threatened biota such that species on the IUCN's globally critically endangered or endangered lists will receive attention Develop an appropriate disaster response framework.	Threatened biota plan - monitoring plan Disaster management plan	Action 3.1.6 (i - iii) Action 3.1.11 (ii) Action 3.4.1 (i - ii)
		Other processes: To, where necessary, restore the role of fire as a natural process (Zuurberg grassy fynbos areas).	Compile and implement a fire management plan to, where necessary, restore the role of fire as a natural process (Zuurberg grassy fynbos areas).	Fire management plan	Action 3.1.8 (i - iii)
		Rehabilitation: To drive towards the re-establishment of structure and function of degraded land that is incorporated into the Addo Elephant NP (including the restoration of key processes which supports the long term persistence of biodiversity).	Hydrological regimes: To improve and restore the hydrological regimes and natural functioning of the Sundays River and its estuary. Degraded land: To drive towards the re-establishment of structure and function of degraded land within the National Park. Alien biota: To drive towards the re-establishment of structure and function of areas degraded by the impacts of alien biota, by controlling and, where possible, eliminating these species.	Develop and implement river, estuary and aquifer management plan Develop a state of river and estuary report Strive towards CMA formation, and, once established, work towards integrated catchment management. To develop and implement a rehabilitation plan (including prioritization). Develop and implement an alien species management plan.	Rehabilitation Plan including alien species management plan (note: Addo may need a separate plan for rehabilitation and management of the Sunday's system and estuary)

High level objectives	Objectives	Sub-objectives (where required)	Initiative	Operational Plan	Project actions
PRESSURE REDUCTION: To reduce external pressures of inappropriate land use, illegal resource use and impacts of invasion of alien biota, to minimise the impact on, and maintain the integrity of indigenous biodiversity.	Management of external development pressures: Minimization of impacts associated with (present and potential) inappropriate activities outside the Park through effective engagement with regional planning structures.		Engage with regional land management authorities, including IDPs and SDFs at a local and regional level Effective communication strategy Coordinated planning and alignment of regional plans Alignment with bioregional planning	Covered in effective Park management	Action 3.3.1 (iii)
	Illegal resource use: Minimization of illegal resource use through effective law enforcement and engagement with appropriate regional authorities.		Law enforcement for Park integrity (for example, anti-poaching operations.) Participate in the protected areas management audit.	Safety and security plan	Action 3.1.11 (iii) Action 3.4.2 (i - iii)
	Alien biota: Minimize the threat of alien biota invasion from outside the Park.		Develop and implement an alien species management plan, with specific reference to infestation from outside the Park.	Alien species management plan (included in rehabilitation plan).	
WILDNESS / REMOTENESS: To maintain and restore wildness/remoteness in the Addo Elephant National Park such that the spiritual and experiential qualities of wildness are maintained, enhanced, or, where necessary, restored.	Range of experiences: To provide a range of wildness experiences through appropriate zonation.		Coordinated planning - sensitivity value analysis and CDF (internal and footprint).	CDF	Action 3.2.1 (i)
	Sense of place: To maintain or restore, through the use of zoning, rehabilitation and restoration efforts, an appropriate sense of place.		To identify, plan and implement appropriate maintenance and restoration of wildness qualities in different zones.	Reference in Rehabilitation plan CDF	Action 3.2.1 (i)
RECONCILING BIODIVERSITY WITH OTHER INTERESTS: To ensure that the other (i. e. non-biodiversity management) aspects of SANParks operations (revenue generation including tourism, resource use, management activities) and interactions with neighbours are informed and constrained by biodiversity, and particularly that the impacts of these activities are minimized.	Reconciling biodiversity with other Park objectives: To ensure that the other (i. e. non-biodiversity management) aspects of SANParks operations (revenue generation including tourism, resource use, management activities) are informed and constrained by biodiversity, and particularly that the impacts of these activities are minimized.	Impacts of activities: To minimize the impacts associated with tourism and Park management activities, and ensure that these activities are only undertaken if they do not compromise biodiversity objectives.	Participate in the State of Biodiversity report (SOB) programme Establish and implement green standards Strive for environmental best practice Internal communication strategy	State of Biodiversity report (SOR) EMS system (Note that these are management reporting systems, not low level plans) Island Management Plan.	Action 3.4.1 (i - ii) Action 3.1.12 (i - iii) Action 3.1.11 (ii)
		Impacts of developments: To minimize the impacts associated with the development of tourism and Park management infrastructure, and ensure that the development of this infrastructure is only undertaken if it does not compromise biodiversity objectives.	Coordinated planning - sensitivity value analysis and zonation.	CDF Island Management Plan	Action 3.2.1 (i)
		Impacts of resource use: To minimize the impacts of extractive resource use, and ensure that extractive resource use is only undertaken if it does not compromise biodiversity objectives (including rebuilding resource stocks) and is within corporate guidelines and management capacity constraints.	Resource use plan defining opportunities and constraints in line with corporate guidelines.	Resource use plan (Should include: water extraction by local authorities from Addo dune/field aquifers; Future resource use in MPA).	Action 3.1.2 (i) Action 3.1.7 (i - v) Action 3.1.11 (ii)
	Reconciling biodiversity with the interests of neighbours: To ensure that SANParks interactions with neighbours are informed and constrained by biodiversity, and where impacts on biodiversity are inevitable, that these impacts are managed and minimized.	Human-animal conflict: In consultation with stakeholders, minimize negative outcomes resulting from human-animal conflicts while ensuring that actions are informed and constrained by biodiversity, and where impacts on biodiversity are inevitable, that these impacts are managed and minimized.	Damage-causing animal breakout management plan (including predators and other animals like elephant which may be dangerous/unwanted by neighbours) Disease management plan	Damage-causing animal breakout management plan Disease management plan (dealt with in herbivore and predator management plans).	Action 3.1.5 (i - iii)
Attain leadership in cultural heritage management.	Cultural heritage assets are conserved and managed.	N/A	Develop and implement a cultural heritage management plan. State of cultural heritage.		Action 3.1.10 (i - iii)

2.4.2 Socio-economic Objectives

The desired state for the AENPs socio-economic objectives are to see the park as a proud tourism destination in the Eastern Cape, catering for the broad diversity of South African society, supported through constructive regional governance, without being a social burden, but rather a net job (both direct & indirect), awareness and opportunity engine for the region. Moreover, the park should become identified as a preferred & sensitive employer impacting broadly on local South African society, where good governance based upon sound knowl-

edge remains order of the day. This should ideally see over the next five years the number tourism beds increase from 341 to 386, with park income increase by an average of 9% per annum to R40.7 million through its current tourism plant, Permanent AENP staff numbers are expected to increase from 135 to 150, with an increased focus on the marine environment. Concession employment of about 102 is expected to increase marginally. Park contract workers are expected to average around 15 individuals. Also expect a positive development of SMMEs involving local communities.

High level objectives	Objectives	Sub-objectives (where required)	Initiative	Operational Plan	Project actions		
Contribute to Local Educational and Socio Economic Development	Enhance benefits to local communities		Identify SMME opportunities within the planning domain	Local socio-economic development plan	Action 3.2.4 (iii)		
			Facilitate the development of SMME's within the planning domain		Action 3.3.3 (i)		
	To increase environmental awareness amongst the parks stakeholders and communities		N/A	Facilitate the consistent flow of benefits	Education development plan		
				Identify possible beneficial partnerships			
				Facilitate the participation of Enon/ Besheba in the Park expansion process			
	Strengthen and maintain established institutions (Mayibuye)			Action 3.3.2 (i - ii) Action 3.3.1 (v)			
Custodian of Choice for Protected Area Management		N/A		Participate in bio-regional initiatives		Stakeholder relationship plan	Action 3.3.1 (iv)
			Develop strong relationships with relevant Government Departments to ensure an effective implementation process				
	Meet social responsibility of Park expansion			Develop a programme to identify funding sources for the management of social impacts of land acquisition			Action 3.1.1 (ii)
				Resolve the contractual social conflicts associated with land purchases			
			Explore alternative resettlement options such as land swaps				
	To maintain good park/community/stakeholder relations			Identify and involve all relevant stakeholders for participation in the Park forum			Action 3.3.1 (ii)
				Develop effective communication mechanisms and responsibilities for representatives			
				Maintain Park forums inclusive of relevant working groups, community, marine, and government departments			
				Develop and implement area integrity management plan			
	To establish effective co-operative governance with stakeholders			Establish and maintain good working relationship with relevant government departments i. e. MCM			Action 3.3.1 (i - ii)
		Develop a MoU regarding the management of the Park area with relevant government departments and local authorities					
		Park requirements in IDP documents					
		Establish a roster for formal meetings					
		Establish political buy-in at a local government level					

High level objectives	Objectives	Sub-objectives (where required)	Initiative	Operational Plan	Project actions
Become the nature based tourism destination of choice in the Eastern Cape region	To provide a unique & diverse ecotourism destination in the Eastern Cape region	N/A	Design customer satisfaction survey	Tourism plan	Action 3.2.2 (i - vi) Action 3.2.4 (i - iii)
			Implement the marketing plan for Addo as the preferred destination in the Eastern Cape region		
			Identify and enhance a range of tourism opportunities		
			Analysis of current product usage and identification of opportunity	Infrastructure programme	
			Implement the marketing plan		
	Plan for tourism infrastructure and facilities as identified by the CDF				
	Create a safe visitor environment in the Park	N/A	Determine incident terminology	Safety & Security Programme	Action 3.4.2 (i - iii)
			Determine the adequacy of security arrangements in Addo and address any shortcomings		
			Create database of incidents		
	Maintain/refurbish the infrastructure of Addo at the acceptable/agreed standards to support the requirements of the target markets	N/A	Develop and implement the infrastructure management plan (in compliance with the state of infrastructure report)	Infrastructure programme	Action 3.4.3 (i - ii)
Implement the grading plan					
Compile a state of infrastructure report					
Transform the domestic guest profile, through growth, to be representative of South African society	To make Addo attractive to previously disadvantaged communities	N/A	Addo Wild card to promote access for local PDIs	Marketing plan	Action 3.2.3 (ii - iii)
		Identify the products/activities required/preferred by the target markets			
			Appropriate product development		
Enhance SANParks' reputation	Enhance Addo's reputation	N/A	Implement communication plan	Stakeholder Relationship Programme	Action 3.3.1 (i - iv)
			Stage the 100 mile run		
			Stage a 15km road race		
			Stage a mountain bike race		
Ensure best practices in managing and understanding HIV and AIDS (and associated diseases)	Implement best practices in managing and understanding HIV and AIDS and associated diseases	N/A	Implementation of SANParks guidelines	SANParks corporate HIV/AIDS programme	Action 3.4.7 (i)
Advance strategic Human Resource management	To ensure good human resource management	N/A	Personnel surveys to determine satisfaction levels	Staff Capacity Building Programme	Action 3.3.2 (vi) Action 3.4.4 (i)
			Performance Management System in place	Institutional Development and Administration Programme	
Enhance research and development	To have sufficient biodiversity knowledge base to support management activities	N/A	Prioritisation plan monitoring to support biodiversity management (TPC's)	Adaptive & integrated Strategic Programme	Action 3.1.2 (i) Action 3.1.3 (i) Action 3.4.7 (i)
	To enhance social, economic and cultural knowledge base		Identify relevant projects		
	Maintain and build strong relationships with research and academic institutions		Establish contact with institutions		
Improve Income to Cost Ratio	To continuously improve the income to cost ratio of Addo to ensure that Addo meets its conservation mandate and contributes to SANParks' overall conservation mandate	N/A	Manage Cost to Income Ratio	Financial sustainability programme	Action 3.4.6 (i)
Grow revenue	To grow the revenue of Addo	N/A	Market aggressively via the marketing plan	Financial sustainability programme	Action 3.2.2 (ii)
			Manage according to budget		
Effective management of revenue and expenditure	To effectively manage revenue and expenditure of all cost and profit centres managed by Addo	N/A	Transaction analysis	Financial sustainability programme	Action 3.4.6 (i, ii, iii)
			Monthly monitoring and review		
Achieve good corporate governance management	To effectively manage the parks risk profile	N/A	Monthly review of all projects against agreed criteria	Risk management programme	Action 3.4.7 (i)
Attract and retain the best human capital	To attract and retain the human capital, meeting the skills required in all the disciplines of Addo	N/A	Implement financial policies and procedures	Institutional development and staff administration	Action 3.4.4 (i)
			Do legal review		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Develop compliance plan	Institutional development and staff administration	Action 3.3.1 (i)
			Monitor against		
Attract and retain the best human capital	To attract and retain the human capital, meeting the skills required in all the disciplines of Addo	N/A	Identify key positions	Institutional development and staff administration	Action 3.4.4 (i)
			Ensure correct grading		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Get access to remuneration survey	Institutional development and staff administration	Action 3.3.1 (i)
			Compare salaries against the benchmark		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Continue motivation for better salaries	Institutional development and staff administration	Action 3.3.1 (i)
			Compile and implement internship programme		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Advise and invite personnel to Imbizos	Institutional development and staff administration	Action 3.3.1 (i)
			Conformance to SANParks policy and procedure		

High level objectives	Objectives	Sub-objectives (where required)	Initiative	Operational Plan	Project actions
Enhance SANParks' reputation	Enhance Addo's reputation	N/A	Implement communication plan	Stakeholder Relationship Programme	Action 3.3.1 (i - iv)
			Stage the 100 mile run		
			Stage a 15km road race		
			Stage a mountain bike race		
Ensure best practices in managing and understanding HIV and AIDS (and associated diseases)	Implement best practices in managing and understanding HIV and AIDS and associated diseases	N/A	Implementation of SANParks guidelines	SANParks corporate HIV/AIDS programme	Action 3.4.7 (i)
Advance strategic Human Resource management	To ensure good human resource management	N/A	Personnel surveys to determine satisfaction levels	Staff Capacity Building Programme	Action 3.3.2 (vi) Action 3.4.4 (i)
			Performance Management System in place	Institutional Development and Administration Programme	
Enhance research and development	To have sufficient biodiversity knowledge base to support management activities	N/A	Prioritisation plan monitoring to support biodiversity management (TPC's)	Adaptive & integrated Strategic Programme	Action 3.1.2 (i) Action 3.1.3 (i) Action 3.4.7 (i)
	To enhance social, economic and cultural knowledge base		Identify relevant projects		
	Maintain and build strong relationships with research and academic institutions		Establish contact with institutions		
Improve Income to Cost Ratio	To continuously improve the income to cost ratio of Addo to ensure that Addo meets its conservation mandate and contributes to SANParks' overall conservation mandate	N/A	Manage Cost to Income Ratio	Financial sustainability programme	Action 3.4.6 (i)
Grow revenue	To grow the revenue of Addo	N/A	Market aggressively via the marketing plan	Financial sustainability programme	Action 3.2.2 (ii)
			Manage according to budget		
Effective management of revenue and expenditure	To effectively manage revenue and expenditure of all cost and profit centres managed by Addo	N/A	Transaction analysis	Financial sustainability programme	Action 3.4.6 (i, ii, iii)
			Monthly monitoring and review		
Achieve good corporate governance management	To effectively manage the parks risk profile	N/A	Monthly review of all projects against agreed criteria	Risk management programme	Action 3.4.7 (i)
Attract and retain the best human capital	To attract and retain the human capital, meeting the skills required in all the disciplines of Addo	N/A	Implement financial policies and procedures	Institutional development and staff administration	Action 3.4.4 (i)
			Do legal review		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Develop compliance plan	Institutional development and staff administration	Action 3.3.1 (i)
			Monitor against		
Attract and retain the best human capital	To attract and retain the human capital, meeting the skills required in all the disciplines of Addo	N/A	Identify key positions	Institutional development and staff administration	Action 3.4.4 (i)
			Ensure correct grading		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Get access to remuneration survey	Institutional development and staff administration	Action 3.3.1 (i)
			Compare salaries against the benchmark		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Continue motivation for better salaries	Institutional development and staff administration	Action 3.3.1 (i)
			Compile and implement internship programme		
Share and provide access to information and knowledge	To enable access of all staff to senior management	N/A	Advise and invite personnel to Imbizos	Institutional development and staff administration	Action 3.3.1 (i)
			Conformance to SANParks policy and procedure		



GUIDELINES AND PROGRAMMES TO ACHIEVE THE DESIRED STATE

3. GUIDELINES AND PROGRAMMES TO ACHIEVE THE DESIRED STATE

This section deals with all the discrete, but often interlinked, programmes which make up the approaches to issues, and lead to the actions on the ground. Together they are the Park's best attempt to achieve the desired state. Each subsection in this management plan is a summary of the particular programme, invariably supported by detailed background documents or lower-level plans. Park operational programmes are classified into the five activity groupings under the two objectives groupings as reflected in the SANParks biodiversity custodianship framework, as follows:

Objective category	Operational programmes
Biodiversity and Heritage	Biodiversity and Heritage Conservation
Socio-economic	Sustainable Tourism Building Co-operation Effective Park Management Corporate Support

Corporate SANParks policies provide the guiding principles for most of the subsections, and will not be repeated here, except as references and, occasionally, key extracts.

The programmes are linked to the objectives hierarchy (Table 1) via Project Actions listed below each section.

3.1 Biodiversity and Heritage Conservation

3.1.1 Park expansion programme

In order to achieve its national mandate of conserving representative samples of South Africa's different ecological landscapes, the establishment of ecologically sustainable parks remains a priority for SANParks. The expansion of the park falls in line with the national strategic objective (SO 5) in the NBSAP (2005) of expanding the national protected area system towards 12% of the terrestrial and 20% of the coastal environment, and the draft National Protected Areas Expansion Strategy (NPAES) programme (NPAES *in prep.*). In this regard, the development of an expanded AENP, revolves around three prime objectives, namely:

- The conservation of a representative sample of the Eastern Capes ecological patterns (five biomes) and processes (eg upland lowland interfaces, biome interfaces, sand movement, land-sea interfaces, large herbivore etc) in a contiguous functional system.

- Establishment of an economically sustainable park, aimed at consolidating land parcels to enhance economic development of the parks ecological assets.
- Developing a park that is socially sustainable through the development of entrenched social linkages across the region.

Addo remains a complex park with 43 identified vegetation units within the parks planning domain, representative of five (namely Fynbos, Thicket, Nama-Karoo, Forest, Grassland & the azonal Wetlands) (CSIR 2002) of the country's originally identified biomes, and as such offers one of the most biologically and landscape diverse (from moist coasts to forested mountains to arid inland Karoo plains) parks in southern Africa. In addition, it has a large interface with a marine component, that in itself is considered an important centre of endemic fishes, macroalgae, haven for marine birds (African Penguins & Cape Gannets) and mammals (seals & humpback whales), in addition to protecting the country's most significant and least transformed surf zone diatom ecosystem. Furthermore, the park offers one of the country's few permanently open estuaries, and a number of secondary catchments entirely within the parks boundaries.

In order to conserve this range of biodiversity and landscapes, SANParks undertook a systematic conservation planning exercise (CSIR, 2002) using CPLAN software as a means of providing a defensible, strategic conservation planning tool. To meet the conservation targets for the ecological patterns, process and large mammals it was recommended that 84% (ie 476 000ha) of the 686 000 ha large planning domain (inclusive of marine area of 106 000 ha) were required. With the park having grown from 2230 ha in 1930s to the 129 000 ha in 2002, it was realized that achieving this goal would be difficult and result in major conflict with current land users. Furthermore, the outputs of the CSIR (2002) report failed to incorporate important issues associated with adjacency, the need for managerial requirements such as straightening boundaries, and also an adequate prioritization list for property

inclusions.

With land acquisitions having continued, the systematic plans have required constant updating to reflect changes in targets being met and thus conservation priorities. However, given the limitations of the CSIR outputs with regard to irreplaceability and threat values, a new prioritization index was developed. Furthermore, new Conservation Land-use Zoning (CLUZ) and MARXAN conservation software was used to allow adjacency to be adequately reflected, thus producing a manageable reserve shape and design aimed at minimizing boundary length but still in sync with conservation targets (Holness 2005). Outputs from this produced a prioritised list of areas for incorporation into the park (Table 2, Appendix 2: Map 3) which would represent the desired state for the park. The areas identified total 53 029 ha with 54%, 2%, 35%, 6% and 2% in Thicket, Forest, Fynbos, Nama-Karoo and Wetland biomes, respectively. Together with the proposed marine protected area of 106 561 ha, on top of the current (as of 2006) 149 000 ha, the total consolidated area would total 323 576 ha, or 47% of the planning domain. The proposed expansion should also be seen in the context of the park interface zone (Appendix 2: Map 6)

In the 2008-12 management cycle it is planned to acquire a total of 20 123 ha for an estimated total of R60.756m, with a further 10 700 ha included contractually and 106 000 ha via a marine proclamation (Table 3). This would meet about 89% of the desired state for the park.

However, the parks expansion has also been identified to have potentially negative affects upon the farm labourer sector of the agricultural community. The development of farm specific resettlement action plans (RAPs) (Gordon 2003), in conjunction with the employment opportunities of national extended public works programme have been developed as a means of addressing this challenging aspect.



Table 2. Summary of habitats by biome identified as priority inclusion areas in Addo Elephant National Park.

Summary of habitat Types (Areas in hectares)		Section				Grand Total
Biome	Vegetation Type	Addo Elephant National Park	Addo Elephant National Park Kuduzuko	Consolidation Area	Marine Protected Area	
Albany Thicket	Albany Alluvial Vegetation	2271		196		2467
	Albany Coastal Belt	2869		3984		6853
	Albany Dune Strandveld	3241		459	23	3723
	Algoa Dune Strandveld	41		631	13	685
	Coega Bontveld	2505		894		3399
	Groot Thicket	10047	84	3854		13975
	Kowie Thicket	5396	213	213		5822
	Sundays Noorsveld	22642	1824	6004		30470
	Sundays Thicket	44943	3636	12551		61130
Albany Thicket Total		93755	5737	28796	36	128324
Forest	Southern Coastal Forest	8236		796		9032
	Southern Mistbelt Forest	843		139		982
Forest Total		9079		935		10014
Fynbos	Cape Seashore Vegetation	8242		1745		10087
	Suurberg Quartzite Fynbos	13179	363	9017		22559
	Suurberg Shale Fynbos	19767	93	8242		28102
Fynbos Total		42188	456	19004		61648
Marine	Marine				106523	106523
Marine Total					106523	106523
Nama-karoo	Albany Broken Veld	1709	8725	3036		13470
Nama-karoo Total		1709	8725	3036		13470
Wetlands	Cape Coastal Lagoons	3		39	1	43
	Cape Estuarine Salt Marshes	5		71	1	77
	Southern Karoo Riviere	2328		1148		3476
Wetlands Total		2336		1258	2	3596
Grand Total		149067	14918	53029	106561	323575

Table 3 – Planned land inclusions for Addo Elephant National Park for the 2008-12 management cycle

Area	Inclusion (acquisition/contract)	Size (ha)	Estimated price [R] million
Woody Cape	Contract	700	
Colchester	Acquisition	3 125	R22.8m
Addo main	Acquisition	6 000	R18.0m
Nyati	Acquisition	1 340	
	Contract	10 000	R2.7m
Kaboega	Acquisition	1 378	R2.8m
Darlington	Acquisition	8 280	R14.5
Marine	Proclamation	100 000	
Sub-total	Acquisition	20 123	R60.8m
	Contract	10 700	
	Proclamation	100 000	
Total		130 823	R60.8m

Action project 3.1.1 (i): Include land as per Table 3.
Action project 3.1.1 (ii): Ensure park acquisitions are in line with legal and social requirements.

3.1.2 Sustainable/natural Resource Use Programme

SANParks is committed to develop a policy investigating avenues for communities to benefit through participation in national park development, while still maintaining effective conservation of resources. The objective of such a policy is to control and limit exploitation of natural resources and to maintain viable populations within their natural fluxes. The use of natural resources in the Park would follow recommendations from the SANParks policy. The programme will comply with national environmental legislation and incorporate risk assessment. When insufficient information exists, the precautionary principle would generally apply. Limited resources are currently being harvested from the park. These include recreational fishing of exotic fish in Darlington Dam and along the Sundays River (controlled by permits), removal of wildlife as part of ecological requirements (see herbivore management). To inform management of potential risks for use of these resources, research should inform on the use of these resources.

Action project 3.1.2 (i): Develop TPCs for identified natural resources actually or potentially extracted, and a monitoring programme. See Project 3.1.3 (i).

3.1.3 Herbivore Management Programme (including elephant management):

In accordance with SANParks' corporate herbivore management policy, the management of herbivores in the park will undergo a shift in emphasis from the use of stocking rates to determine when management actions should be taken, to the use of monitoring of impacts on biodiversity to determine when management actions should be taken. This is to ensure that the influence of herbivory on the biodiversity of the park is measured directly, and that the management action taken is based on when the extent of herbivore impacts on the park's biodiversity begins to alter the desired state for the AENP unacceptably, or irreversibly. Similarly, herbivore reintroduction must take cognisance of the other biodiversity objectives of the AENP. By means of the objectives hierarchy for herbivory and reintroduction, these goals are cross-linked with one another, and with other relevant management objectives, such as fire and the species of special concern programme in the park. In line with accepted reintroduction principles (Novellie *et al.* 1994) historical information, large mammal reintroduction plans were formulated and refined to cater for the need of re-establishing this important ecological process into the expanding park (Knight & Castley 1999, Castley 2004).

The principle large mammal objective is to minimize the loss of ecosystem resilience across the range of landscapes and habitats within the AENP. With monitoring, this would improve our understanding of the role of herbivory as a modifier of ecological hetero-



geneity and biodiversity in the AENP ecosystem. This management plan will promote natural fluctuations in wildlife numbers while simultaneously conserving plant species diversity, a heterogeneous habitat structure, and ecosystem functioning.

Herbivore stocking rates have largely been determined in relation to agricultural stocking rates for each game area in the past (Addo main camp, Nyati, Darlington Karoo and floodplains, Kuzuko Contractual Area), and range from 2.2 ha/LSU (floodplains) to 22 ha/LSU (Nama-Karoo). In some areas wildlife populations have been left to fluctuate within natural limits (e. g. Zuurberg, Kabouga). The park is also striving towards establishing viable populations (>200 breeding individuals) of large herbivores, and for those that can not be accommodated (such as oribi, black rhino, larger carnivores), a metapopulation management strategy is advocated (Whitehouse 2002). The application of recommended agricultural stocking rates has provided a rough guideline and since the elephants are seldom actively managed, it has generally led to exceeding these recommendations in specific areas (such as the Addo main camp). Many of these observed changes have taken years to manifest within the ecosystem and the management challenge will be to determine whether these degradation trends are continuing. The ideal elephant density within the park (particularly the main camp) is hotly debated and the previous recommendations of 2.0 elephants/km² (Hall-Martin & Barrat. 1991; Knight *et al.* 2002) has been contested by Boshoff *et al.* (2002) who suggest that for many of the mesic Thicket habitats in the park elephant densities should be an order of magnitude lower (i.e. 0.2 elephant/km²). The density is even lower in the xeric habitats (ranging from 0.02 – 0.16 elephant/km²) while it is highest in the thicket mosaic habitats (0.54 elephant/km²).

It is immediately evident that the current elephant population density of 2.8 elephants/km² in the main elephant section could significantly alter the functioning of this ecosystem. Developing and opening new sections of the park (such as the 14 000 ha Nyati concession area and 11 000 ha Colchester sections) remains a short-term strategy in attempting to manage these high elephant densities. Further expansion areas are limited (including the Kabouga section) and alternative management strategies need to be investigated now. These include contraception, translocation to other reserves, shifting acceptable levels of change to vegetation communities and ultimately culling, although the latter option is not preferred (Knight *et al.* 2002).

SANParks intends to develop thresholds of potential concern (TPCs) for various herbivores, using identified indicator species, thereby placing less reliance on the historical LSU approach. Such mammal TPCs may include growth rates. Maintenance of a range of herbivore body sizes, variable allocation of forage resources among the four primary foraging guilds, assessments of vegetation cover etc. The introduction of carnivores has also called for a reassessment of herbivore population dynamics that may influence future stocking rates. Further research and modelling is also required to determine the acceptable levels of predation mortality.

Action project 3.1.3 (i): Develop TPCs for monitoring impacts of herbivores and carnivores and a monitoring programme to track the identified indicators.

Action project 3.1.3 (ii): Update current wildlife reintroduction plan and implement recommendations.

Action project 3.1.3 (iii): Explore alternative options of managing elephants

Action project 3.1.3 (iv): Continue with the annual wildlife monitoring programme.

3.1.4 Carnivore Species Management

The objective is to manage the impact of the large carnivores (lions and spotted hyenas) on the confined herbivore guild, as a means of not losing biodiversity as a consequence. This programme was undertaken to reinstate this important missing ecological process in the park.

Six lions and eight spotted hyenas were introduced into the 11 500 ha Main Section in 2003. In addition, two cheetah and two lions have been introduced to Kuzuko contractual section in 2007. A research monitoring project has been tracking their impact. Although the bulk of the diet of both lions and hyenas in the Main Section is composed of high density species such as kudu, warthog, duiker etc, there is a growing concern about their impact on the important buffalo population. Given that this species in particular may not be able to sustain itself, a metapopulation management approach is being advocated. It is thus planned to have no more than two small prides of lions (total about 10 lions) and at least one pack of hyenas (total of about 10 hyenas) in the Main Section. Sub adults will be removed on a regular basis as will the breeding males who will be replaced once per generation (five years). Further cheetah (and wild dogs) are planned to be reintroduced into the Darlington Dam section once fences are complete and viable populations of herbivores exist. In addition, plans are afoot to introduce lions into the Nyati Section once fencing issues are clarified.

Action project 3.1.4 (i): Develop TPCs for monitoring impacts of herbivores and carnivores and a monitoring programme to track the indicators.

Action project 3.1.4 (ii): Update current wildlife reintroduction plan and implement recommendations.

3.1.5 Damage-causing Animal Programme

To date few occurrences of animals causing damage have occurred in the park, primarily because of the maintenance of the perimeter fence. Designated park staff (Senior Section Ranger & designate) need to be trained in

the use of capture drugs and use of heavy calibre rifles, with the required equipment (capture drugs and rifles, recovery truck, crates) serviceable and ready. All reported break-outs need to be reported and reacted on immediately. The basic principle of using the most humane treatment (drug capture) over euthanasia (via drugs or high calibre rifles) is maintained.

Although jackal, caracal, baboon, warthog and porcupine are frequently blamed for damage to neighbouring farmlands, fences and livestock, the risk is considered to be very limited, the maintenance of the perimeter fence reduce this risk. Suitable game proof fencing should be erected within a 15 year period around the entire park, which will increase AENP's management of predators. Negotiations with landowners include the encouragement to keep natural prey species on their properties so as to discourage predators from taking livestock.

Action project 3.1.5 (i): Update current damage causing animal plan, identifying species, actions, responsibilities and authority.

Action project 3.1.5 (ii): Establish a database recording all incidents involving all damage causing animals.

Action project 3.1.5 (iii): Provide training to identified staff in handling/containing damage causing animals

3.1.6 Species of Special Concern

The aim is to prevent the extinction of threatened species from the park through proactive internal management programmes, in conjunction with other conservation initiatives to secure and strengthen the future of such species over their historic distribution ranges. This requires inventorising our biodiversity heritage, assessing their distribution and the threats facing them. Addo currently supports the largest population of the critically endangered south-western ecotype of black rhinoceros *Diceros bicornis bicornis* in South Africa (N=57), and has the potential to support second largest and population in South Africa. This plan is in compliance with SANParks strategic plan for rhinos (SANParks 2002), its biodiversity values and international programmes. Opening of new sections such as in Darlington and Colchester will allow the population to continue to grow at a rate averaging approximately 6% per annum. The park has the potential to support 300 animals although the population is currently managed as a metapopulation with other sub-population in other national parks (Castley 2004b).

The park also supports small populations of the vulnerable Cape Mountain zebra, *Equus zebra zebra*, within the Zuurberg and Darlington Dam management units. The performance of this species on the sour grasslands of the Zuurberg has been poor and it may be necessary to supplement this population with additional animals in the future or to consolidate future land to the north of the



range to allow the herd to migrate down into more suitable habitat in the karroid vegetation communities. The performance of the Darlington Dam and Kuzuko populations can not yet be assessed as this was only recently established and the population is currently widely dispersed across the area. Further supplementation of this population is also warranted to enhance the survival and growth in this area. A small founder population of the oribi, *Ourebia ourebi*, was recently reintroduced into the coastal grasslands in the Langevlakte Contractual area.

Other Red Data species such as the larger raptors (Martial, & Crowned eagles) will benefit from the increased habitat conservation, as will the regions important herpetofauna with its 13 endemic species, five species of land tortoises, 14 of the expected 15 species of frogs are listed as Red Data Book species. The later will gain from increased wetland protection. Furthermore, the Thicket vegetation, in particular, has a whole suite of endemic succulents and geophytes which appear to survive in areas free of or with light grazing pressure. While, the forests have a range of species under threat from past exploitation. In addition the Zuurberg Mountains are home to seven (25%) of the country's 28 cycad (*Encephalartos* sp.) species. Current research programmes have focused on the rhinos, rare susceptible plants species and potential indicator bird species.

Resident marine birds listed as vulnerable (Du Toit *et al.* 2003) are the African Penguin, Cape Gannet, Roseatte and Damara Terns and the White-breasted Cormorant. Threatened marine fauna include the Great White Shark (*Carcharodon carcharias*), with threatened species include the Humpback Whale (*Megaptera novaeangliae*) and the Southern Right Whale (*Eubalena glasilis*)

Action project 3.1.6 (i): Continue with the dedicated black rhino monitoring programme.
Action project 3.1.6 (ii): Develop monitoring programme for key threatened/rare species, as per priority framework.
Action project 3.1.6 (iii): Re-establish a biodiversity inventorisation programme.

3.1.7 Water Programme

The objectives of this programme are multifactorial, attempting to re-establish natural, unimpaired water regimes in the unregulated rivers, more natural flow regimes in regulated system (Sundays River), reduced exploitation of subterranean water supplies and minimal provision of artificial water for wildlife.

Section 3 of the National Water Act (Act 36 of 1998) clearly identifies the National Government as the public trustee of the nation's water resources, which act

through the Minister of Water Affairs and Forestry and has the power to regulate the use, flow and control of all water in South Africa. SANParks thus does not directly, and in most cases also indirectly, manage hydraulic processes and resource use in rivers. The Act also states that the Department of Water Affairs and Forestry must devolve most of the catchment management issues to Catchment Management Agencies (CMA's) that include representatives of local interest groups and relevant government agencies. The CMA's will provide opportunity for cooperative catchment management.

The most productive future role for SANParks in the management of rivers in parks would be the active participation in structures and processes for cooperative catchment management involving all stakeholders. Via such mechanisms the case could be made for resource utilization that is not only equitable and efficient, but also results in the protection of a healthy aquatic environment for present and future generations. Prominent activities would most likely include lobbying for and active participation in determination of ecological reserves; facilitating assessment of ecosystem and river health; and provision of information and insight obtained through research and monitoring to facilitate informed decision making and the successful implementation of catchment-scale adaptive management systems. National legislation remains the important underlying with directive to managing the parks water supplies.

Addo's shape and configuration has inherited a difficult management arrangement with regards the management and provision of water. The fact that the Sundays River remains a fully regulated system, in a disturbed landscape precludes its natural functioning. Some of its tributaries such as the Wit, Uie and Kabouga are differently impacted, with the Kabouga the least impounded except for its upper reaches, while the Wit and Krom rivers have an intact catchment but impounded river. The Wit, Uie and Krom rivers will be monitored on a regular basis. With the parks game areas largely far from the rivers has lead to reliance upon subterranean water supplies. However general policy remains that of reduced provisioning of water for wildlife to reduce expansive pliospheres and ecological impact. Furthermore, the subterranean water seepage from the Alexandria dune fields into the marine environment remains the cornerstone of the important marine diatom ecosystem. Extraction from this water for further municipal use could damage this sensitive ecosystem and as such should be resisted at all costs. In addition, possible expansions of the Sundays River irrigation scheme in the lower sections of the river may see actual and visual impacts upon the Khoranvlakte section of main camp section.

Expansion of the new areas in Colchester will see limited

water provisioning to reduce potential impacts with waterholes likely to be placed in currently transformed land. Furthermore, every effort to improve wetland (pans, seeps, rivers) conservation in the Sundays catchment areas in the park will be a focus. In addition, a research programme focused on the Sundays River estuary will remain an important output to enhance its ecological functioning and linkage with the marine environment. As the Sundays River estuary is constantly open to the sea, no opening plan is required.

Action project 3.1.7 (i): Ensure active participation in catchment management agencies.
Action project 3.1.7 (ii): Determine ecological reserve for Sundays River.
Action project 3.1.7 (iii): Establish a river health monitoring programme across the diversity of rivers in the park.
Action project 3.1.7 (iv): Establish a monitoring monitoring programme of subterranean water supplies, particularly the Alexander dunefield aquifer.
Action project 3.1.7 (v): Monitor impacts of artificial water supplies.

3.1.8 Fire Programme

The objective is to allow fire to function as naturally as possible in those systems adapted to it. A greater percentage of the AENP is composed of Thicket Biome vegetation. Its unique succulent growth form mix with an absence of a conspicuous grassy layer makes it largely resistant to fire. The only areas in the park that are fire prone are the plateaus of Zuurberg mountains, the coastal grasslands and degraded patches within the park which have been altered to "grasslands". Only fynbos on Zuurberg mountains frequently experiences fire.

The fire management system that is being proposed satisfies ecosystem and tourism objectives. The objective is to maintain ecological heterogeneity (or mosaics) over space and time. The Zuurberg area is popular in terms of hiking and horse riding. The beauty of this scenery will therefore be maintained by allowing natural processes in the fynbos. Man-made fires will be put out. Currently, fires in this area are largely lightning-driven, occurring once every two years. As such, no man made fire will be set to supplement the natural process. As the Zuurberg section remains an isolated island within the park, fires are allowed to burn (under control) so as to mimic the natural dynamics. Interventions are made when fires threaten other systems (or infrastructure) or have burnt more than the desired area of the Zuurberg plateau. In this regard, the desired burns entail not less than every two years for the grassy northern slopes and not less than every 12 years for the moister sandy Fynbos patches.



According to the National Veld & Forest Fire Act, SANParks is obliged to be a member of the local Fire Protection Associations (FPAs) to gain full legal benefit thereof and stakeholder support.

Action project 3.1.8 (i): Implement a largely natural fire regime with every two years for grassy Fynbos and every 12 years for moister sandy Fynbos patches.

Action project 3.1.8 (ii): Establish a fire monitoring programme recording timings, extent and impacts.

Action project 3.1.8 (iii): Join the local FPA.

3.1.9 Rehabilitation Control Programme (including erosion and alien control)

Rehabilitation: The aim of this programme is a mixture of ecological and aesthetic, namely to reverse man-made negative impacts to the environment, to reduce natural negative transformation of landscapes, and to improve the aesthetic value of the park.

The parks expansion programme into the agricultural areas has seen the inclusion of large tracts of transformed (ranging from lightly grazed to heavily cultivated citrus lands) landscapes and unwanted structures. The natural ecological processes (e.g. nutrient recycling, herbivore impacts) have been lost or degraded and need be restored to encourage the return of natural vegetation patterns and processes over a linked inter-reacting landscape. To a large degree the agricultural transformation into pastures and citrus groves (up to 69 % of specific vegetation types) is restricted mainly to the Thicket and Grassland vegetation types, while the more arid Karoo sections have been exposed to different intensities (up to 100% of specific vegetation types) of grazing pressure. Many of these degraded areas have seen the invasion of alien plants such as *Acacia cyclops*, *A. mearnsii* in the coastal and mountain sections, *Opuntia* spp in the Thicket and Karoo vegetation types, and *Tamarix* spp along the Sundays River system, particularly in the Darlington Dam area. In addition areas like Darlington have been exposed to extensive sheet and donga type erosion.

To address these issues, the park has started in accordance with the operational plan for rehabilitation to:

- remove unwanted structures (fences farm houses, dipping tanks, dams etc), but in compliance with heritage-related legislations and SANParks policies.
- re-vegetate degraded areas through seeding programmes.
- landscape unsightly burrow pits and former fence lines.
- implement an extensive alien plant eradication scheme as part of the Work for Water programme. Currently a total of R 2 681 475 m is being spent in the park in the Woody Cape and Zuurberg sections, with an additional R 5 m being spent on the Coast Care programme over the next two years.
- construct gabions to control donga erosion, primarily in the Darlington area.

If rehabilitation does not receive attention, the park runs the risk of having compromising its environmental integrity. Areas in which significant research can be implemented are vegetation regeneration in degraded landscapes. In this regard experiments have been started looking into the potential role played by large herbivores as agents facilitating rehabilitation processes.

Action project 3.1.9 (i): Map all areas requiring rehabilitation and prioritise those requiring urgent attention.

Action project 3.1.9 (ii): Develop a rehabilitation programme and monitoring system.

Invasive alien control: The following plant species have been identified, namely: *Acacia mearnsii* - Black Wattle; *Acacia longifolia* - Long leaf wattle; *Acacia melanoxylon* - Black wood; *Acacia Cyclops* - Rooikrans; *Eucalyptus* spp.; *Opuntia aurantiaca* - Jointed cactus; *Opuntia ficus-indica* - Sweet prickly pear; *Opuntia falgida* - Rosea cactus; *Lantana camara* - Lantana; *Solanum mauritianum* - Bug weed.

Areas infested within the park boundaries as well as on adjacent private land have been carried out and is on record on 1:50 000 topographical maps. These include details relating to the area, size of infestation and quantitative data in terms of densities etc (housed at the park's ISCU). Areas affected include:

- a. A large percentage of the alien invasive infestations that are present occur within the boundaries of the proclaimed national park. The *Acacia* spp. are mainly limited to the major catchments within the northern sections of the park, particularly within the Zuurberg catchments area, although there are scattered infestations throughout.
- b. Although *Opuntia* spp. occur mainly in the more arid areas of the park such as the northern Nama-Karoo, central Subtropical Thicket areas, infestations may also be found throughout the park.

- c. *Lantana* is becoming more and more present in the upper Zuurberg catchment areas which falls in the Fynbos and Grassy Fynbos biomes.
- d. Rooikrans (*A. cyclops*) is at this point mainly limited to the coastal areas of the park with the densest infestations occurring along the migratory sand dune region and falls within the coastal dune Fynbos vegetation type.
- e. *Eucalyptus* spp. can be found throughout the park, however mainly along water courses, usually at low densities.
- f. *Solanum* is restricted to the catchments of the Zuurberg mountain range with slight infestation along the south western region of the park.

Records of the status on the efficacy of previous control and eradication measures by area are also noted. The ISCU unit has a very detailed management system that captures the entire management unit clearing areas from the initial time they were worked, until present. This data is presented in a document called a (Nbal analysis history of areas worked) that has the following information captured within it: Management area number, area, type of infestation, density, rotational period, person day allocation per hectare and finally the reduction in rotational time and funds put into the management area, hence efficiency of the clearing operation. Photography, reduction of person days and historical figures are also used to set benchmarks and to evaluate the clearing activities.

The programme includes the three major components, namely: monitoring, control, and eradication of invasive species. Mechanical, chemical and biological or combinations of them are used in the control and eradication programmes and vary depending upon the species in questions and scale of infestation. Indicators of success are drawn from the Nbal analysis history of areas.

Approximately 25% of all the infestations of the park and future land to be incorporated have been mapped. Completing the remainder is dependent upon the continuation of the grant support and donor funds. At current clearing rates, its expected to either eradicate or control invasive plant aliens by the year 2015.

Invasive animal control remains a relatively minor problem in the park. Species such as domestic cats, and feral dogs are infrequently found in the park. The latter could become a potential problem with the planned introduction of wild dogs to the Darlington Dam - Kuzuko areas and will require close monitoring of fences.

Action project 3.1.9 (iii): Continue with invasive alien plant programme.



3.1.10 Cultural Heritage Resource Programme

The park, in keeping with SANParks' corporate Cultural Resources Management Policy (CRM) and the desire to comply with South African cultural heritage legislation, namely the National Heritage Resources Act (1999), has selected to produce a Strategic Framework for the Conservation of Cultural Resources within the park and its planning domain (Webley 2002). Further, as a precautionary principle, rather than a necessity, an initial desktop cultural resources inventory has been compiled. The purpose of such a framework is to guide the parks' management (Conservation and People and Conservation) interventions with the identified heritage resources.

Whilst parts of the area in the park are known to contain important rock art, fossils and artefacts none of these resources are threatened by the current park nor by the associated expansion programme. Compliance with the World Bank (a major funder of the expansion project) safeguard policy for Cultural Resources, OPN 11.03 and OP 4.11 has been confirmed.

Through a desktop cultural mapping exercise it has become clear that the planning domain encompasses an area with significant heritage resources. In 1996, a small dinosaur called *Nqwebasaurus thwazi* (Kirky) was discovered near Kirkwood, while the very first dinosaur to be identified in South Africa was discovered on the Bushman's River (on the edge of the Park) in 1845. Archaeologically, the area includes extensive evidence for Khoisan settlement in the past. This is reflected in the shell middens on the Alexandria coast, the rock art of the Zuurberg and the stone cairns found along the Sundays River. In the south eastern portion of the planning domain, the Alexandria Dune Field Area is considered by the South African authorities to have World Heritage Status. Motivations in this regard have been made to UNESCO. It is anticipated some heritage sites found in the planning domain will be of national importance while others have regional and local significance. SAHRA (South African Heritage Resources Agency) and/or the local Provincial Heritage Authority will be involved in the determination of significance in consultation with experts. The desktop study was complimented by some field studies, more especially around considering oral history around the intangible resources in the area and provided information on the cultural significance of plants, animals and birds as well as useful information on a number of sites which are used for ritual purposes.

The next phase (2006 – 2008) includes the mapping of all additional land incorporated as well as the development of a Cultural Heritage Management Plan with associated capacity building projects to enhance staff's capacity to manage these assets. The conservation of these sites; their related oral history and the capturing and marketing of these resources are part and parcel of the conservation mission of the park.

Action project 3.1.10 (i): Map cultural heritage sites on newly incorporated lands.

Action project 3.1.10 (ii): Implement the Cultural Heritage Management Plan.

Action project 3.1.10 (iii): Pursue the World Heritage Status of the Alexandria dunefield.

3.1.11 Marine Programme

Marine Protected Areas (MPAs) and its living marine resources are governed by the Marine Living Resources Act (MLRA) of 1998. This Act requires sustainable resource use as well as the protection of functioning biological ecosystems. SANParks Marine and Coastal Policy are striving to reflect these values as well as those of the PAA, which governs National Parks. The current management mandate of SANParks is limited to the island groups of Bird and St Croix. The surrounding waters of the islands is a Marine Protected Area governed through Marine and Coastal Management (MCM). This marine area contributes towards the 9% of the South African coast which is considered no take or completely protected areas. It offers protection to large bird and seal colonies, as well as high value abalone stocks. Through an unofficial mandate from MCM, the waters around the Bird island group is patrolled by Conservation Staff, the main mandate being to offer protection to the bird and seal colonies. The Woody Cape coast is managed up to the high water mark, with the park officials also handling fishing permits.

The proclamation of a much larger area, consisting of almost half of Algoa Bay is indicated by the park expansion footprint (Appendix 2: Map 3). Conservation is also important for the continued sustainable use of marine resources by humans, especially in a country where fisheries is an important sector in the economy. MPAs play an important role in the protection and rebuilding of exploited fish species, protecting breeding habitats of birds, feeding grounds for mammals, as well as protecting the integrity of whole ecosystems

(Pomroy et al. 2004). The expansion of the AENP MPA is in line with the conservation and biodiversity objectives of government, as stated by the NBSAP (2005), and will contribute to the increase in the national protected areas network. SANParks is striving towards achieving an integrated terrestrial and marine area, governed by a single management authority.

Action project 3.1.11 (i): Establish the marine protected area (MPA) linking the islands to the coast.

Action project 3.1.11 (ii): Implement baseline monitoring programmes of key indicator species.

Action project 3.1.11 (iii): Implement resource protection operations.

Action project 3.1.11 (iv): Develop a specific MPA management plan.

3.1.12 Island Management Programme

The Islands of the Cross (St Croix) and Bird Islands are considered distinct functional ecosystems (Williams et al. 2000), even though they have been disturbed and altered by human activities, such as egg and guano collection (Urquhart & Klages 1996). The islands were formally protected as nature reserves during the 1980s and incorporated into the AENP in 2002. These islands are classified as Important Bird Areas for two reasons, firstly the vast number of threatened and endangered bird species roosting and breeding on the islands and secondly because these islands are the only ones along the south east coast between approximately Hermanus in the Western Cape and Inhaca island off Mozambique (Barnes 1998). The seabird species assemblage is diverse and fluctuates according to season, with more species occurring during winter. Five keystone species occur on the islands, the African Penguin, Cape Gannet, Roseate Tern, Antarctic Tern and Kelp Gull. The African penguin population breeding on St Croix and Bird Islands comprises almost half of the world population, while the gannet population on Bird Island consists of



40% of the global population. Black Rocks, part of the Bird island group, is the eastern most breeding site of approximately 4000 Cape Fur Seals (Newman & Nell 2001).

Management actions on the islands include law enforcement with two rangers on duty at all times. Drainage to prevent penguin and gannet nests from flooding is performed on a weekly basis. All sick and injured birds are removed from the island to relevant rehabilitation stations. Nest sites mortalities and predation by gulls on endangered species such as Roseate Tern are recorded. A fully compliant oil spill plan has been developed and will be incorporated into an island management plan to be developed during the next year. Rainfall, temperatures as well as sea temperatures are recorded on a daily basis. All equipment is maintained to high standard. Daily patrols to monitor all Jetsam deposited on the island for dangerous hazardous substances are conducted. The several old buildings and existing pathways are maintained by park staff with the lighthouse being managed by the National Port Authority. All incoming goods are inspected for possible alien infestation. An active programme of alien removal (faunal and floral) is in place. Managing the heritage on and off the island is regarded as high priority and sites such as graves; historical buildings and the Dodington anchor are actively managed and maintained. The park is currently in the process of upgrading the jetty and a vessel has been procured which should improve management of this area considerably.

Action project 3.1.12 (i): Continue with Penguin & Cape Gannet nest site maintenance programme.

Action project 3.1.12 (ii): Develop a disaster management plan for the islands and coastline.

Action project 3.1.11 (iv): Develop an island focused precinct management pl

3.2 Sustainable tourism

3.2.1 Conservation Development Framework (CDF)

The primary objective of a Conservation Development Framework (CDF) is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives. A key part of the CDF is the zoning plan, which plays an important role in minimizing conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas (Appendix 2: Map 4 a-c, 5).

The zoning of Addo Elephant National Park was based on an analysis and mapping of the sensitivity and value of a park's biophysical, heritage and scenic resources; an assessment of the regional context; and an assessment of the park's current and planned infrastructure and tourist routes/products; all interpreted in the context of park objectives.

Overview of the use zones of Addo Elephant National Park

The summary of the use zoning plan for Addo Elephant National Park is shown in (Appendix 2: Map 4). Full details of the use zones (including high resolution maps), the activities and facilities allowed in each zone, the conservation objectives of each zone, the zoning process, the Park Interface Zones (detailing park interaction with adjacent areas) and the underlying landscape analyses are included in Appendix 1: Addo Elephant National Park Zoning Plan (Appendix 2: Map 3).

Remote Zone: This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped and roadless. There are no permanent improvements or any form of human habitation. It provides outstanding opportunities for solitude, with awe inspiring natural characteristics with sight and sound of human habitation and activities barely discernable and at far distance. The conservation objectives for this zone require that deviation from a natural/pristine state should be minimized, and existing impacts should be reduced. The aesthetic/recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) will not be tolerated. In Addo Elephant NP, Remote areas were designated in the mountainous areas of the Zuurberg and in sections of the Woody Cape dunefields, which are both landscapes

with high environmental sensitivity and value.

Primitive Zone: The prime characteristic of the zone is the experience of wilderness qualities with access controlled in terms of numbers, frequency and size of groups. The zone shares the wilderness qualities of the Remote zone, but with limited access roads (mostly 4x4) and hiking trails, and the potential for basic small-scale self-catering accommodation facilities such as a small bushcamp. Views of human activities and development outside of the park may be visible from this zone. The conservation objectives for this zone require that deviation from a natural/pristine state should be small and limited to restricted impact footprints, and that existing impacts should be reduced. The aesthetic/recreational objectives for the zone specify that activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) should be restricted and impacts limited to the site of the facility. Ideally visitors should only be aware of the facility or infrastructure that they are using, and this infrastructure/facility should be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts. In Addo Elephant NP, Primitive areas were designated to buffer Remote areas and to protect most of the remaining sensitive areas from high levels of tourist activity. Primitive areas were also designated in areas with relatively low environmental sensitivity to allow access into Remote mountainous areas. Most contractual park sections were designated Primitive, as the controlled access associated with Primitive is compatible with the activities undertaken by the concessionaires. Controlled access trail areas (such as the Alexandria hiking trail) fall within this zone. In areas where Remote zones border on the park boundary, a 100m wide Primitive zone was designated to allow park management access to fences.

Quiet Zone: This zone is characterized by unaccompanied non-motorized access. Visitors are allowed unaccompanied access, mainly on foot, for a wide range of experiences. Larger numbers of visitors are allowed than in the Primitive zone and contact between visitors is frequent. The conservation objectives for this zone specify some deviation from a natural/pristine state is allowed, but care should be taken to restrict the development footprint. The aesthetic/recreational objectives for the zone specify that activities which impact on the relatively natural appearance and character of the area should be restricted, though the presence of larger numbers of visitors and the facilities they require, may impact on the feeling of "wildness" found in this zone. In Addo Elephant NP, Quiet areas were designated in the Kwaihoek section. This zone has limited application in the park due to the widespread presence of dangerous animals which preclude unaccompanied pedestrian access in many areas.



Low Intensity Leisure Zone: The Low Intensity Leisure Zone is characterized by relatively high levels of tourist activity, motorized self-drive access to certain areas, and the potential for small basic camps without facilities such as shops and restaurants. Facilities along roads are limited to basic self catering picnic sites with toilet facilities. Low intensity leisure does not imply motorized access to beaches. The conservation objectives for this zone specify that although deviation from a natural/pristine state should be minimized and limited to restricted impact footprints as far as possible, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable. The aesthetic/recreational objectives for the zone specify that although activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc) is inevitable, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience. Low intensity leisure areas were designated in the current and future game viewing areas (the current main section, Kabouga, Nyathi, and around Darlington Dam), in relatively high use recreational areas such as Alexandria forest around the administrative area, and the beaches east of the Sunday's River and also west of Cannon Rocks. Low intensity leisure areas were only designated if relatively high tourist activity did not conflict with the underlying landscape sensitivity and value analysis.

High Intensity Leisure Zone: The main characteristic is that of a high density tourist development node with amenities such as shops, restaurants and interpretive centres. This is the zone where more concentrated human activities are allowed, and is accessible by motorized transport on high volume transport routes. The conservation objectives for this zone specify that the greatest level of deviation from deviation from a natural/pristine state is allowed in this zone, and, it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable. However, care must be taken to ensure that the zone still retains a level of ecological integrity consistent with a protected area. The aesthetic/recreational objectives for the zone specify although the high visitor numbers, activities and facilities will impact on the wild appearance and reduction of the wilderness characteristics of the area (solitude, remoteness, wildness etc) is inevitable, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience. In Addo Elephant NP, High intensity leisure areas were restricted to the current rest camp, Matyholweni Camp and the banks of the Sundays River estuary.

Overview of the Special Management Overlays of Addo Elephant National Park:

Special management overlays which designate specific areas of the park that

require special management interventions have not yet been identified in Addo Elephant National Park.

Overview of the Park Interface Zone of Addo Elephant National Park

The Park Interface Zones shows the areas within which landuse changes could affect a national Park. The zones, in combination with guidelines, serve as a basis for a.) identifying the focus areas in which park management and scientists should respond to EIA's, b.) helping to identify the sort of impacts that would be important at a particular site, and most importantly c.) serving as the basis for integrating long term protection of a national park into the spatial development plans of municipalities (SDF/IDP) and other local authorities. In terms of EIA response, the zones serve largely to raise red-flags and do not remove the need for carefully considering the exact impact of a proposed development. In particular, they do not address activities with broad regional aesthetic or biodiversity impacts.

Addo Elephant National Park has three Park Interface Zone categories. The first two are mutually exclusive, but the final visual/aesthetic category can overlay the others (Appendix 2: Map 6).

Priority Natural Areas: These are key areas for both pattern and process that are required for the long term persistence of biodiversity in and around the park. The zone also includes areas identified for future park expansion. Inappropriate development and negative land-use changes should be opposed in this area. Developments and activities should be restricted to sites that are already transformed. Only developments that contribute to ensuring conservation friendly land-use should be viewed favorably.

Catchment Protection Areas: These are areas important for maintaining key hydrological processes within the park. Inappropriate development (dam construction, loss of riparian vegetation etc.) should be opposed. Control of alien vegetation & soil erosion as well as appropriate land care should be promoted.

Viewshed Protection Areas: These are areas where development is likely to impact on the aesthetic quality of the visitor's experience in a park. Within these areas any development proposals should be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone would be perfectly suited for development. In addition, major projects with large scale regional impacts may have to be considered even if they are outside the Viewshed Protection Zone.

Current status and future improvements

Certain elements of the Addo Elephant National Park CDF have not yet been finalized. Remote areas will still be investigated for possible formal declaration as Wilderness Areas in terms of Section 22 of the PAA. Special management overlays which designate specific areas of a park that require special management interventions (e.g. areas requiring rehabilitation) will also be identified.

Action project 3.2.1 (i): Test operational activity compliance with CDF via State of Biodiversity (SOB) reporting.

3.2.2 Tourism Programme

The park's close proximity to Port Elizabeth and at the eastern end of the Garden Route makes it a key tourism destination in the Eastern Cape. Tourism routes and infrastructure in the areas surrounding the park are well establish and well-known Internationally renowned game reserves eg Shamwari, Lalibela and Amakhala Game Reserves are situated close to the park. Due to the size of the park, it falls within 3 tourism routes. These tourism routes incorporate well-established markets in eco-tourism, adventure tourism, restaurants and accommodation facilities, namely B&B's, hotels and numerous luxury game lodges. The hunting industry in this area is also well-established and is also a popular hunting destination for foreign visitors. Municipal and provincial authorities bordering the park are those of the Nelson Mandela Metropolitan, Cacadu District Municipality, which consist of the Sundays River-, Blue Crane Route-, Ndlambe- and Ikwezi municipalities. A socio-economic study in 2005 concluded that the park has a significant impact on the region and that its contribution is second largest after agriculture (Saaiman and Saaiman, 2005).

Including representation of five biomes and a rich cultural heritage, from the Darlington Dam across the Zuurberg mountains through the beautiful valleys of the Sundays River, ending at the Woody Cape, which is host to the largest coastal dune fields in the southern hemisphere, the park provides a true ecotourism experience to visitors. The inclusion of the Bird and St Croix island groups ensures that the park is unique in that it potentially offers a Big 7 experience (Big 5 plus the Great White Shark and the Southern Right Whale), the only park in South Africa to do so.

The parks tourism infrastructure is diverse, offering a variety of selfcatering to private luxury facities as follows (Appendix 2, Map 7):



- Camping: Two camp grounds in Main Camp and Mvubu (Kabouga section) with 33 sites accommodating a total of 198 persons.
- Safari tents: Five units in Main Camp with 10 beds.
- Forest huts: 10 units in Main Camp with 40 beds.
- Rondawels: Six units in Main Camp with 12 beds.
- Chalets: 38 units in Main Camp with a total of 122 beds and 12 units in Matyholweni with a total of 27 beds.
- Guest houses: Two units in Main Camp with 12 beds.
- Wilderness camps: Four units in the Zuurburg section with eight beds.
- Trails camp: Two units with 24 beds in Woody Cape section and one unit accommodating five guests in Kabouga.
- This totals 293 beds and 198 camping accommodation.
- Privately run luxury five star lodges: Riverbend Lodge (22 beds) in Nyati Section, Ghora Elephant Camp (22 beds) in Main Section, Nguni Camp (20 beds) in Nyati Section, Ntsomi Forest Lodge (20 beds) in the Langevlakte contractual park (Woody Cape Section), Kuzuko Lodge (48 beds) in Kuzuko contractual park (Darlington Section) and Darlington Lodge (12 beds) in Darlington Section collectively accommodate 120 guests.

Tourism beds (excluding camping) total 413 for the park. Most of the tourism facilities are rated as easily accessible. Activities include a 4X4 route, horse riding, guided game driving, bird watching and overnight hiking. Facilities within the SANParks camps include that of an outsourced restaurant and shop and a fuel station at Main Camp. Unit occupancy in 2006-7 stood at 90.8%. A total amount of R27.560 million in tourism revenue was created in 2006-7, with R11.673 million surplus generated. This park in particular is a favourite destination amongst the United Kingdom, Dutch and German Tourists.

The desired state for tourism in the park is noted as:

“To provide visitors with a true ecotourism (Big 7) experience and a variety of activities in order to remain one of SANParks top tourism brands that is of international significance.”

Its objectives are as follows:

- To continuously upgrade and develop tourism infrastructure in order to enhance the tourist experience.
- To develop a variety of eco-focused activities for visitors.
- To develop more tourism supporting services and to market the park more effectively.
- To provide more training and education for staff in order to provide a quality service.

New tourism infrastructure and programmes for the future will be in accordance with the park's Conservation Development Framework (3.2.1), the Infrastructure plan (3.5.3) and the Cultural Management plan. Developing of the existing tourism plan will therefore focus on the implementation of initiatives to reach this desired state. This tourism plan must be integrated with all other aspects of the management plan especially to ensure that there is no conflict of interest with the biophysical and cultural heritage management objectives, which according to the SANParks values, must take precedence. Product development and diversification is high on the list of the parks objectives.

Tourism development plans for the next five years include:

- Bird island: Development of the island access point (jetty) and upgrading the infrastructure to accommodate day visitors. This will be done with donor support.
- Main camp: Extension of the Addo Main camp with five more units (10 beds), and a general upgrading of tourism plant. This is expected to add a further R1.1 million in revenue. Also the development of a further picnic site.
- Colchester Section: Development of the Colchester section through final land acquisitions, fencing last 4 km, gravelling 50 Km of tourism roads, and stocking the area with game populations to complete this tourism product. This will be part supported by donor funds. In addition an interpretative centre will enhance tourism experience.
- Darlington Dam: Consolidate this section through the acquisition of crucial properties and the erection of a proper game fence to provide completed game experience for the Darlington Dam concession area as well as the development of a tourism product on the western side of the dam
- Capacity: Enhance tourism staff capacity.

Action project 3.2.2 (i): Completion of the Bird island access and infrastructure upgrades.

Action project 3.2.2 (ii): Development of the Colchester section (roads, fences & game introduction).

Action project 3.2.2 (iii): Accommodation additions to Main Camp and new picnic site.

Action project 3.2.2 (iv): Completion of fencing of the Darlington Dam section to enhance this concession area once section has been consolidated

Action project 3.2.2 (v): Explore means of increasing cultural heritage tourism.

Action project 3.2.2 (vi): Enhance tourism capacity and the skills base in current staff.

3.2.3 Marketing Programme

In order to implement the initiatives identified as part of the desired state for tourism in the park, a detailed marketing plan was developed for the park in 2005. In addition further research indicated that the current customer base consists of 38.8% local and 61.2% foreign (Germany – 48%, UK- 32% and the Netherlands -20%) visitors (Saayman and Saayman 2005). Foreign tourists, however, on average only spend 2 days at the park. Activities and experiences to boost the number of days spent in the park will be looked at. The need for more educational talks and information will be met through an interpretive centre estimated to be in operation by 2008. Other strategies to market the park, and therefore attract more visitors, include the focussing on primary and secondary markets and to ensure that the stay within the park is a memorable one. The park's resources and services are being actively marketed in collaboration with tourism promotion bodies and media. Effective marketing materials that include new adverts, new brochures and a visitor map have been developed and are to be reviewed on a bi-annual cycle.

Action project 3.2.3 (i): Completion and use of the interpretative centre in Addo Main Camp. Action project 3.2.3 (ii): Update current marketing brochures.

Action project 3.2.3 (iii): Further the cooperative relationships with other tourism promotion bodies such as Eastern Cape and Sundays River Tourism.

3.2.4 Commercial Development Programme

The objective is to manage concessionaires and commercial tourism operators in the Park to ensure that ecological, cultural and scenic resources and visitor experience are maintained and enhanced. There are a number of concessionaires in the park. There are 6 privately run five star luxury lodges within the park (see Table 4, Appendix 2: Map 7) namely: Darlington Lake Lodge, River Bend Country Lodge, Nguni River Lodge, Gorah Elephant Camp, Ntsomi Forest Lodge and Kuzuko Lodge. Tigers Eye Pty Ltd has the concession for the park shop and the restaurant.

Two new concessions have been planned for, namely: the Darlington Dam area and also the Sundays River, where canoe trips will be run by a concessionaire. Current contractual agreements are with Kuzuko Contractual Area near Darlington Dam, River Bend Country Lodge in the Nyati section and Langevlakte Contractual Area in the Woody Cape section.



Commercial operators and concessions potentially offer an important source of income for the park providing a percentage of turnover, but their operations could have a negative effect on the environment and would therefore require careful monitoring and evaluation. Equally although outsourcing a number of park activities may provide the park with complimentary skills and efficiencies, this has its own set of management challenges. It is envisaged that all concessionaires will continue to contribute to the AENP income through the establishment of fixed fees or a percentage of turnover. Opportunities for public private partnerships will continued to be explored. Opportunities will especially be sought to enhance the already successful partnership with small, medium and macro enterprises (SMMEs) from the immediate communities.

Action project 3.2.4 (i): Develop further concession agreements for Darlington Dam and Sundays River.
Action project 3.2.4 (ii): Complete outstanding commitments with regard to game delivery to Kuzuko and Nyati.
Action project 3.2.4 (iii): Endeavour to further develop SMMEs linked concession contracts.

Table 4 – Commercial & contractual concession agreements in Addo Elephant National Park.

Concession/ contract (farm name)	Type of agreement	Commercial activity	Time frame & start date	Area (Ha)	Major conditions
Inqo Properties Ltd (Kuzuko)	Contractual park & concession agreement	Kuzuko Lodge	99 yrs (12/01/04)	14462	1. Pay % of turnover fees to SANParks 2. Traversing rights over Darlington Section 3. Not > 1 bed per 200 ha 4. Develop big 5 product
River Bend & Nyati Farms (River Bend)	Contractual park & Concession agreement	River Bend Country Lodge	50 yrs + 25 yrs (6/10/2004)	1200	1. Pay % of turnover fees to SANParks 2. Traversing rights over Nyati Concession 3. Allowed total of 40 beds, with one site in Nyati concession to be developed in 5 yrs 4. Develop big 5 product
VK Fick Family Trust (Langevlakte)	Contractual park	Ntsomi Forest Lodge	99 yrs (21/06/04)	1018	1. Pay % of turnover fees to SANParks 2. Traversing rights in forests and dunes 3. Allowed total of 60 beds 4. Provide agreed game
Gorah Elephant Camp	Concession agreement	Gorah Elephant Camp	30 yrs (2002)	5000	1. Pay % of turnover to SANParks 2. Traversing rights over a portion of Addo main camp 3. Allowed a total of 40 beds
Darlington Lake Lodge	Concession agreement	Darlington Lake Lodge	10 yrs (2007)	5000	1. Pay % of turnover to SANParks 2. Traversing rights over eastern portion of Darlington section 3. Allowed a total of 40 beds
Nguni River Lodge	Concession agreement	Nguni River Lodge	30 yrs (2005)	11000	1. Pay % of turnover to SANParks 2. Traversing rights over Nyati section 3. Allowed a total of 40 beds
Tigers Eye Pty Ltd	Concession contract	Addo Shop & restaurant	10 yrs (2004)	Na	1. Pay % of turnover to SANParks 2. 10 year contract



3.3 Building cooperation / Constituency Building

3.3.1 Stakeholder Relationship Management Programme

The park aims to enhance biodiversity conservation through the promotion of a conservation ethic and developing healthy community custodianship for the park. Co-operative, collaborative and mutually beneficial relationships are essential to reach park goals and ultimately to ensure the sustainability of the Park. To this end, both formal and informal partnerships are initiated, maintained and nurtured with Government, local and district municipalities, conservation entities, business partners, communities, various NGO's, CBO's, the media, customers and employees. These arrangements are underpinned by Guiding Principles for SANParks Stakeholder Participation.

Park Forums were established to encourage the building of constituencies in support of natural and cultural heritage conservation goals of SANParks. It is expected that the Addo Park Forum that meets quarterly will facilitate constructive interaction between the park and its surrounding communities, local and district municipalities and other relevant stakeholders. Park Forums are a means of providing a legitimate platform to communicate Park / SANParks issues and to ensure participation of all stakeholders on matters of mutual relevance affecting the Park. Dedicated interactions with the affected municipalities of Cacadu district Ndlambe, Nelson Mandela Metro, Sundays River, Blue Care and Ikwezi (Appendix 2: Map 1) on particularly integrating the park's plans with the municipal Integrated Development Plans (IDPs) and Spatial Development Plans (SDFs) have taken place. In addition, the dedicated Mayibuye Ndlovo Development Trust also remains an interface with six of the surrounding communities to enhance park community relationships. Development of a specific relationship with the Enon-Bersheba community remains a focus from biodiversity and socio-economic perspective.

Co-operative governance systems are being developed and strengthened on an individual basis and via the park forum. These aim to promote inclusively and to ensure compliance with legislation through improved relationships and collaboration with government and various governing bodies. The park liaises with various conservation entities to ensure that it keeps up to date with global and national trends and that it collaborates on management strategies that are relevant to be implemented for the local context. Where feasible, the park enters into agreements with various business partners to enable SANParks to focus on its core mandate as a conservation agency, whilst continuing to yield financial benefit from the provision of quality products and services to its customers.

The park enhances biodiversity conservation through developing a healthy com-

munity custodianship that would be able to be regarded as part of the parks' conservation equity. Where required, special task teams are set up to address issues of mutual interest or to resolve potential conflict of interest. SANParks regards its employees as a most valuable asset and foundation for organisational competency. The need for an explicit communication programme is required.

The park invests in staff development, strives towards employment equity and endeavour to uphold employee rights.

Visitors to the park are regarded as the number one financial resource that enables us to fulfil the organisation's conservation mandate. SANParks fosters good media relations. Not only is the media regarded as an ally to market our tourism products, but also as key communication tool to keep stakeholders informed and to promote a positive image of SANParks, including this park.

Action project 3.3.1 (i): Develop and implement a communication plan.
Action project 3.3.1 (ii): Ensure the Addo Park Forum functions effectively.
Action project 3.3.1 (iii): Ensure the park's plans are reflected in the IDPs and SDFs.
Action project 3.3.1 (iv): Ensure the park's plans are reflected in national conservation initiatives.
Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovo Development Trust.

3.3.2 Environmental Interpretation Programme

The aim of this programme is to build constituencies amongst people in support of SANParks' conservation endeavours by playing a significant, targeted and effective role in promoting a variety of educational opportunities and initiatives. The People and Conservation Division will continue to focus attention on youth development and environmental education for both young and old in order to build a conservation constituency for the future.

Environmental learning within the park involves developing an understanding of the environment and its issues, and values and skills that will help learners to contribute to the protection and improvement of environments. To this end the park's programme includes talks, slide shows, and guided tours, with educational trips on the school bus programme available to the surrounding community school groups. School groups are also

involved in the celebration of national environment days such as marine week, water week, harbour week, heritage day, etc. Entry to the park for educational trips is offered free of charge to learners. In 2007 a total of 11,195 pupils were put through the parks education programme, above the annual target of 9000. This is to continue to grow.

Environmental interpretation information for visitors to the park is provided by the following means: leaflets available at reception, an information board at the main rest camp waterhole viewing site, information boards and experience on the PPC Discovery Trail.

The Imbewu programme, a joint project between SANParks and the Wilderness Foundation seeks to instil, in present and future generations, a deep link to the earth and its cultural legacy. Between 20 and 30 Imbewu camps are held each year in the Kabouga section where youth enjoy the age-old art of story telling, interpretive walks and talks on cultural values and traditional plant uses. These camps are led by wise elders from the local communities.

The Junior Honorary Ranger programme comprises youth from Port Elizabeth, Uitenhage and the Colchester area led by senior Honorary Rangers in conjunction with park staff.

An Interpretative Visitor Centre is planned to be constructed in 2007.

Action project 3.3.2 (i): Continue with school education programmes (SANParks, Imbewu & Wilderness Foundation)
Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovo Development Trust
Action project 3.2.3 (i): Completion and use of the interpretative centre in Addo Main Camp.

3.3.3 Local Socio-economic Development Programme

The objective of this programme is to play a significant, targeted and effective role in contributing to local economic development, economic empowerment and social development in communities and neighbouring areas adjacent to the park by partnering with Local Government to form part of the Integrated Development Plans (IDP's), participating in Government Programmes (WfW, EPWP, etc.) to contribute to local skills development by supporting learnerships, implementing needs related training programmes and by creating business opportunities.

A dedicated socio-economic study was recently completed (Saayman & Saayman 2005) and proved that the



park contributes to substantial socio-economic growth within a 30km radius within the planning domain. A total number of 228 direct jobs and 104 new businesses has been created.

The park has also been successful in communications with the District Municipality to be reflected as the top eighth priority for their Local Economic Development Strategy, recognising that the park contributes significantly to the local economy.

A total number of 16 SMMEs (338 labourers) in the Extended Public Works programme (EPWP), 11 SMMEs (240 workers) in the Working for Water Programme, 101 workers in the Coast Care programme and 2 SMMEs (42 workers) are currently employed in various contracts with the park. These contracts include fencing, road building, production of protective clothing and rehabilitation. These SMMEs, in association with SEDA have been diagnosed and registered on a database and have undergone training. An ongoing skills development programme through the EPWP and World Bank projects ensures that communities are able to participate in job creation programmes. SMMEs will continue to be funded where donor or state grant funds continue. However expected termination of the EPWP funding in 2009 and the World Bank GEF funds in 2010 will see the number of SMMEs drop considerably.

The park continues to support and develop local initiatives or small businesses that provide services that are required during special events or functions. These initiatives have in the past included craft groups, choirs or traditional dance groups, small catering businesses, cleaning services etc. Where more continued collaboration is required, mutually beneficial initiatives or partnerships are established. One such partnership is the Mayibuye Ndlovu Development Trust that involves six communities around the park, tourism forum and Sundays River Valley Municipality. Another example is the local community Eyethu 'Hop-On' Guides that guide all the visiting schools or special interest groups and tourists in their own vehicles (Hop On). In addition the development of a specific relationship with the adjoining Enon-Bethsheba community remains a focus from a biodiversity and socio-economic perspective and park-community relationship.

Action project 3.3.3 (i): Continue to facilitate the development of SMME's within the planning domain.

Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovu Development Trust.

3.3.4 Communications Programme

The objective of the communications programme include the creation of knowledge/ awareness about the park, its objectives, its products and (SANParks) mission & vision, ensuring that the park becomes a major player in the eyes of the public through effective representation in the media and to keep conservation debates at the forefront of media coverage and to create and maintain a positive image of SANParks, to manage media coverage of contentious issues and educate the media about SANParks and emerging conservation issues.

Media releases to various publications are issued by the designated media liaison officer and park spokesperson. Film permits are administered through Peninsula Permits, in consultation with the Park Manager and media liaison officer. Stakeholder liaison is accomplished through an electronic newsletter sent to tourism stakeholders, meetings of the Park Forum where feedback and Park reports are given, and regular liaison with key stakeholders. Visitors to the website can sign on for a monthly electronic newsletter.

Various local exhibitions such as the Kirkwood Wildlife Auction, the Rose Festival and the Splash Festival are attended in order to promote the Park to local visitors and stakeholders. The Park website is hosted by SANParks, according to corporate standards and image. Regular updates to information and visual materials are made to the Park's website information.

Communications with staff take the form of a staff newsletter, updates on a staff notice board, distribution of the SANParks Go Wild magazine and information broadcasts on the SANParks Intranet.

Action project 3.3.4 (i): Develop and implement a communication plan.

3.4 Effective Park Management

3.4.1 Environmental Management Programme (includes waste, energy, water, NEMA compliance)

SANParks has committed itself to a set of corporate values, one of which state that SANParks will embrace, and be guided by environmental ethics in all we do. In addition SANParks is obliged by NEMA regulations in this regard. Given the national and international importance of our national parks, it is vital that parks are managed to world-class standards.

An environmental management system (EMS) has been

adopted and partially implemented in the park. This system will assist the park and park management to:

- Achieve environmental management goals
- Address the environmental challenges consistently.

The EMS is applied with the standards of managing waste, pollution, uncontrolled resource consumption, risks, meeting stakeholder expectations etc. The implementation of EMS offers benefits to the management of the AENP, such as:

- The compliance of legal requirements
- Provides improved organizational image, competitiveness, relationship with all neighbours and regulatory relationships
- Improved efficiency in the AENP's environmental responsibility
- Increase in environmental awareness and
- Placing environmental issues on the AENP's agenda.

There is a growing awareness in the general community of problems associated with the state of natural resources in South Africa. This is generating a community expectation that natural resources must be managed and or used sustainably if South Africa is to maintain healthy ecosystems for the wellbeing of future generations. Consumers are also beginning to demand that the environment be taken into account in decision making.

The EMS will focus on the following requirements:

- *Environmental aspects:* The park identifies the environmental aspects which the facility controls and over which it may be expected to have an influence, and determines which of those aspects are considered significant.
- *Legal and other requirements:* The park identify, access and communicate legal and other requirements that are applicable to the park.
- *Environmental objectives and targets:* The park develop objectives and targets for each significant environmental aspect. Objectives and targets are developed considering significant environmental aspects, technological options and financial, operational and business plans, and the views of interested parties.
- *Environmental management programmes:* The park establishes environmental management programmes (EMPs) as a means for achieving objectives and targets. These programmes define the principal actions to be taken, those responsible for undertaking those actions and the scheduled times for their implementation.
- *Training, awareness and competence:* The park identifies, plans, monitors and records training needs for personnel whose work may create a significant impact upon the environment.
- *Operational Control:* The park is responsible for iden-



tifying operations and activities associated with significant environmental aspects that require operational controls in procedures, work practices or environmental management programmes.

- **Emergency preparedness and response:** The park identify potential accidents and emergency situations and responses to, them, as well as how to prevent and mitigate the environmental impacts that could result.

Action project 3.4.1 (i): Update, maintain the EMS.

Action project 3.4.1 (ii): Monitor compliance of EMS via the State of Biodiversity (SOB) reporting.

3.4.2 Safety & Security Programme

Firstly, securing visitor safety to the park is about securing SANParks' international reputation as the custodian of choice for protected area management, AENP with its unique brand of biodiversity and as the only "Big 7" National Park. Any compromises to visitor safety could receive high profile negative international coverage.

Secondly, visitor safety is both about securing the SANParks tourism income stream from the park and securing the AENP's wider economic role in the regional and national tourism economy.

Therefore the strategic intent of the safety and security plan is to firstly ensure that effective visitor safety measures are in place, and secondly to ensure that tourist perceptions are managed in order to protect the brand and reputation of SANParks and South African Tourism at large.

Investment in the core business of visitor safety allows SANParks to protect its reputation and to sustain its long term tourism income required to deliver on its conservation mandate both in the park and across SANParks nationally.

While a single attack is one too many in terms of the risk to the SANParks brand and reputation, mitigatory risk management measures can and must be taken.

The Safety and Security Operational Plan comprehensively addresses both the strategic and operational aspects of visitor safety and security within the framework. A detailed SWOT analysis has been completed inclusive of planning for capacity and detailed budgets for the following two year cycle.

The park recognizes the need to facilitate various partnerships with the public and private sectors in order to realise this Safety and Security Plan. To this end, interactions with entities such as the Nelson Mandela Tourism Board, Eastern Cape Tourism role-players, National and Provincial Ministry for Safety and Security, SAPS from regional municipalities, relevant magisterial districts, DEAT, Serious Violence and Crime Units and Emergency medical Services are under way.

Addo Main Camp has 1 access gate about 1 km from the camp (Appendix 2: Map 7). This gate is open from 7:00 to 19:00. This gate is accessible 24 hours due to private security manning the gate after hours. Matyholweni camp has 1 access gate which is open from 7:00 to 19:00. This gate is accessible 24 hours due to security. Zuurberg section has 1 gate which is open from 7:00 to 17:00. Darlington have two access gates operational between 07:00 to 17:00 with one situated near Darlington Dam wall and the other at the junction of the Darlington Dam road – R400 eastern junction. Kabouga has 1 access gate near Kirkwood which is open from 7:00 to 17:00. The staff at this gate is living at the gate and in emergencies can open it at any time. Narina Bush Camp is accessible 24 hours a day. Woody Cape has open access at many places due to the complexity of the area. Access is monitored by game rangers on patrol. Bird & St Croix Islands are currently closed to visitors, although it is planned to open the Bird Island to limited guided tourism once the infrastructure on the island is upgraded and deired tourism acativuities have been decided cvia the MPA planning activity.

Only SANParks aircraft. Single and twin engine aircraft which qualify to use the two airfields in the park. SANParks helicopters and contracted aircraft are permitted to land at the Main Camp helipad.

Given the height variation between 0m and 935m in the park and its long thin shape makes for difficulty with regards to air-traffic traversing the park at regulatory 1500m above the heightest point (935m). The close proximity to Port Elizabeth adds to the complexity of the situation. Currently air traffic largely complies with the 1500 m above the actual above ground position. Plans for an airfield in the Coega IDZ will place greater stress on the park in this regard. Negotiations with Directorate of Civil Aviation (DCA) need be undertaken to clarify the situation.

Action project 3.4.2 (i): Implement the Safety and Security Operational Plan.

Action project 3.4.2 (ii): Establish a close working relationship with relevant organisations enhancing the parks safety and security.

Action project 3.4.2 (iii): Clarify aviation regaltions with Directorate of Civil Aviation.

3.4.3 Infrastructure Programme

Tourism infrastructure comprises (Appendix 2: Map 7):

- Addo Main Camp which consists of 66 accommodation units and 32 camping sites. The accommodation units have 208 beds and the camping has 192 beds.
- Camp Matyholweni which has 12 units with 27 beds.
- Narina bush camp has 4 tents with 8 beds.
- Kabouga guest house with 6 beds.
- Mvubu which consists out of 6 camping sites with 24 beds.
- Langebos hut in the Alexandria hiking trail which can sleep 12 people.
- Woody Cape hut in the Alexandria hiking trail which can sleep 12 people.
- Fully licensed restaurant in Addo Main Camp.
- Curio shop in Addo Main Camp.
- Discovery trail in Addo Main Camp that is accessible for the disabled.
- Bird hide & underground hide n Addo main Camp.
- Swimming pool in Main Camp.

The tourism infrastructure is generally in a good condition but requires ongoing maintenance which has slipped in previous years given to budget constraints.

Conservation administrative infrastructure in main centres includes:

- 3 Administration offices (Park, Working for Water, People & Conservation)
- 1 x Reception – Addo main camp
- 1 x reception - Matyholweni
- 1 Workshop and large shed
- 1 Stable
- 43 Staff accommodation units, with 37 in Main Camp and the remainder in Darlington Dam, Zuurberg, Colchester, Woody Cape and Korhaanvlak areas of the park.
- 2 Ranger outposts - Korhaanvlakte
- 1 Office - Darlington
- 1 office and flatlet – Zuurberg
- 1 office – Colchester section
- 1 weather station in Main Camp

Conservation management infrastructure outside the developed centres consists of:

Darlington:

- 5 Large 3 bedroom + staff houses
- 8 x 2 bedroom staff houses
- 1 large shed
- 2 store rooms
- 1 Lucerne shed
- 2 fisherman's cottages
- 13 Workshops



Kabouga:

- 4 x 2 bedroom staff houses
- 2 large houses (Rudvale & Kruisrivier)
- 1 Open plan Kitchen / Bar area on river
- 1 small store room
- 1 guest house

Zuurberg:

- 4 large houses (Zuurberg, x 3 Nyati)
- 8 ranger houses
- 1 large store

Arizona / Cypherfontein

- 11 x 2 bedroom staff houses
- 3 large sheds
- 4 large 3 bedroom + houses

Colchester:

- 8 x 2 bedroom staff houses
- 1 cottage
- 1 large store
- 1 small store

Woody Cape:

- 2 x Large houses
- 1 Store
- 1 small store
- 2 offices (1 wooden and 1 brick)
- 14 x 2 bedroom staff houses good condition
- 12 x 2 bedroom staff houses poor condition
- 2 x 2 bedroom house patrol

Bird and St Croix Island:

- 1 old house - St Croix
- 2 store rooms
- 1 bunk house
- 1 small store room
- 1 engine room
- 1 x 2 bedroom ranger house
- 1 x 3 bedroom ranger house
- 1 slipway
- 1 jetty

Bulk infrastructure:

- There are 64 km of tourist roads in the main section of the park of which approximately 19 km is tarred. The Colchester section has 16 km of tourist road of which inclines are tarred and the rest gravelled. The Kabouga section has gravel roads which are accessible to tourists with high clearance vehicles, as well as a 45km 4X4 trail. There are about 300 km of management (patrol) roads within the park. Gravel roads are maintained and repaired as necessary, and particularly after heavy rainfalls.
- A single sewage system in Main Camp consists of a septic tank with a reed bed system coupled to it.
- One water treatment plant.
- Two reservoirs
- 13 km of bulk water supply to Main Camp
- 28 borehole fed waterholes.
- Fencing:
 - Electrified predator-proof game fencing - A total of 243 km: Main section (56 km); Nyati (59 km), Darlington (78 km); and Colchester (50 km).
 - Non-electrified game fencing comprises of 18 km and 16 km in the Zuurberg and Langevlakte areas of the park, respectively.
 - The remainder of the fencing around the park comprises of stock fencing of about 350 km in length.
 - Inspection and maintenance of predator-proof fencing is undertaken on a daily basis, as well as inspection, and maintenance if necessary, of all wildlife water supply facilities in the main game area. The long term plan is to upgrade fencing in all areas of the park to predator- proof fencing standards.
- Aircraft landing fields
 - Darlington: 1200m landing strip located at Darlington dam. Tarred surface, 8 meters wide. Can only be used visual flight rules conditions.
 - Mimosa: 1000m landing strip, 8 meters wide located at Mimosa. Unsurfaced. Can only be used under visual flight rules.
 - Single helipad at Addo Main Camp.
- Burrow pits for road construction
 - Peasland: open rehab quarry. Location: 33°37'27.56"S; 25°49'56.35"E. Problems: None. Registered.
 - Harveys: open quarry. Location: 33°38'03.45"S; 25°45'51.62"E. Problems: None. Registered.
 - Jan Val Pan: open quarry. Location: 33°29'25.69"S; 25°45'51.44"E. Problems: None but rehabilitated. Registered.
 - Korhaanvlakte: Open quarry. Location: 33°30'18.22"S; 25°42'15.61"E. Problems: none but rehabilitated. Registered.
 - Kleinvlakte: Open quarry. Location:

33°26'24.36"S; 25°48'44.35"E. Problems: none but rehabilitated. Registered.

- Thembani: Open quarry for crusher stone. Location: 33°24'26.31"S; 25°53'12,07"E. Problems: none. Registered.

Maintenance of all tourism infrastructure, facilities, staff houses and roads within the park is catered for in the park's five year maintenance plan (2005/6 – 2009/10). This plan also sets out a rehabilitation plan in terms of removal of unwanted structures in certain areas of the park.

Action project 3.4.3 (i): Implement park's Five Year Maintenance Plan (2005/6 – 2009/10.)

Action project 3.4.3 (ii): Implement the state of infrastructure report to assess the quality of infrastructure on an annual basis.

3.4.4 Staff Capacity Building Programme

The objective is to attract and retain the human capital meeting the required skills required in all the disciplines of the park, through the implementation of structured remuneration packages and relevant training programmes for Park Management staff, contractors and volunteers. Training needs of all staff is continually assessed to ensure that those responsible for implementation of the park objectives possess the necessary skills to do so. Training needs of SMMEs are also assessed in order to affect capacity building through the SEDA programme.

The Park currently has 135 staff on its permanent establishment. This is expected to grow to 150 positions as a result of the Park's expanding business operations. Two key areas of staff expansion include the development of a dedicated marine conservation function to service the proposed new expanded marine protected area. The tourism department would likely comprise 5 additional staff due to tourism infrastructure expansion. The Marine division would include two (2) operational managers supported by a field team of 10 staff. The number of contract staff of 15 staff members and 5 students, is expected to remain the same until 2011.

Action project 3.4.4 (i): Expand staff capacity to meet operational requirements.



3.4.5 Institutional Development and Administration Programme

The AENP is fully aligned to the corporate policy, guidelines and protocol on institutional development programmes and actions. This is communicated to the park from time to time by corporate HQ in Pretoria. Administration and is also based on accepted norms & standards as set out in various sets of legislation pertaining to administrative procedures.

3.4.6 Financial Sustainability Programme

Table 5 provides an estimation of the costs involved in striving towards the desired state for AENP over the next 5-year period through all of the objectives and associated programmes detailed in this management plan. This is divided into the following components:

- **Park operational and maintenance budgets:** The park expects to generate about R173m in the five year period from current products and services. Expenditure is expected to total about R93m, providing an estimated profit of R79m over the five years..
- **Development budgets:** The park has been reasonably successful in securing about R112m in funds from the Infrastructure Development Programme (IDP), Global Environment Fund (GEF) via World Bank, Work for Water (WfW), Marine MPA fund and park expansion funds. These projects are largely focused on upgrading current tourism plant, improvement of Bird Island infrastructure, specific conservation management projects (fencing, roads, water provision, alien removal), marine conservation and acquiring a few strategic properties. However, an estimated total amount of R6.0m for biodiversity conservation tourism management projects (tarring roads, extension to Matyloweni Camp, fencing) remained unfunded. However, although park expansion funds may be allocated to specific acquisitions, the fickle nature of acquiring properties where sellers may not be willing to sell, may see the funds being used in priority properties elsewhere in the park or other parks.
- **Park expansion** via acquisition (an estimated R34m for about 18800 ha) remains largely unfunded. This value at current prices is expected to under represent the actual estimated cost. These parcels of land are identified as key to consolidating the park and making the ecological units of Addo (Colchester, Darlington, Zuurberg, Nyati and Kabouga) both ecological more sustainable, as well as providing greater tourism opportunities to the park. Without the product (land) the park cannot generate its expected true economic potential via tourism and game.
- **Biodiversity conservation projects:** A total of R26.3m has been identified for biodiversity conservation projects (R22.9m: TPC development, marine monitoring, marine baseline studies (side scan sonar), herbivore vegetation impact monitoring, biodiversity inventurisation, alien eradication, information dissemination, conservation management & technical staff shortages etc), and heritage projects (R3.4m: heritage surveys and mapping, access and management of sites, information dissemination etc) but also remains unfunded.

Action project 3.4.6 (i): Manage cost to income ratio

Action project 3.4.6 (ii): Seek additional funding

Action project 3.4.6 (iii): Manage budget & external project funds effectively.

Table 5 – Costing

Cat 1	Cat 2	Description	2007-2008 (R'000)	2008-2009 (R'000)	2009-2010 (R'000)	2010-2011 (R'000)	2011-2012 (R'000)
AENP: Current Operational Budget							
A. Income	Conservation Fee		-8,370	-9,622	-10,438	-11,274	-12,176
A. Income	Concession Fees		-2,764	-3,258	-4,107	-4,466	-4,858
A. Income	Tourism Income		-16,636	-18,571	-20,033	-21,635	-23,366
A. Income	Other Income		-222	-287	-302	-317	-333
B. Expenditure	Human Resource		9,169	9,785	10,518	11,308	12,156
B. Expenditure	Depreciation		1,093	984	1,043	1,105	1,172
B. Expenditure	Maintenance Costs		1,392	1,55	1,643	1,741	1,846
B. Expenditure	Operating Costs		4,829	5,067	5,371	6,034	6,034
B. Expenditure	Finance Costs		130	155	164	174	184
Total Operations			-11,379	-15,745	-16,141	-17,330	-19,341
AENP Infrastructure Development Program (Provisional DEAT Funding)							
C. IDP	Tourism Management	All Tourism Projects	4,859	1,653			
C. Total: IDP			4,859	1,653			
Extended Public Works Program Applications (unfunded projects)							
D. EPWP	Tourism Management	All Tourism Projects	14,040	5,054	6,487		
D. Total: EPWP			14,040	5,054	6,487		
World Bank (GEF) funded projects							
			14,851	6,322	4,148		
E. Total: GEF fundings			14,851	6,322	4,148		
Working for Water & Coast							
F. WfW	Biodiversity Management	All Projects	6,061	7,334	7,625	7,932	8,258
F. Total: WfW			6,061	7,334	7,625	7,932	8,258
Marine MPA							
G. Marine	Biodiversity Management	All Projects	2,671	2,812	2,980	3,159	3,349
G. Total: Marine			2,671	2,812	2,980	3,159	3,349
Park expansion							
H. Park expansion	Biodiversity Management	All Projects	12,600	13,300	2,100	0	0
H. Total: Expansion			12,600	13,300	2,100	0	0
Unfunded Projects							
I. UFP	Biodiversity Management	Park expansion (acquisition+resettlement)	6,506	13,221	16,207	19,323	5,238
I. UFP	Biodiversity Management	Biodiversity Projects	6,900	4,000	4,000	4,000	4,000
I. UFP	Heritage Management	Heritage Projects	800	650	650	650	650
I. UFP	Tourism Management	Tourism Projects	1,200	1,200	1,200	1,200	1,200
I. Total: UFP			15,406	19,071	22,057	25,173	11,088
Summary							
Total Income (A)			-27,992	-31,738	-34,880	-37,692	-40,733
Total Committed Budgets (B,C,E,F,G,H)			57,655	47,414	35,592	31,453	32,999
Total Budgets Applied For (D)			14,040	5,054	6,487	0	0
Total Uncommitted Budgets (I)			15,406	19,071	22,057	25,173	11,088
Total: AENP Short Fall* (D+I)			29,446	39,801	28,544	25,173	11,088

*If all income re-invested in park



3.4.7 HIV/AIDS Programme

HIV & AIDS requires special attention because it is also spreading within SANParks. Whilst it is an integral component of the EAP (Employee Assistance Programme), it is accorded priority within the SANParks programming. In the most severely affected settings, there is mounting evidence that HIV/AIDS is eroding human security and capacity, undermining economic development and threatening social cohesion. Inevitably, this situation has serious impacts on business. HIV & AIDS in the Addo communities will also concern the tourism progress and general economic growth of the area.

South Africa's hospitality and tourism industry, of which the organization is a key role player, allows for job creation throughout the country, including rural areas, where HIV prevalence is often high. It impacts on all businesses, both directly and indirectly, resulting in increased costs and reduced productivity. Against this backdrop and because SANParks values its human capital, it has now introduced a comprehensive HIV & AIDS Programme which includes Developing an HIV & AIDS Policy; Education and Awareness; Anonymous and Unlinked Prevalence Surveys; Know-Your-Status Campaigns; Lifestyle Management; Care, Treatment & Support as well as Scientific Impact Analyses. The purpose of a AENP HIV & AIDS programme will be to enable SANParks and its adjacent communities to maintain a healthy and productive workforce. The park will inform and educate the children and communities of lifestyle management, prevention, care and treatment and support of those who are infected. SANParks could play a pivotal role in sending a positive message in this regard.

Action project 3.4.7 (i): Implement SANParks HIV guidelines

3.4.8 Risk Management Programme

Risk awareness and management within the AENP is adhered to on an ongoing basis. This entails the implementation of corporate policies, procedures and protocol.

The purpose of corporate risk management is to ensure that strategic, business and operational objectives are met and that continued, sustained growth and biodiversity management takes place. This is achieved by proactively identifying and understanding the factors and events that may impact the achievement of the set objectives, then managing, monitoring and reporting on these risks.

The process for the identification of risk is an objective driven process which assesses the impact that risks would have on the viability of the objectives. Senior executives and line management within divisions, down to each business unit are accountable for risk. Each individual Park Scorecard (Balanced Scorecard) reflects the goals, objectives, targets and performance indicators for all its operations. They need to meet all applicable laws and regulations as a minimum and, where appropriate, apply best practice.

Section 51 (1) (a) (i) of the PFMA requires of the Accounting Authority of a Public Entity to establish and maintain effective, efficient and transparent systems of financial and risk management and internal control.

Reporting on Risk Management occurs monthly at EXCO. Currently the existing corporate risk registers (per division) are being aligned with the divisional scorecard objective-setting. The process to integrate park level scorecards with that of the Director: Parks is currently in progress but park managers must in the interim advise the Manager Admin Parks of any significant risk arising for that park that falls outside the scope of ongoing management issues. The Head Risk Management or Manager: Corporate Insurance can be contacted in this regard.

Action project 3.4.8: Monitor compliance against risk identification plan

3.4.9 Adaptive and Integrative Strategies to Sustain the Desired State for AENP

The desired state cannot be effectively maintained without explicit attention given to prioritization, integration, operationalisation, and above all, reflection and adaptation according to the principles in the biodiversity custodianship framework.

Most objectives as indicated in the objective hierarchy table (Table 1) contained above need to be seriously addressed in the next five-year management cycle. A balance must be struck between the energy needed to deal with immediate threats, and the necessity of laying the all-important groundwork for longer-term strategic success.

The desired state will take long and be tough to reach, and difficult trade-offs will need to be made along the way. It is hoped that the guidance offered in this section assists that decision-making in a structured way, though obviously ongoing evaluation is imperative. Biophysical and socio economic goals seem compatible given the current formulation of the desired state. The expansion process and its affects need to be kept high in convincing the stakeholders of the key objectives to do so. On the other hand, it may be difficult to achieve all the goals within the next five years.

Given the desired state, the next step is for Park management to use this management plan to draw up a detailed plan of action to for annual operationalisation and wherever necessary down to the level of tasks and duties. The Park Manager must be satisfied that all this serves the desired state as contained in this report. A further cross-check is contained in the Balanced Scorecard system implemented by SANParks, which serves not to replace any objectives contained in this plan, but to support their effective implementation.

If these obligatory feedbacks are effectively honoured, it is believed that the AENP will be practicing an acceptable if not sophisticated level of adaptive management, and in accordance with SANParks' overarching values around complex systems, will have a good chance of achieving the desired state in a sustainable way.

Action project 3.4.9: Monitor biodiversity conservation actions against plan & modify accordingly



ACTION PROJECTS

4. ACTION PROJECTS

High rated projects made up about 67% of projects, while moderate and low ones made up 29% and 4%. Funding was average with about 27% of projects with committed budgeted funds, while uncommitted budgeted, unfunded and donor support was estimated for 1%, 20% and 31% of projects respectively. Projected with combinations of funding or lack of made up 16% of projects. There is a need to increase the overall funding base or numerous priority projects will not be undertaking thus jeopardising the achievement of the parks desired state.

Table 6 Summary of Action projects under operational programmes, with priority (high, moderate & low) and funding (budgeted, uncommitted budgeted, unfunded and donor funds).

Programme	Action Projects	Priority High (H) Moderate (M) Low (L)	Funding Budgeted (B) Uncommitted (U) Donors (D) Unfunded (N)
Park expansion programme	Action project 3.1.1 (i): Include land as per Table 3. Action project 3.1.1 (ii): Ensure park acquisitions are in line with legal and social requirements	H H	B, U, D, N
Sustainable/natural resource use programme	Action project 3.1.2 (i): Develop TPCs for identified natural resources actually or potentially extracted, and a monitoring programme. See Project 3.1.3 (i).	M	U
Herbivore management programme	Action project 3.1.3 (i): Develop TPCs for monitoring impacts of herbivores and carnivores and a monitoring programme to track the identified indicators.	H	U, D
	Action project 3.1.3 (ii): Update current wildlife reintroduction plan and implement recommendations.	M	N
	Action project 3.1.3 (iii): Explore alternative options of managing elephants	H	N
	Action project 3.1.3 (iv): Continue with the annual	H	B

	wildlife monitoring programme		
Carnivore Species Management	Action project 3.1.4 (i): Develop TPCs for monitoring impacts of herbivores and carnivores and a monitoring programme to track the indicators.	H	N
	Action project 3.1.4 (ii): Update current wildlife reintroduction plan and implement recommendations.	M	N
Damage Causing Animal Programme	Action project 3.1.5 (i): Update current damage causing animal plan, identifying species, actions, responsibilities and authority.	H	N
	Action project 3.1.5 (ii): Establish a database recording all incidents involving all damage causing animals.	M	N
	Action project 3.1.5 (iii): Provide training to identified staff in handling/containing damage causing animals	M	D
Species of Special Concern	Action project 3.1.6 (i): Continue with the dedicated black rhino monitoring programme.	H	B,D
	Action project 3.1.6 (ii): Develop monitoring programme for key threatened/rare species, as per priority framework.	M	N
	Action project 3.1.6 (iii): Re-establish a biodiversity inventerisation programme.	L	N
Water Programme	Action project 3.1.7 (i): Ensure active participation in catchment management agencies.	H	B
	Action project 3.1.7 (ii): Determine ecological reserve for Sundays River.	H	D
	Action project 3.1.7 (iii): Establish a river health monitoring programme across the diversity of rivers in the park.	H	N
	Action project 3.1.7 (iv): Establish a monitoring monitoring programme of subterranean water supplies, particularly the Alexander dunefield aquifer.	H	N
	Action project 3.1.7 (v): Monitor impacts of artificial water supplies	M	N
Fire Programme	Action project 3.1.8 (i): Implement a largely natural fire regime with every two years for grassy Fynbos and every 12 years for moister sandy Fynbos patches.	H	B
	Action project 3.1.8 (ii): Establish a fire monitoring programme recording timings, extent and impacts.	M	N
	Action project 3.1.8 (ii): Join the local FPA.	H	B
Rehabilitation Control Programme	Action project 3.1.9 (i): Map all areas requiring rehabilitation and prioritise those requiring urgent attention.	H	N
	Action project 3.1.9 (ii): Develop a rehabilitation programme and monitoring system.	L	N
	Action project 3.1.9 (iii): Continue with invasive alien plant programme	H	B
Cultural Heritage Resource Programme	Action project 3.1.10 (i): Map cultural heritage sites on newly incorporated lands	H	N
	Action project 3.1.10 (ii): Implement the Cultural Heritage Management Plan	H	N
	Action project 3.1.10 (iii): Pursue the World Heritage Status of the Alexandria dunefield.	L	N
Marine Programme	Action project 3.1.11 (i): Establish the marine protected area (MPA) linking the islands to the coast.	H	D
	Action project 3.1.11 (ii): Implement baseline monitoring programmes of key indicator species.	H	D, N
	Action project 3.1.11 (iii): Implement resource protection operations.	H	B
	Action project 3.1.11 (iv): Develop a specific MPA management plan	H	D
Island Management Programme	Action project 3.1.12 (i): Continue with Penguin & Cape Gannet nest site maintenance programme.	H	N
	Action project 3.1.12 (ii): Develop a disaster management plan for the islands and coastline.	H	N
	Action project 3.1.12 (iv): Develop an island focused precinct management plan.	M	D

Programme	Action Projects	Priority High (H) Moderate (M) Low (L)	Funding Budgeted (B) Uncommitted (U) Donors (D) Unfunded (N)
Conservation Development Framework (CDF)	Action project 3.2.1 (i): Test operational activity compliance with CDF via State of Biodiversity (SOB) reporting.	H	B
Tourism Programme	Action project 3.2.2 (i): Completion of the Bird island access and infrastructure upgrades.	H	D
	Action project 3.2.2 (ii): Development of the Colchester section (roads, fences & game introduction).	H	D
	Action project 3.2.2 (iii): Accommodation additions to Main Camp and new picnic site.	H	B, N
	Action project 3.2.2 (iv): Completion of fencing of the Darlington Dam section to enhance the this concession area.	H	N
	Action project 3.2.2 (v): Explore means of increasing cultural heritage tourism.	M	N
	Action project 3.2.2 (vi): Enhance tourism capacity and the skills base in current staff.	M	B
Marketing Programme	Action project 3.2.3 (i): Completion and use of the interpretative centre in Addo Main Camp.	H	D
	Action project 3.2.3 (ii): Update current marketing brochures.	M	D
	Action project 3.2.3 (iii): Further the cooperative relationships with other tourism promotion bodies such as Eastern Cape and Sundays River Tourism.	M	B
Commercial Development Programme	Action project 3.2.4 (i): Develop further concession agreements for Darlington Dam and Sundays River	H	B
	Action project 3.2.4 (ii): Complete outstanding commitments with regard to game delivery to Kuzuko and Nyati.	H	B
	Action project 3.2.4 (iii): Endeavour to further develop SMMEs linked concession contracts.	M	B
Stakeholder Relationship Management Programme	Action project 3.3.1 (i): Develop and implement a communication plan.	M	D
	Action project 3.3.1 (ii): Ensure the Addo Park Forum functions effectively.	H	B
	Action project 3.3.1 (iii): Ensure the park's plans are reflected in the IDPs and SDFs.	H	B, D
	Action project 3.3.1 (iv): Ensure the park's plans are reflected in national conservation initiatives.	H	B, D
	Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovo Development Trust.	H	D
Environmental Interpretation Programme	Action project 3.3.2 (i): Continue with school education programmes (SANParks, Imbewu & Wilderness Foundation)	H	D
	Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovo Development Trust	H	B, D
	Action project 3.2.3 (i): Completion and use of the interpretative centre in Addo Main Camp.	H	D
Local Socio-economic Development Programme	Action project 3.3.3 (i): Continue to facilitate the development of SMME's within the planning domain.	H	D
	Action project 3.3.1 (v): Develop a cooperative working relationship with the Enon-Besheba community and the Mayibuye Ndlovo Development Trust	H	B, D
Communications Programme	Action project 3.3.1 (i): Develop and implement a communication plan.	H	D
Environmental Management Programme	Action project 3.4.1 (i): Update, maintain the EMS.	M	N
	Action project 3.4.1 (ii): Monitor compliance of EMS via the State of Biodiversity (SOB) reporting.	M	N
Safety & Security Programme	Action project 3.4.2 (i): Implement the Safety and Security Operational Plan.	H	B, N
	Action project 3.4.2 (ii): Establish a close working relationship with relevant organisations enhancing the parks safety and security.	H	B
	Action project 3.4.2 (iii): Clarify aviation regulations with Directorate of Civil Aviation.	M	N

Programme	Action Projects	Priority High (H) Moderate (M) Low (L)	Funding Budgeted (B) Uncommitted (U) Donors (D) Unfunded (N)
Infrastructure Programme	Action project 3.4.3 (i): Implement park's Five Year Maintenance Plan (2005/6 – 2009/10)	H	B, U, N
	Action project 3.4.3 (ii): Implement the state of infrastructure report to assess the quality of infrastructure on an annual basis.	H	B
Staff Capacity Building Programme	Action project 3.4.4 (i): Expand staff capacity to meet operational requirements	M	D, B
Institutional Development and Administration Programme			
Financial Sustainability Programme	Action project 3.4.6 (i): Manage cost to income ratio	H	B
	Action project 3.4.6 (ii): Seek additional funding	M	N
	Action project 3.4.6 (iii): Manage budget & external project funds effectively	H	B
HIV/AIDS Programme	Action project 3.4.7 (i): Implement SANParks HIV guidelines	H	B
Risk Management Programme	Action project 3.4.7 (i): Monitor compliance against risk identification plan	H	B
Adaptive and Integrative Strategies to Sustain the Desired State for AENP	Action project 3.4.8 (i): Monitor biodiversity conservation actions against plan & modify accordingly	H	B



REFERENCES

5. REFERENCES

- AENP SEA (2002). Strategic environmental assessment report for the greater Addo Elephant National Park. Coastal and Environmental Services, Grahamstown. 132 pp.
- Attwood & Bennett 1995. Modelling the effect of marine reserves on the recreational shore-fishery of the South-western Cape, South Africa. *S. Afr. J. Mar. Sci* 16: 227-240.
- Aucamp & Taiton 1984 AUCAMP, A. J. & TAINTON, N. M. 1984. Veld Management in the Valley Bushveld of the Eastern Cape. Unpublished Bulletin 401. Department of Agriculture, Dohne Research Station, Stutterheim, South Africa.
- Barnes K. N. 1998. The important Bird Areas of Southern Africa. BirdLife South Africa: Johannesburg
- Boshoff, A. F. , Kerley, G. I. H. and Wilson, S. L. 2002. The potential distributions, and estimated spatial requirements and population sizes, of the medium to large-sized mammals in the planning domain of the Greater Addo Elephant National Park project. *Koedoe* 45: 85-116.
- Boyd AJ, Tauton-Clark J and Oberholster GPJ. 1992. Spatial features of the near-surface and mid-water circulation patterns off western and southern South Africa and their role in the life histories of various commercially fished species. *S. Afr. J. Mar. Sci* 12:189-206.
- Branch GM, Griffiths CL, Branch ML and Beckley LE. 1994. Two Oceans. A guide to marine life in Southern Africa. David Philip, Cape Town.
- Branch, W. R. 1988. South African Red Data Book – Reptiles and Amphibians. South African National Scientific Programmes Report No 151.
- Castley, J.G. 2004a. Wildlife introduction programme for development zones within the greater Addo Elephant National Park. Unpublished Internal Report, SANParks, November 2004. 22pp.
- Castley, J.G. 2004b. Translocation options for black rhinoceros *Diceros bicornis bicornis*: potential for meta-population management. Unpublished Internal Report, SANParks, September 2004. 14pp.
- Castley, J.G. 2006b. Historical distribution of large mammal species in South African national parks and reintroduction opportunities. Unpublished contract report, July 2006. 13pp.
- Crawford RJM, Williams AJ, Hofmeyer J, Klages NTW, Dyer BM, & Chesselet Y. 1995. Trends in African penguin *Spheniscus demersus* population in the 20th century. *S. Afr. J. Mar. Sci.* 16: 101-118.
- CSIR. 2002. Conservation Planning Framework for the Greater Addo Elephant National Park. CSIR, Stellenbosch. 342 pp.
- Du Toit M, Boere GC, Cooper J, De Villiers MS, Kemper J, Lenten B, Peterson SL, Simmons RE, Underhill LG, Whittington PA & Beyers OP. 2003. Conservation assessment and management plan for Southern African coastal seabirds. Avian Demography Unit & Conservation Breeding Specialist group: Apple Valley and Cape Town.
- Gordon JB 2003. Resettlement Policy Framework and associated Resettlement Action Plans for the greater Addo Elephant National Park project (gAENP). Conservation Services, SANParks, Port Elizabeth, 58pp
- Griffiths 2000. Long-term trends in the catch and effort of commercial linefish off South Africa's Cape province: snapshots of the 20th century. *S. Afr. J. Mar. Sci* 22: 81-110.
- Hall-Martin AJ & D.G. Barrat. 1991.; The effect of elephants *Loxodonta Africana* on Thicket vegetation in Addo Elephant National Park. Internal report, SANParks, Pretoria, 23 pp.
- Hall-Martin AJ. 1982. Elephant survivors. *Oryx*: 355-362
- Heemstra P & Heemstra E. 2004. Coastal fishes of Southern Africa. SAIAB and NISC, Grahamstown.
- Holness, S. 2005. Update to Greater Addo Elephant National Park Conservation Plan. Internal report, Conservation Services, SANParks, Port Elizabeth. 3pp.
- Kerley, G. I. H. , Boshoff, A. 1997. A proposal for a Greater Addo National Park. A regional and national conservation and development opportunity. Terrestrial Ecology Research Unit Report 17. University of Port Elizabeth, South Africa.
- Knight M.H., G. Castley, L. Moolman & J. Adendorff. 2002. Elephant management in Addo Elephant National Park. In: GIH Kerley, S Wilson & A Massey (Eds) Elephant Conservation and management in the Eastern Cape. Terrestrial Ecology Research Unit, Nelson Mandela Metropolitan University, Report 35.
- Knight, M.H. & J.G. Castley. 1999. Addo Elephant National Park: Development plan of proposed concession areas. Unpublished Internal Report, SANParks, Port Elizabeth, 14pp.
- Low, A. B. & Rebelo, A. G. 1996. Vegetation of South Africa, Lesotho and Swaziland. Department of Environmental Affairs and Tourism, Pretoria.
- Maccicar, C. N. 1991. Soil classification: A taxonomic system for South Africa. *Memoirs of the Agricultural Natural Resources of South Africa*, 15. Department of Agricultural Development, Pretoria, South Africa.
- NBSAP (2005). South Africa's National Biodiversity Strategy & Action Plan. Department of Environmental Affairs & Tourism, Pretoria. 108 pp.
- Newman B. & Nell J. 2001. Final report on the proposed Marine Protected Area for the Greater Addo Elephant National Park. Part 2. Aquatic Conservation Planning. CSIR Report No: ENV-S-C 2002.
- Novellie, P., M. H. Knight & R. M. Randall. 1994. Restoring the diversity of ungulate species in the Southern National Parks: Current state of progress and relevant background information. Internal report, SANParks.
- NPAES. (in prep). National Protected Areas Expansion Strategy. Department of Environmental Affairs & Tourism, Pretoria.
- Pomroy RS, Parks JE & Watson LM. 2004. How is your MPA doing? A guidebook of Natural and social Indicators for evaluating Marine Protected Area Management Effectiveness. IUCN Gland, Switzerland and Cambridge, UK. 216pp.
- Pringle, J. A. 1982. The Conservationists and the Killers. T. V. Bulpin & Books of Africa, Cape Town.
- Rogers, K. 2003. Biodiversity Custodianship in SANParks: A protected area management planning framework. School of Animal Plant & Environmental Sciences, University of Witwatersrand, Johannesburg.
- Saaiman, M. & A. Saaiman. 2005. Socio-economic impact of the Addo Elephant National Park. Institute for Tourism & Leisure Studies. Potchefstroom University. 36 pp.
- SANParks. 2002. Strategic plan for the conservation and management of Rhinoceros (*Diceros bicornis* and *Ceratotherium simum*) within South African National Parks 2003- 2013. Internal report, SANParks, Pretoria.
- SANParks. 2006. Coordinated policy framework governing park management plans. Internal report, SANParks, Pretoria.
- Shumann EH & Martin JA. 1991. Climatological aspects of the coastal windfield at Cape Town, Port Elizabeth and Durban. *S. Afr. J. Geogl. Sci* 73:48-51
- Stuart-Hill, GC & Aucamp, A. 1993. Carrying Capacity of the succulent valley bushveld of the Eastern cape. *Afri. J. Range Forage Sci.* 10:1-10
- Tree AJ. 2005. Roseate tern. In: Hockey, PAR, Dean WRJ, & Ryan PG. (eds). Roberts – Birds of Southern Africa, 7th Ed. John Voelcker Bird Book Fund, Cape Town, pp461-462.
- Urquhart C. & Klages N. T. W. 1996. East to the Isles. The story of the Bird Island of Algoa Bay, South Africa. Bluecliff, Bridgemeade. 144p.
- Vlok J. H. J. , Euston-Brown, D. I. W. & Cowling, R. M. 2003. Acocks' Valley Bushveld 50 years on: new perspectives on the delimitation, characterisation and origin of thick- et vegetation. *S. Afr J. Bot.* 69: 27-51.
- Webley L. 2002. Greater Addo Elephant National Park Cultural Mapping Pilot Project. Conservation Services: SANParks report. Pretoria. (unpublished)
- Webley L. 2002. Strategic framework for the conservation of cultural resources in the Greater Addo Elephant National Park (unpublished).
- Whitehouse A.M. 2002. Managing small elephant populations: lessons from genetic studies. . In: GIH Kerley, S Wilson & A Massey (Eds) Elephant Conservation and management in the Eastern Cape. Terrestrial Ecology Research Unit, Nelson Mandela Metropolitan University, Report 35.
- Whitehouse A. M & A.J. Hall-Martin. 2000. Elephants in the Addo Elephant National Park, South Africa; reconstruction of the population's history. *Oryx* 34:46-55.
- Williams A. J. Klages N. T. W. & Crawford R. . M. M 2000. Functional ecosystems: Coastal islands. In : Durham B. D. & Pauw J. C. (eds). Summary Marine Biodiversity Status Report for South Africa. National Research Foundation, Pretoria. Pp 26-29.



APPENDIX 1

ADDO ELEPHANT NATIONAL PARK ZONING PLAN

1. INTRODUCTION

The primary objective of a Conservation Development Framework (CDF) is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives. A key part of the CDF is the zoning plan, which plays an important role in minimizing conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas. A zoning plan is also a legislated requirement of the Protected Areas Act, which stipulates that the management plan, which is to be approved by the Minister, must contain "a zoning of the area indicating what activities may take place in different sections of the area and the conservation objectives of those sections".

The zoning of Addo Elephant National Park was based on an analysis and mapping of the sensitivity and value of a park's biophysical, heritage and scenic resources; an assessment of the regional context; and an assessment of the park's current and planned infrastructure and tourist routes/products; all interpreted in the context of park objectives. This was undertaken in an iterative and consultative process. This document, which is extracted from the full *Conservation Development Framework for Addo Elephant National Park (2006)* sets out the rationale for use zones, describes the zones, and provides management guidelines for each of the zones.

2. RATIONALE FOR USE ZONES

The prime function of a protected area is to conserve biodiversity. Other functions such as the need to ensure that visitors have access to the park, and that adjoining communities and local economies derive benefits from the area, potentially conflict with and compromise this primary function. Use zoning is the primary tool to ensure that visitors can have a wide range of quality experiences without comprising the integrity of the environment.

Further, people visit a park with differing expectations and recreational objectives. Some people are visiting a park purely to see wildlife as well as natural landscapes. Others wish to experience intangible attributes such as solitude, remoteness, wildness, and serenity (which can be grouped as wilderness qualities), while some visit to engage in a range of nature-based recreational activities, or to socialize in the rest camp. Different people have different accommodation requirements ranging

from extreme roughing it up to luxury catered accommodation. There is often conflict between the requirements different users and different activities. Appropriate use zoning serves to minimizing conflicts between different users of a park by separating potentially conflicting activities such as game viewing and day-visitor picnic areas whilst ensuring that activities which do not conflict with the park's values and objectives (especially the conservation of the protected area's natural systems and its biodiversity) can continue in appropriate areas. Use zones serve to ensure that high intensity facilities and activities are placed in areas that are robust enough to tolerate intensive use, as well as to protect more sensitive areas of the park from over-utilization.



3. PARK USE ZONATION SYSTEM

The Zoning System

SANParks has adopted a dual zoning system for its parks. The system comprises:

- a) Visitor use zones covering the entire park, and
- b) Special management overlays which designate specific areas of a park that require special management interventions.

The use zoning of Addo Elephant National Park is shown in Map 4a-c, and summarised in Table 1.

The Zoning process and its linkage to the underlying environmental analysis.

The zoning for Addo Elephant National Park was underpinned by an analysis and mapping of the sensitivity and value of a park's biophysical, heritage and scenic resources. This analysis examined the biophysical attributes of the park including habitat value (in particular the contribution to national conservation objectives), special habitat value (the value of the area to rare and endangered species), hydrological sensitivity (areas vulnerable to disruption of hydrological processes such as floodplains and wetlands), topographic sensitivity (steep slopes), soil sensitivity (soils that are vulnerable to erosion) and vegetation vulnerability to physical disturbance. In addition, the heritage value and sensitivity of sites was examined (including palaeontological, archaeological, historical and current cultural aspects).

The visual sensitivity of the landscape was also examined in order to identify sites where infrastructure development could have a strong aesthetic impact. This analysis was used to inform the appropriate use of different areas of the park, as well as to help define the boundaries between zones. The zoning was also informed by the park's current infrastructure and tourism products, as well as the regional context (especially linkages to neighbouring areas and impacts from activities outside the reserve). Planned infrastructure and tourism products were also accommodated where these were compatible with the environmental informants. These were all interpreted in the context of the park objectives. This was undertaken in an iterative and consultative process.

Map 5 shows the relationship between the use zoning and the summary products of the biodiversity and landscape sensitivity-value analysis. This indicates that in general it was possible to include most of the environmentally sensitive and valuable areas into zones that are strongly orientated towards resource conservation rather than tourist use. Further, in many cases the boundaries between zones are

Table 1: Summary of Use Zone Characteristics

Zone	General Characteristics	Experiential Qualities	Intrusion between sites	Type of Access	Type of activities	Types of Facilities	Limit of acceptable change: Biophysical	Limit of acceptable change: Aesthetics and recreational
REMOTE*	Retains an intrinsically wild appearance and character, or capable of being restored to such.	Solitude and awe inspiring natural characteristics	None to very low	Controlled access, only on foot	Hiking in small groups	Established footpaths where erosion may be a problem. Essentially undeveloped and roadless	Deviation from a natural pristine state should be minimized, and existing impacts should be reduced	Activities which impact on the intrinsically wild appearance and character of the area will not be tolerated.
PRIMITIVE	Generally exhibits wilderness qualities, but with basic catering facilities. Access is controlled. Provides access to the Remote Zone, and can serve as a buffer.	Experience wilderness qualities	Low	Controlled access. Accompanied or unaccompanied. Foot, 4x4 vehicles	Hiking, 4x4 drives, game viewing, horse riding	Small, basic, self-catering or limited concessions with limited numbers. 4x4 trails, hiking trails	Deviation from a natural pristine state should be small and limited to minimal impact points. Existing impacts should be reduced.	Activities which impact on the intrinsically wild appearance and character of the area should be avoided, and impact limited to the site of the facility.
QUIET	This zone allows non-motorised access to areas which generally retain a natural appearance and character. Access is not spatially controlled.	Wide range of activities, relaxation in a natural environment	Medium to high	Unaccompanied non-motorised access. Mainly on foot, non-motorised access to specific facilities	Hiking, walking, rock climbing, bird watching, possibly mountain biking and horse riding	Hiking trails, footpaths, management hides, bird hides. Abutment facilities may be provided in high use areas. No accommodation, and no tourist access by vehicle.	Some deviation from a natural pristine state is allowed, but care should be taken to facilitate development footprint. Infrastructure, especially paths and viewpoints should be designed to limit the impacts of large numbers of visitors on the biophysical environment.	Activities which impact on the intrinsically wild appearance and character of the area should be avoided, though the presence of larger numbers of visitors and the facilities they require, may impact on the feeling of wilderness found in this zone.
LOW INTENSITY LEISURE	The underlying character of this zone is motorised self-drive access with basic self-catering facilities. The numbers of visitors are higher than in the Remote and Primitive Zones. Camps are without modern facilities such as shops and restaurants.	Comfortable facilities in a relatively natural environment	Medium to high	Motorised self-drive access	Motorised self-drive game viewing, photography, walking, cycling, rock climbing, hiking, adventure activities	Facilities limited to basic self-catering picnic tables, abutment facilities, information education centres, parking areas. Small to medium self-catering and camping rest camps with abutment facilities, but not shops or restaurants. Low spec access roads to provide a more wild experience.	Deviation from a natural pristine state should be minimized and limited to established impact points as far as possible. However, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable.	Although it is inevitable that activities and facilities will impact on the wild appearance and character of the area, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience.
HIGH INTENSITY LEISURE	The main characteristic of this zone is high density tourist development, with modern amenities, where more concentrated human activities are allowed.	Comfortable and sophisticated facilities while retaining a natural ambience	High	Accessible by motorised transport, including high volume transport routes, including delivery vehicles	As above. Additional sophisticated amenities. Large, organized adventure activities, drinking, luncheon, dining at restaurants	High density, tourist camps with modern amenities. Footpaths, transport systems, accommodation, restaurants, cafe and refreshment stalls, education centres. High volume roads.	The greatest level of deviation from a natural pristine state is allowed in this zone, and it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable.	Although it is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and character of the area, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience appropriate for a national park.



based on changes in environmental sensitivity. Table 2 summarises the percentage area of the park covered by each zone, as well as the percentage of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value analysis) that are in each zone. This indicates that over two thirds of the park is covered by zones that are strongly conservation orientated in terms of their objectives (i.e. Remote and Primitive). Further, the table shows a good correlation between spatial distribution of environmentally sensitive habitats and the conservation orientated zones, with the Remote zone covering 24.6% of the park yet containing over 50% of the highly valuable and sensitive areas. Conversely, the tourist orientated Low Intensity Leisure zone covers 30% of the park yet contains only around 10% of the sensitive habitats.

Table 2 – Summary of the percentage area of the park covered by each zone, as well as the percentage of the highly environmentally sensitive and valuable areas (defined as areas with values in the top quartile of the sensitivity value analysis) that are in each zone.

		Zone as a percentage of park area	Percentage of highly sensitive areas that are in the zone
Addo Elephant National Park			
Conservation orientated zones	Remote	24.6	51.9
	Primitive	44.6	37.6
Tourism orientated zones	Quiet	0.2	0.1
	Low Intensity Leisure	30.4	10.4
	High Intensity Leisure	0.2	0.04

Remote Zone

Characteristics

This is an area retaining an intrinsically wild appearance and character, or capable of being restored to such, and which is undeveloped and roadless. There are no permanent improvements or any form of human habitation. It provides outstanding opportunities for solitude with awe inspiring natural characteristics. If present at all, sight and sound of human habitation and activities are barely discernable and at a far distance. The zone also serves to protect sensitive environments from development impacts and tourism pressure.

Visitor activities and experience

Activities: Access is strictly controlled and on foot. Groups must be small, and can either be accompanied by a guide or unaccompanied. Several groups may be in area at the same time, but if necessary densities and routes should be defined so that no signs can be seen or heard between the groups. The principles of “Pack it in Pack it out” must be applied.

Interaction with other users: There is no interaction between groups. The numbers of groups within the area will be determined by the ability to ensure that there is no interaction between groups.

Objectives of the zone (Limits of acceptable change)

Biophysical environment: Deviation from a natural/pristine state should be minimized, and existing impacts should be reduced.

Aesthetics and recreational environment: Activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wilderness, serenity, peace etc) will not be tolerated.

Facilities:

Type and size: No facilities are provided. Should overnight facilities be required to serve this zone, these should be placed in the adjoining zones.

Sophistication of facilities: No facilities except self carried portable tents. Guidelines for washing, ablution and cooking must be defined according to the “Pack it in Pack” it out principles. Camping only at designated sites.

Audible equipment and communication structures: None.

Access and roads: Public access is non-motorized. Vehicular access and parking is provided in the adjoining

Primitive zone. Established footpaths may be provided where erosion risks occur.

Location in Park: In Addo Elephant NP, Remote areas were designated in the mountainous areas of the Zuurberg and in sections of the Woody Cape dunefields, which are both landscapes with high environmental sensitivity and value.

Primitive Zone

Characteristics

The prime characteristic of the zone is the experience of wilderness qualities with the accent on controlled access. Access is controlled in terms of numbers, frequency and size of groups. The zone shares the wilderness qualities of Wilderness Areas and Remote zones, but with the provision of basic self-catering facilities and access. It also provides access to the Remote zone and Wilderness Area. Views of human activities and development outside of the park may be visible from this zone.

This zone has the following functions

It provides the basic facilities and access to serve Wilderness Areas and Remote zones.

It contains concession sites and other facilities where impacts are managed through strict control of the movement and numbers of tourists, for example if all tourists are in concession safari vehicles.

It serves as a buffer to the fringe of the park and other zones, in particular Wilderness and Remote.

It serves to protect sensitive environments from high levels of development.

Visitor activities and experience:

Activities: Access is controlled in terms of numbers, frequency and size of groups. Activities include hiking, 4x4 drives and game viewing. Access is controlled either through only allowing access to those with bookings for specific facilities, or alternatively through a specific booking or permit for a particular hiking trail or 4x4 route. Several groups may be in area at the same time, but access should be managed to minimize interaction between groups if necessary.

Interaction with other users: Interaction between groups of users is low, and care must be taken in determining the number and nature of facilities located in the area in order to minimize these interactions.

Objectives of the zone (Limits of acceptable change)

Biophysical environment: Deviation from a natural/pristine state should be small and limited to restricted impact footprints. Existing impacts should be reduced. Any facilities constructed in these areas, and activities



undertaken here should be done in a way that limits environmental impacts. Road and infrastructure specifications should be designed to limit impacts.

Aesthetics and recreational environment: Activities which impact on the intrinsically wild appearance and character of the area, or which impact on the wilderness characteristics of the area (solitude, remoteness, wildness, serenity, peace etc) should be restricted and impacts limited to the site of the facility. Ideally visitors should only be aware of the facility or infrastructure that they are using, and this infrastructure/facility should be designed to fit in with the environment within which it is located in order to avoid aesthetic impacts.

Facilities

Type and size: Facilities are small, often very basic, and are distributed to avoid contact between users. Alternatively facilities designed for high levels of luxury, but limited visitor numbers can be accommodated here (e.g. controlled access private camps or concession sites).

Sophistication of facilities: Generally facilities are small, basic and self-catering, though concession facilities may be significantly more sophisticated.

Audible equipment and communication structures: None.

Access and roads: Vehicular access to facilities is limited to low-spec roads, often 4x4 only. Tourist and game viewing roads are 4x4 only. Established footpaths are provided to avoid erosion and braiding.

Location in Park

In Addo Elephant NP, Primitive areas were designated to buffer Remote areas and to protect most of the remaining sensitive areas from high levels of tourist activity. Primitive areas were also designated in areas with relatively low environmental sensitivity to allow access into Remote mountainous areas. Most contractual park sections were designated Primitive, as the controlled access associated with Primitive is compatible with the activities undertaken by the concessionaires. Controlled access trail areas (such as the Alexandria hiking trail) fall within this zone. In areas where Remote zones border on the park boundary, a 100m wide Primitive zone was designated to allow park management access to fences.

Quiet Zone

Characteristics

This zone is characterized by unaccompanied non-motorized access without specific access control and permits. Visitors are allowed unaccompanied (or accompanied) access, mainly on foot, for a wide range of experiences. Larger numbers of visitors are allowed than in the Primitive zone and contact between visitors is frequent. The main accent is on unaccompanied non-motorized access. Larger numbers of visitors are allowed and contact between visitors is frequent. It is important to note that this zone may have different interpretations in different parks and the CDF documentation for each park should set the objectives specific to that park. Thus, in some instances horses and mountain bikes could be accommodated. This zone can also provide non-motorized access within Low and High Intensity Leisure zones away from vehicular access roads.

Visitor activities and experience

Activities: Hiking, rock climbing, bird watching, self-guided constructed trails and walks.

Interaction with other users: Interaction between groups of users is frequent.

Objectives of the zone (Limits of acceptable change)

Biophysical environment: Some deviation from a natural/pristine state is allowed, but care should be taken to restrict the development footprint. Infrastructure, especially paths and viewpoints should be designed to limit the impacts of large numbers of visitors on the biophysical environment.

Aesthetics and recreational environment: Activities which impact on the relatively natural appearance and character of the area should be restricted, though the presence of larger numbers of visitors and the facilities they require, may impact on the feeling of "wildness" found in this zone.

Facilities

Type and size: Hiking trails, footpaths, bird hides. No accommodation. Ablution facilities may be provided in high use areas. Heritage structures may be used for recreation purposes.

Sophistication of facilities: Where provided these should be basic.

Audible equipment and communication structures: Allowed, but should be managed to retain a relative level of solitude.

Access and roads: Essentially pedestrian access, but in certain parks horse and Mountain bikes can be accommodated. Pedestrian only or in some cases cycles. No access for tourists by vehicle. The only roads are essential two wheeled management tracks.

Location in Park

In Addo Elephant NP, Quiet areas were designated in the Kwaihoek section. This zone has limited application in the park due to the widespread presence of dangerous animals which preclude unaccompanied pedestrian access in many areas..

Low Intensity Leisure Zone

Characteristics

The underlying characteristic of this zone is motorized self-drive access with basic self-catering facilities. The numbers of visitors are higher than in the Remote and Primitive zones. These camps are without modern facilities such as shops and restaurants. Relatively comfortable facilities are positioned in the landscape retaining the inherent natural and visual quality which enhances the visitor experience of a more natural and self-providing experience. Access roads are low key, preferably gravel roads and/or tracks to provide a more wild experience. Facilities along roads are limited to basic self-catering picnic sites with toilet facilities. In some parks, large busses and open safari vehicles are not permitted.

Visitor activities and experience

Activities: Self drive motorized game viewing, picnicking, walking, cycling, rock climbing, hiking, adventure activities.

Interaction with other users: Moderate to high

Objectives of the zone (Limits of acceptable change)

Biophysical environment: Deviation from a natural/pristine state should be minimized and limited to restricted impact footprints as far as possible. However, it is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable.

Aesthetics and recreational environment: Although it is inevitable that activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience.

Facilities

Type and size: Picnic sites, view sites, information cen-



tres, ablution facilities, parking areas, education centres etc. Small self-catering (including camping) camps of low to medium density 25-35 beds. Additional facilities can include swimming pools. Trails for 4x4 vehicles can also be provided. Day visitor sites are not placed within the camps. Day visitor sites must be compliant with the general self-catering characteristic of the zone.

Sophistication of facilities: Self contained self-catering units with bathroom facilities. Camp sites will include ablution facilities. These camps are without modern facilities such as shops and restaurants.

Audible equipment and communication structures: Cell phone coverage in vicinity of camps. Code of use for cell phones and radios required to retain relative level of solitude.

Access and roads: Motorized self drive sedan car access (traditional game viewing) on designated routes which are preferably gravel roads. In some parks, large busses and open safari vehicles are not permitted. When busses are permitted some roads should be designated as accessible to self drive only. Roads are secondary gravel tourist roads or minor game viewing roads.

Location in Park

Low intensity leisure areas were designated in the current and future game viewing areas (the current main section, Kabouga, Nyathi, and around Darlington Dam), in relatively high use recreational areas such as Alexandria forest around the administrative area, and the beaches east of the Sunday's River and also west of Cannon Rocks. Low intensity leisure areas were only designated if relatively high tourist activity did not conflict with the underlying landscape sensitivity and value analysis.

High Intensity Leisure Zone

Characteristics

The main characteristic is that of a high density tourist development node with modern amenities such as restaurants and shops. This is the zone where more concentrated human activities are allowed. As impacts and particularly cumulative impacts are higher, such facilities should be placed on the periphery of the park. Staff not directly associated with tourism facilities should be accommodated outside of the park if possible. All industrial type facilities such as laundries, abattoirs, maintenance depots and workshops should ideally be located outside of the park within suitably zoned adjoining urban or rural areas. Accessible by motorized transport (Car/bus) on high volume transport routes. More concentrated activities

occur than in than Low Intensity leisure.

Visitor activities and experience

Activities: Traditional game viewing routes with associated more sophisticated infrastructure, sight seeing at tourist destinations, picnicking, walking, cycling, rock climbing, hiking, adventure activities (orienteering, scuba diving, fun runs), activities associated with amenities such as dining in restaurants.

Interaction with other users: High

Objectives of the zone (Limits of acceptable change)

Biophysical environment: The greatest level of deviation from a natural/pristine state is allowed in this zone, and it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable. However, care must be taken to ensure that the zone still retains a level of ecological integrity consistent with a protected area.

Aesthetics and recreational environment: Although it is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area (solitude, remoteness, wildness etc), these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience.

Facilities

Type and size: High density camps providing tourist accommodation with modern amenities. Restaurants, shops, education centres, botanical gardens. Day visitor sites are provided outside of main camps. Day visitor sites or picnic sites may provide catered facilities and kiosks. In some parks it may be necessary to provide high density recreational sites with a wide range of intensive activities close to the periphery of the park. Picnic sites, view sites, information centres, ablution facilities, parking areas, education centres etc. Staff villages and administrative centres restricted to core staff. Non essential staff housing, administration and industrial activities positioned outside of or peripheral to the park.

Sophistication of facilities Moderate to high density facilities. Self catering and catered. These camps have modern facilities such as shops and restaurants.

Audible equipment and communication structures Cell phone coverage in vicinity of camps. Code of use for cell phones and radios required to retain relative level of solitude.

Access and roads: The zone is highly motorized including busses and delivery vehicles on designated routes

which are often tarred. Care must be taken to distinguish between roads that serve as high access delivery routes to camps, link roads between camps, and game viewing roads to minimize conflict between users.

Location in Park

In Addo Elephant NP, High intensity leisure areas were restricted to the current rest camp, Matyholweni Camp and the banks of the Sundays River estuary.

4. THE PARK INTERFACE ZONE

The Park Interface Zones shows the areas within which landuse changes could affect a national Park. The zones, in combination with guidelines, will serve as a basis for a.) identifying the focus areas in which park management and scientists should respond to EIA's, b.) helping to identify the sort of impacts that would be important at a particular site, and most importantly c.) serving as the basis for integrating long term protection of a national park into the spatial development plans of municipalities (SDF/IDP) and other local authorities. In terms of EIA response, the zones serve largely to raise red-flags and do not remove the need for carefully considering the exact impact of a proposed development. In particular, they do not address activities with broad regional aesthetic or biodiversity impacts.

In Addo Elephant National Park, there are three categories within the Park Interface Zone. The first two are mutually exclusive, but the final visual/aesthetic category can overlay the others (Map 6).

Priority Natural Areas

This zone aims to ensure the long term persistence of biodiversity, within and around the park, by identifying the key areas on which the long term survival of the park depends. This includes areas important to both biodiversity pattern (especially reasonably intact high priority natural habitats) and processes (ecological linkages, catchments, intact hydrological systems, etc.). This does not imply any loss of existing rights (e.g. current agricultural activities or legal extractive biodiversity use such as fishing), but rather aims to ensure the park's survival in a living landscape.

Priority natural areas include areas identified for future park expansion as well as reasonably natural areas of high biodiversity value which are critical for the long-term persistence of biodiversity within the park. These include adjacent natural areas (especially high priority habitats) which function as an ecologically integrated unit with the park, as well as areas critical for maintaining ecological links and connectivity with the broader landscape.



Development guidelines

Inappropriate developments and negative land use changes (such as additional ploughing permits for natural veld, development beyond existing transformation footprints, urban expansion, intensification of land use through golf estates etc) should be opposed within this area. Developments with site specific impacts (e.g. a lodge on a game farm) should be favourably viewed if they contribute to ensuring conservation friendly land use within a broader area. Guidelines applicable for the Catchment Protection Section would also apply to these areas.

Catchment Protection

These are areas important for maintaining key hydrological processes (surface and groundwater) within the park.

Development guidelines

Within these areas inappropriate development such as dam construction, loss of riparian vegetation and excessive aquifer exploitation should be opposed. In addition, the control of alien vegetation, the control of soil erosion, and appropriate land care (e.g. appropriate stocking rates) should be promoted.

Viewshed protection

These are areas where developments could impact on the aesthetic quality of a visitor's experience in a park. This zone is particularly concerned with visual impacts (both day and night), but could also include sound pollution.

Development guidelines

Within these areas any development proposals should be carefully screened to ensure that they do not impact excessively on the aesthetics of the park. The areas identified are only broadly indicative of sensitive areas, as at a fine scale many areas within this zone would be perfectly suited for development. Further, very invasive developments outside this zone would also have to be considered.

5. CURRENT STATUS AND FUTURE IMPROVEMENTS

Certain elements of the Addo Elephant National Park CDF have not yet been finalized. Remote areas will still be investigated for possible formal declaration as Wilderness Areas in terms of Section 22 of the PAA. Special management overlays which designate specific areas of a park that require special management interventions (e.g. areas requiring rehabilitation) will also be identified.

6. REFERENCES

Department of Environmental Affairs and Tourism. 2003. National Environmental Management: Protected Areas Act (Act 57 of 2003). Department of Environmental Affairs and Tourism, Pretoria.

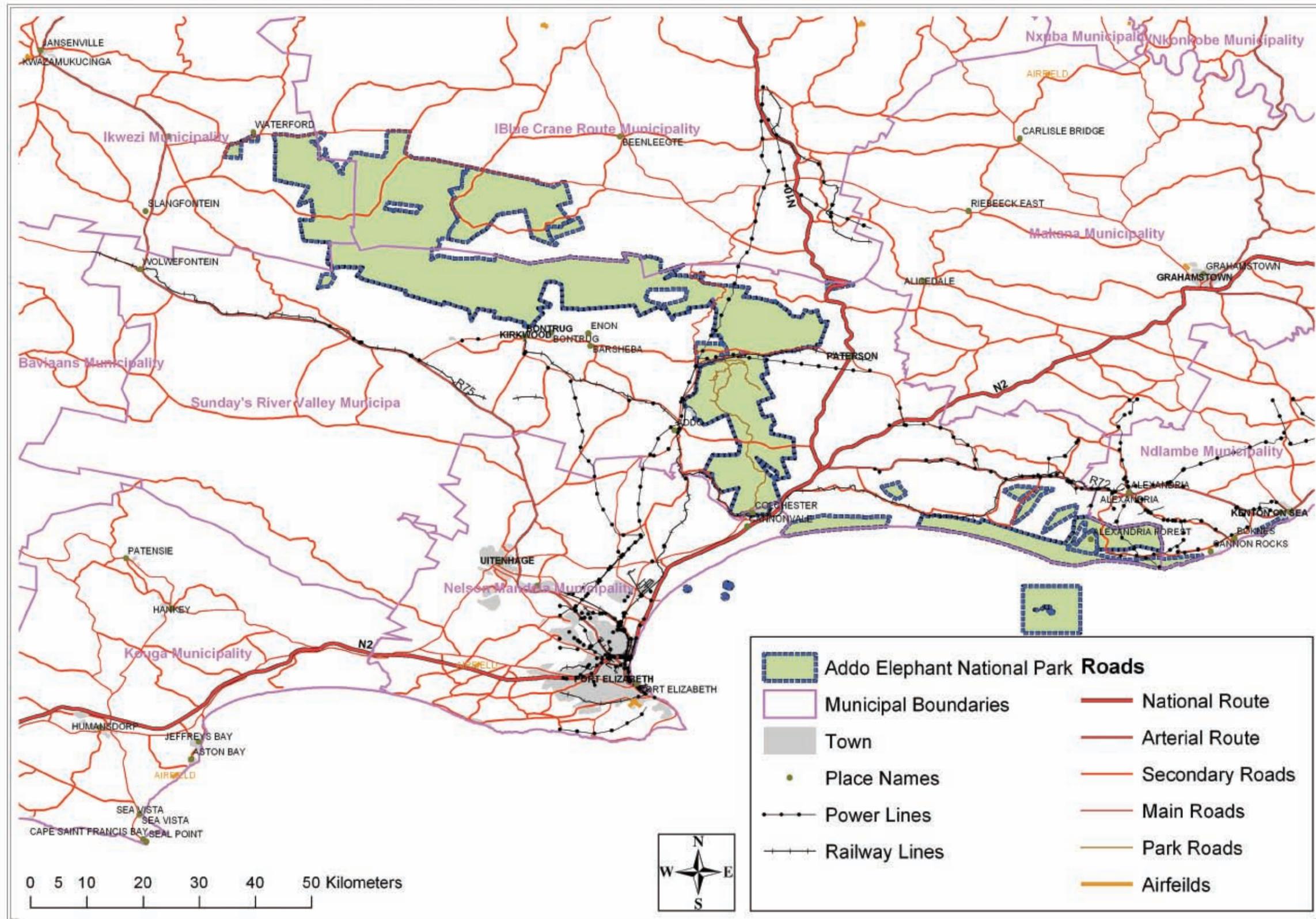
SANParks. September 2005. Sensitivity-Value analysis Manual. Unpublished. SANParks, Pretoria.

SANParks. November 2005. CDF Planning Manual. Unpublished. SANParks, Pretoria.

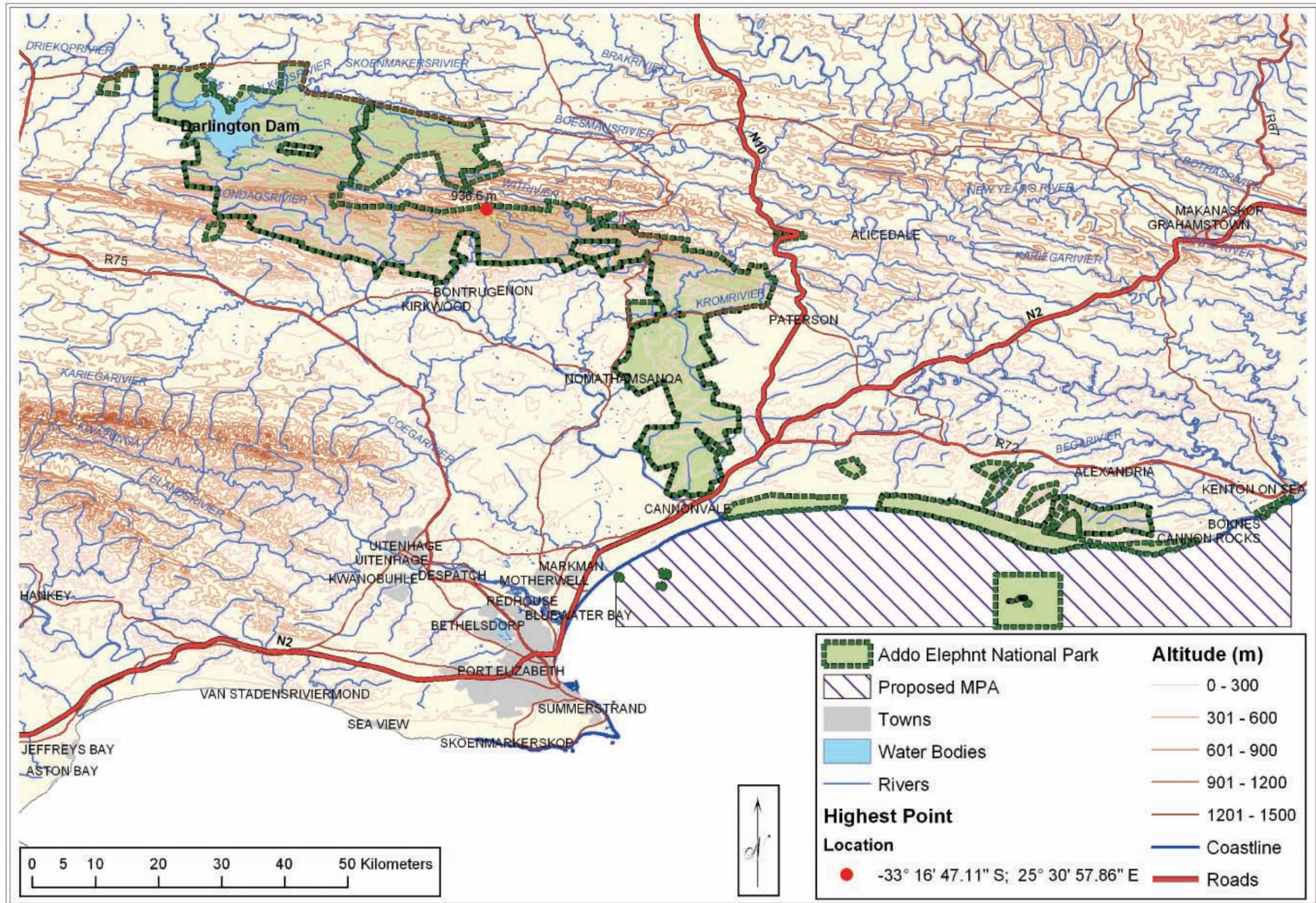
SANParks. July 2006. Conservation Development Framework for Addo Elephant National Park. Unpublished. SANParks, Pretoria.

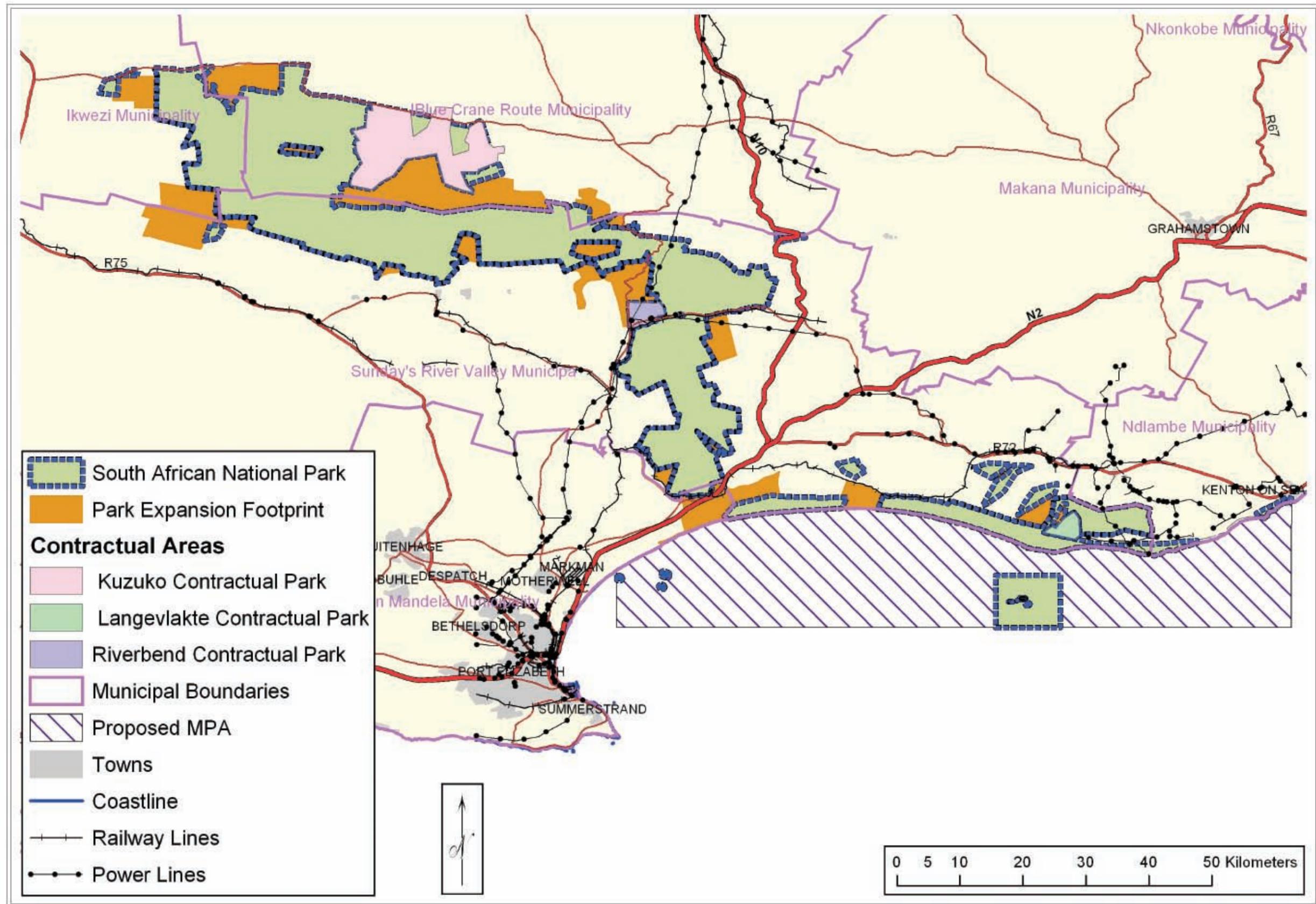
APPENDIX 2

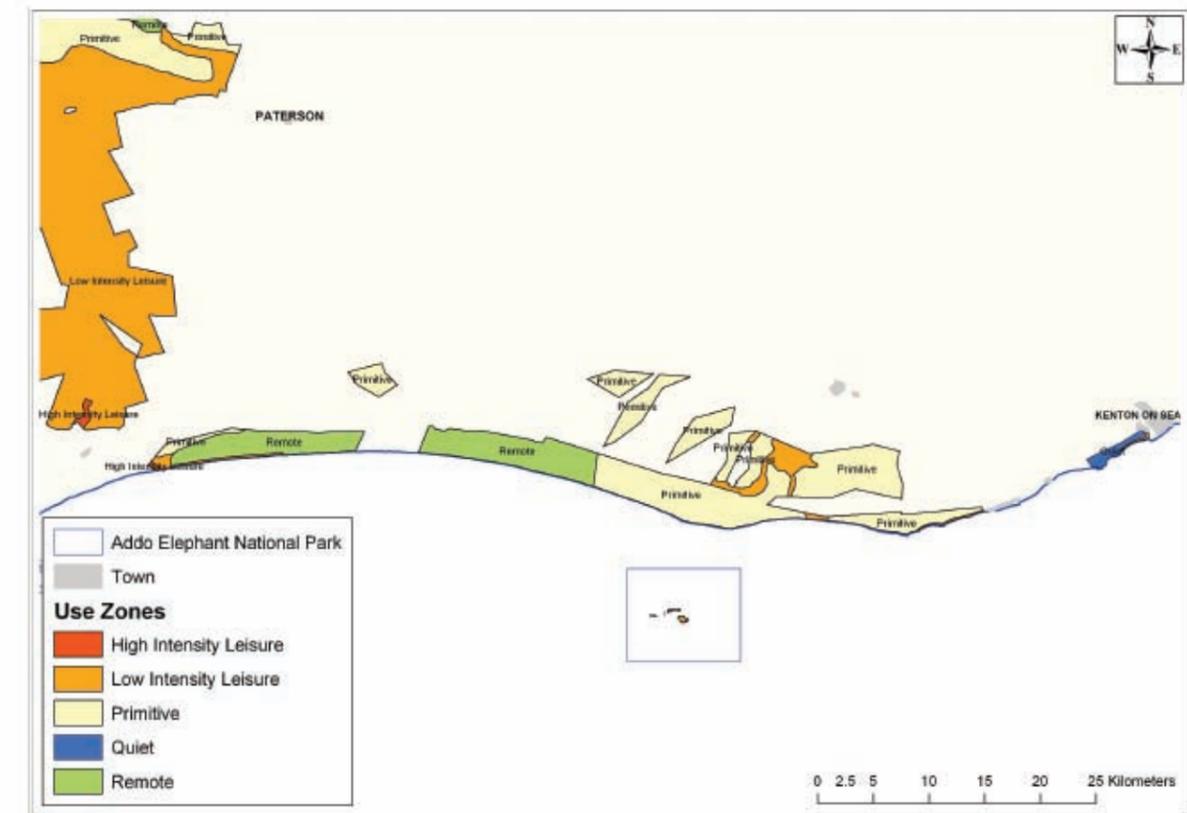
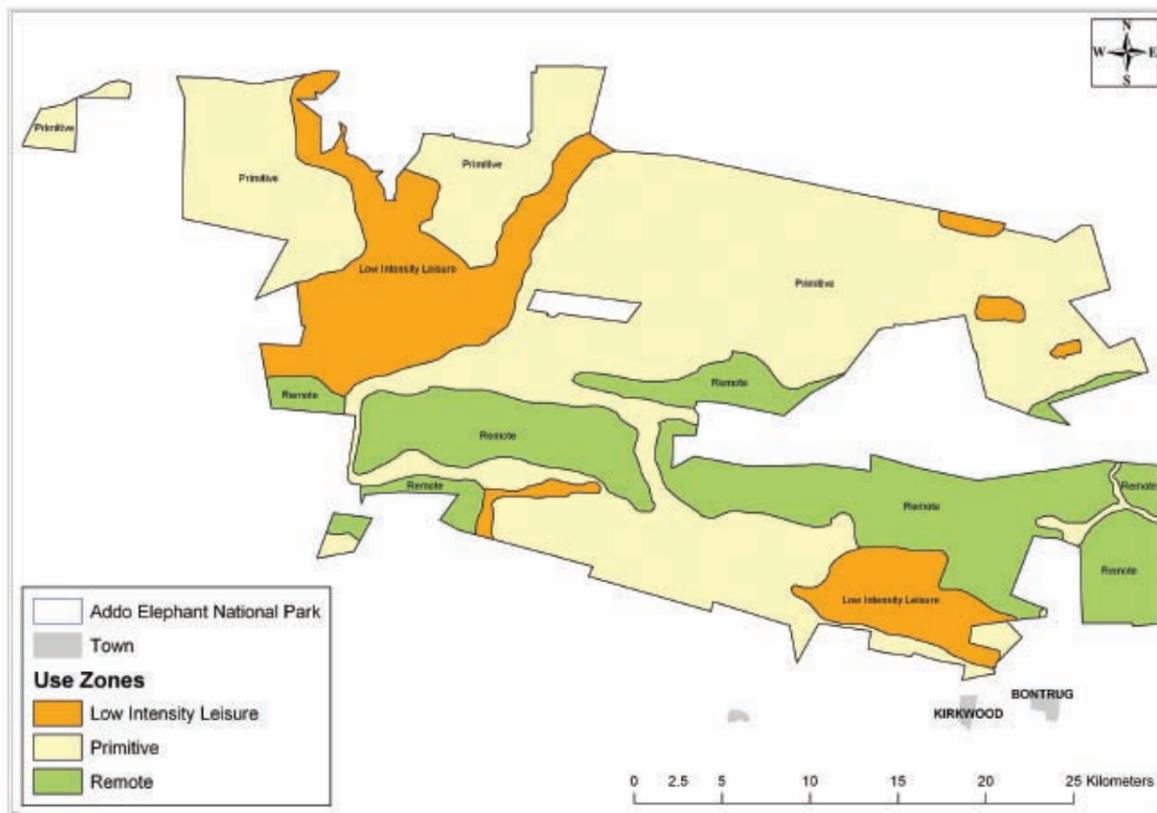
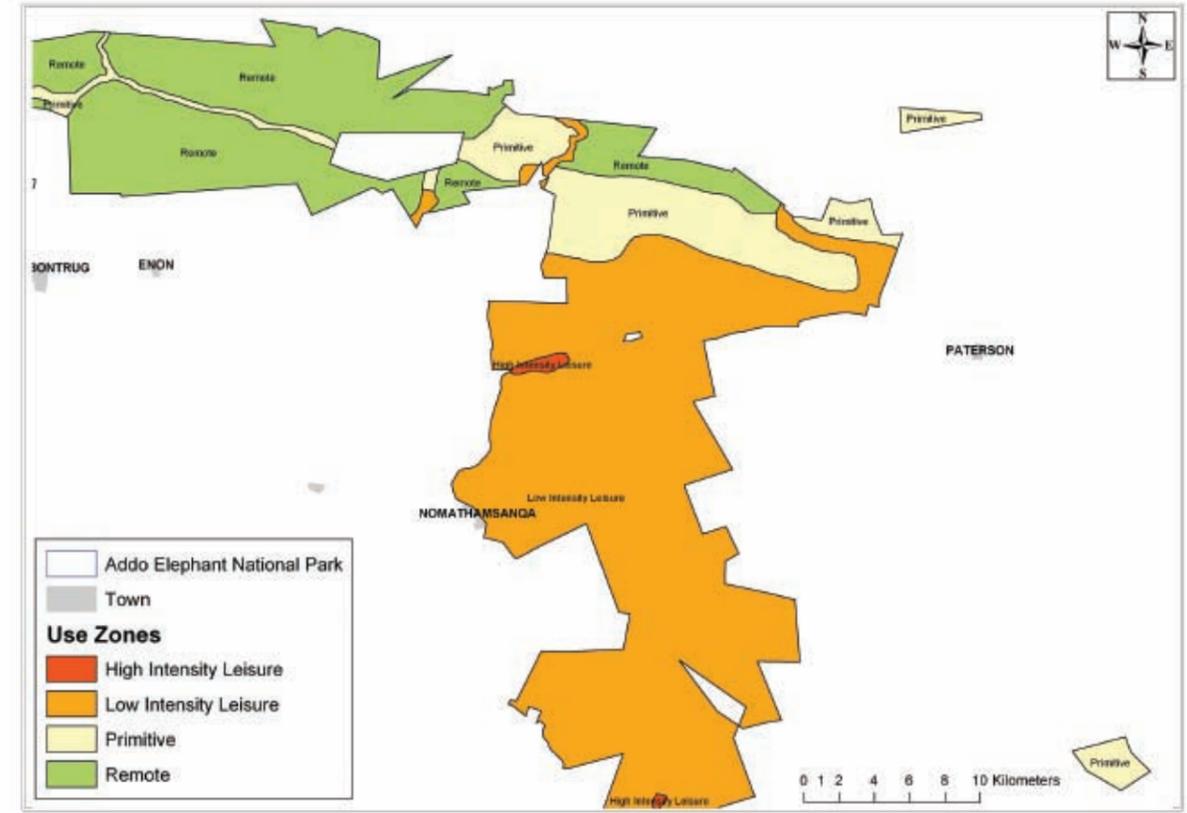
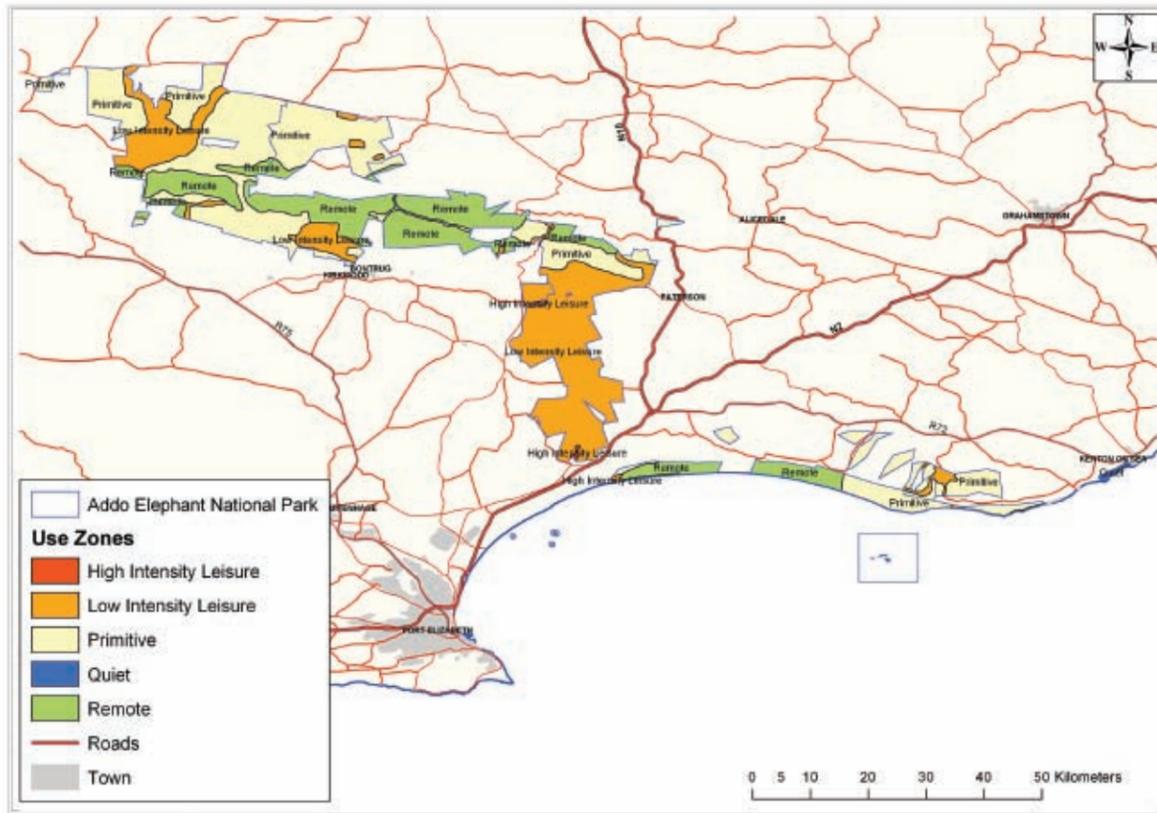
Map 1 – Regional Map

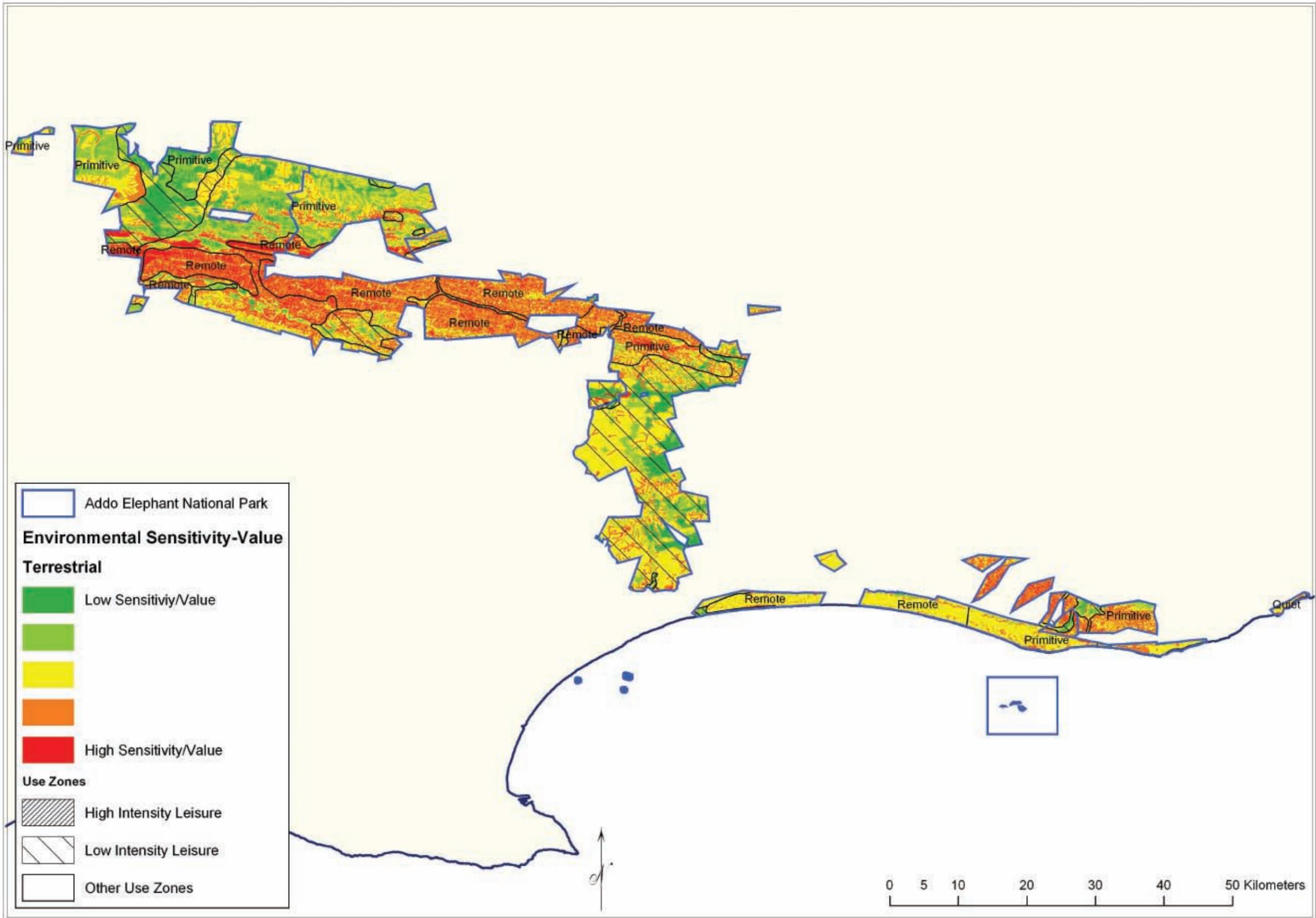


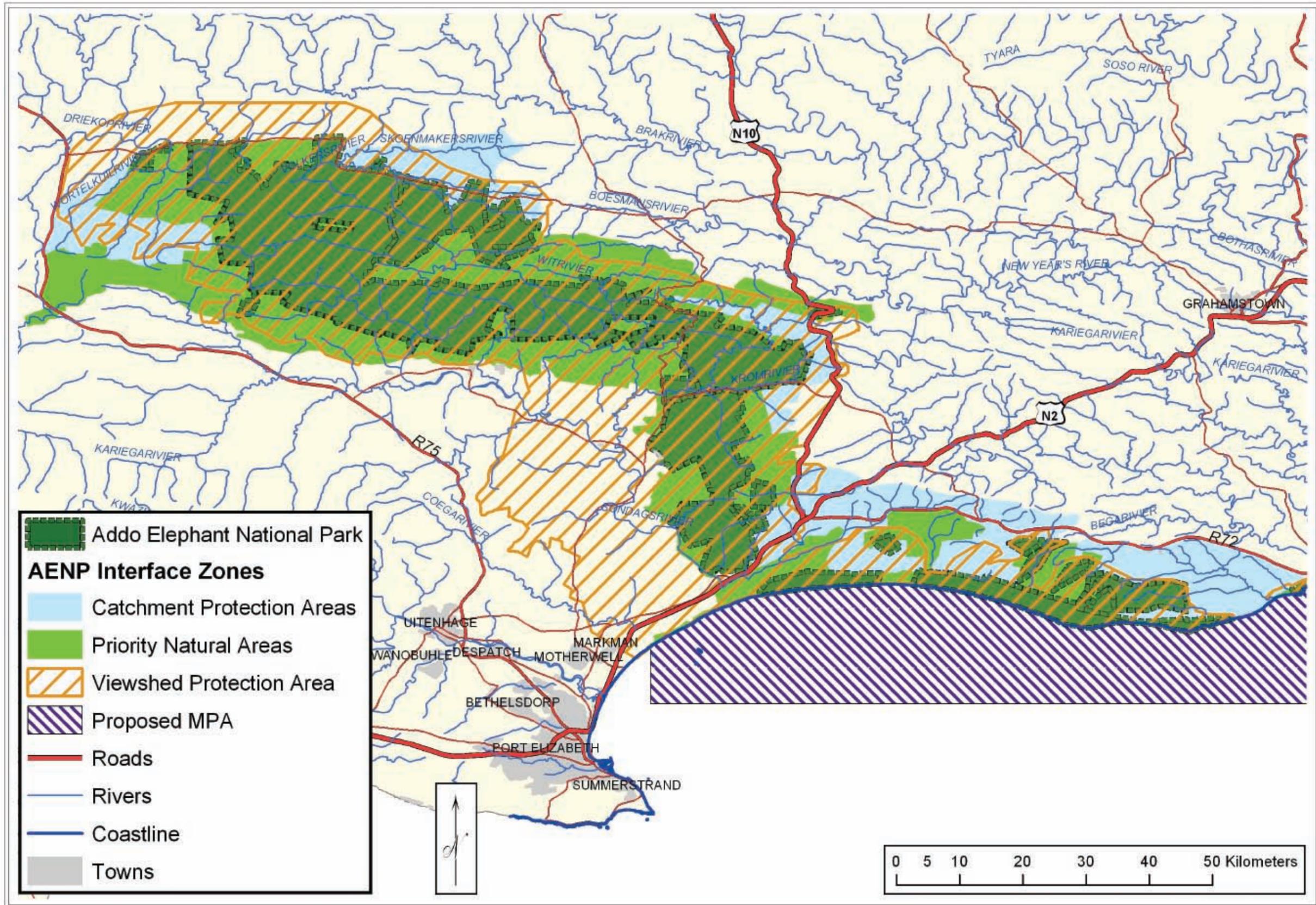
Map 2 – Physical features of the park













ADDO ELEPHANT NATIONAL PARK

P O Box 52

ADDO

6105

Tel: (042) 233 8600

Fax: (042) 233 8643