



South African
NATIONAL PARKS

Wilderness National Park

PARK MANAGEMENT PLAN

October 2006

AUTHORISATION

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

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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 Wilderness National Park (WNP), 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 WNP, proclaimed in 1983 is situated between the towns of George and Knysna in the Western Cape and forms part of the world-renowned Garden Route. This park is most probably one of the most integrated urban parks in South Africa and probably in the world. Main sources of income for communities surrounding the park are offered by the park, domestic service, restaurants, hotels and B& B's, petrol stations and farms in the area. The park is composite of lakes, rivers, vleis, estuaries and beaches all with a backdrop of lush forests and lofty mountains and offers a mild climate throughout the year. It is a birder's paradise, with a total of 257 bird species, including the most diverse and abundant water bird communities.

The park falls within the Cape Floristic Region (CFR) with its rich biodiversity under serious threat for a variety of reasons. The region has been identified as one of the worlds "hottest" biodiversity hotspots. The Cape Action Plan for the Environment (C.A.P.E) is a strategic plan to identify the key threats and root causes of biodiversity losses that need to be addressed in order to conserve the floral kingdom. The Garden Route Initiative (GRI) is one of the component landscape initiatives of the C.A.P.E. programme, working towards the implementation of the C.A.P.E strategy in the Garden Route region.

The process towards establishing a single consolidated mega-park in the Garden Route has been initiated by SANParks and forms a part of the larger GRI project. The mega-park includes the currently proclaimed Tsitsikamma and **Wilderness NPs**, as well as the former Knysna National Lakes Area. The vision is to manage all three of these protected areas along with national forests transferred to SANParks, and its contracting partners, as an integrated whole in the regional mosaic. This will meaningfully conserve a representative sample of the Garden Route's biodiversity heritage under a single banner. Given this broader vision for the protected areas in the Garden Route, WNP's management plan need be consistent and support the notion of the mega-park. The vision statement for WNP recognises the importance of having to conserve this areas' unique biodiversity in conjunction with its important cultural heritage and as a part of a larger socio- economic system.

To meet this vision a desired state for the proposed Garden Route NP to guide park management in its daily operations and longer term planning was developed. 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. In this way the management plan was customized for TNP, but within the mega-park context.

The WNP plans specifically to conserve a representative sample of the regions ecosystems in a linked landscape, with particular emphasis on the Wilderness Lake systems, and the maintenance or restoration of environmental processes. It also plans to in conjunction with relevant stakeholders, to reduce threats and pressures and limit environmental impacts. The park plans to develop its tourism infrastructure and facilities in order to enhance the experience as well as to integrate the current park as a tourist node in the greater Garden Route protected areas." Further to the parks current zonation plan, will be the development of an all inclusive conservation development framework (CDF) for the mega-park that sets the limitations for development based upon regional, biological and social informants. This would be fully in tune with local IDPs to facilitate development and conservation issues.

Purpose and formulation of the park management plan

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. The purpose of a management plan is –

- To provide a **holistic view** of where the park is and where it is to go in the short and long term.
- To **inform management** at all levels, from the section manager through to the CEO, Board and the Minister;
- To **streamline**, where possible, management procedures.
- To provide a **sound motivation for justifying budgets** and where necessary increasing them, as well as providing indicators to ensure that the budget is spent correctly
- To **build accountability** (internally and externally) into the management of the park
- To **provide for capacity building and future** green and economic thinking
- To enable the management authority to manage the park in line with all **relevant legislation and policies**.

The park management plan is developed in line with SANParks Biodiversity Custodianship Framework (Rogers 2003) which proposes the means to plan, integrate, implement and review ecological, social and economic components of SANParks core business, whilst allowing continual learning and improvement. 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 (both internal and external) cycles. The park management plan is both informed by corporate policies, public consultation, which in turn feeds back to corporate.

The first step in compiling/revising a management plan is to develop the **desired state** of the park which guides both the direction of the park and its daily operations, all within SANParks general policy framework. This is followed by the generation of a park vision and mission, and the park objectives and specific management programmes to meet them. The setting of the desired state will be dealt in detail after the background contextual information sets the scene for the park.

Objectives Hierarchy for the WNP:

A hierarchy of objectives for the park have been formulated by park management in conjunction with key stakeholders with reference to the above background information, the park's vital attributes, perceived threats and constraints, guiding principles and the vision. The objectives are listed in the table below, along with initiatives and their associated park programmes to meet the objectives,

In addition, the table list SANParks corporate balanced score card objectives as a means of indicating the link between the parks and SANParks corporate objectives. In 2004 SANParks implemented the Balanced Scorecard management tool to provide a comprehensive business measurement and management framework that allowed the organization to translate its value proposition into achievable objectives, measures and targets. These are divided into four operational quadrants affecting SANParks business, namely: Financial; Customer; Internal; and Learning & Growth. The balanced score card has the following advantages in that:

- Places SANParks business within a common framework
- Communicates strategy effectively to all levels
- Makes strategic goals operationally implement able
- Align departments and activities
- Links remuneration to performance
- Effects organisational change

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List of Acronyms and abbreviations used:

BSC	Balanced Scorecard
C.A.P.E	Cape Action Plan for People and the Environment
CBOs	Community Based Organisations
CDF	Conservation Development Framework
CMAs	Catchment Management Authorities
CRM	Cultural Resource Management policy
EAP	Employee Assistance Program
EMS	Environmental Management System
EXCO	Executive Committee
GGP	Gross Geographic Product
GRI	Garden Route Initiative
HDE	Historically Disadvantaged Enterprise
IUCN	International Union for the Conservation of Nature and natural resources
MPA	Marine Protected Area
NGOs	Non- Government Organisations
PAA	Protected Areas Act
PFMA	Public Finance Management Act
SAHRA	South African Heritage Resources Agency
SANParks	South African National Parks
SBR	State of Biodiversity Report
SEA	Strategic Environmental Assessment
SEDA	Small Economic Development Agency
SMME	Small, medium and macro enterprise
WNP	Wilderness National Park

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1. Introduction to Background Information

1.1. Location

The Wilderness National Park (WNP) (33°50'-34°30'S; 22°33'-22°50'E) is located between the towns of George (16km) and Knysna (40km), and adjoins the Indian Ocean on the Southern Cape Coast.

1.2. Extent

The WNP is ± 2 595 ha in extent, and incorporates the Touw Estuary, Eilandvlei, Langvlei, Rondevlei and all interleading channels (collectively referred to as the Touw System), Swartvlei Lake, Karatara Lake and Swartvlei estuary (collectively referred to as the Swartvlei System); a portion (72.1 ha) of the lower reaches of the Duiwe River catchment; and the marine shoreline (Admiralty Zone) from Wilderness (town) to the western boundary of the Goukamma Nature Reserve.

1.3. History

The WNP was proclaimed in 1983 with subsequent additions made in 1986 (Swartvlei System), 1987 (state lands in the Wilderness National Lake Area), 1991 (Rondevlei and lands between Rondevlei and Swartvlei Lake), and 1997 (lower Duiwe River). The objective of the park was to conserve the Touw and Swartvlei Systems (collectively referred to as the Wilderness lakes) and associated historic and cultural assets and natural landscape features. Portions of the Touw System (Rondevlei, Langvlei, Eilandvlei, Serpentine) were designated in terms of the Convention on Wetlands (Ramsar Convention) as a Wetland of International Importance in 1991.

1.4. Urban/rural park relation

This park is most probably one of the most integrated urban parks in South Africa and probably in the world. Its borders are intertwined with residential estates (Wilderness, Klein Krans and Sedgefield) and farmlands to the extent that it becomes difficult to know when one is in the park and when not. Located between the town of George (16km) and Knysna (25km) in the heart of the Garden Route the area has seen a significant increase in residential development over the last five years.

The Park is a largely an open access system with only the controlled access at the Ebb and Flow Rest camp. Contact and liaison with communities adjacent to the park takes place in a formal and informal manner. Regular contact is maintained with various levels of community structures as part of the parks daily operations.

1.5. Socio economic context:

The park serves an area between Sedgefield and George. Communities within close proximity of the park, fall within two municipal areas: Knysna (Sizamile, Sedgefield) and George (Kleinkrans, Kransvlei, Langvlei, Rondevlei, Wilderness, Wilderness Heights, Hoekwil, Touwsranten). The estimated population for Sedgefield is 7840 (as per Knysna Municipal figures). The prevalence of HIV/ Aids estimated at 298 as per reported antenatal cases at the Knysna Municipal Health Department.

The Sedgefield economy is based on Tourism services. Most people work in Knysna (25km) especially the more professional jobs. Some are employed by SANParks Poverty Relief programmes such as CoastCARE and Work for Water. Communities within the George municipal area show an unemployment rate of 21% as per Eden Integrated Development Plan (IDP) 2006. The estimated population figure is 16983.

Main sources of income for communities surrounding the park are offered by: the park (permanent positions in SANParks, Work for Water and CoastCARE, learnerships and holiday jobs), domestic service, restaurants, hotels and B& B's, petrol stations and farms in the area. Others travel to and from George.

1.6. The park in its bioregional context:

The park falls within the Cape Floristic Region (CFR). The CFR in South Africa is the smallest and richest of the six floral kingdoms in the world, and it is the only one to be found entirely within one country. Its rich biodiversity is under serious threat for a variety of reasons including conversion of natural habitat to permanent agriculture, inappropriate fire management, rapid and insensitive development, overexploitation of water resources, marine resources, and infestation by alien species. The region has been identified as one of the worlds "hottest" hotspots of biodiversity.

In response to this a process of extensive consultation involving various interested parties, including local government and non governmental organisations resulted in the establishment of a strategic plan referred to as Cape Action Plan for the Environment (C.A.P.E). It identified the key threats and root causes of biodiversity losses that need to be addressed in order to conserve the floral kingdom. This resulted in a spatial plan identifying areas which need to be conserved and a series of broad programme activities which need to be undertaken over a 20 year period. Based on the situation assessment and analysis of threats, three overarching themes that complement and reinforce one another were developed: C.A.P.E. will:

- establish an effective reserve network, enhance off-reserve conservation, and support bioregional planning
- strengthen and enhance institutions, policies, laws, co-operative governance, and community participation
- develop methods to ensure sustainable yields, promote compliance with laws, integrate biodiversity concerns into catchment management, and promote sustainable eco-tourism

The Garden Route Initiative (GRI) is one of the component landscape initiatives of the C.A.P.E. programme, working towards the implementation of the CAPE strategy in the Garden Route region. The GRI is a partnership programme that aims to conserve and restore the unique biodiversity and sense of place in the Garden Route, while supporting the sustainable management of the area and the delivery of benefits to local communities. The GRI is supported by a grant as part of the C.A.P.E. Programme from the GEF (Global Environment Facility) through the World Bank to SANParks.

The GRI's strategic areas of implementation include the consolidation of priority biodiversity into protected areas, assisting land owners to appropriately manage biodiversity on their properties, and incorporating biodiversity priorities into land use planning and decision making, as well as ensuring the sustainable management effectiveness of the Garden Route's conservation areas.

SANParks is leading the implementation of the protected area land consolidation programme for the GRI, working towards the establishment of the single consolidated Garden Route National Park, as well as working with CapeNature with the Stewardship Programme to realize the protection and appropriate management of the biodiversity priorities on private land.

1.7. Climate

The WNP occurs in the relatively small perennial rainfall zone of South Africa (Tyson 1971). Annual rainfall is between 600 and 700 mm (Schafer 1992) with little seasonal variation (Whitfield *et al.* 1983), but slight peaks do occur from January to March, and from August to November (Robinson & De Graaff 1994; Fijen & Kapp 1995c). Mean rainfall in the upper river catchments is 900-1000 mm y^{-1} (Adamson 1975; Fijen & Kapp 1995c).

South-west winds predominate throughout the year (Howard-Williams & Allanson 1978), though warm north and north-east winds are fairly common during winter months. Strong winds are uncommon with 97% below 30 km hr^{-1} (Whitfield *et al.* 1983). Cloudy conditions are common. Mean daily minimum and maximum air temperatures are 15-25°C (summer) and 7-19°C (winter). Temperature extremes recorded at Swartvlei Lake (1975 to 1982) are minimum 2°C, and maximum 33°C (Whitfield *et al.* 1983).

1.8. Topography, geology & soils

The coastal lakes and their surrounding dunes comprise predominantly quaternary sands in which dune rock or aeolianite has been formed from the cementing of sandy ridges by calcium carbonate (Martin 1962). Soils range from inceptisols on the youngest dunes, to finely textured, poorly drained podzols and duplex soils in older dunes (Schafer 1991). The high silt and fine clay fraction in the topsoil of older dunes, coupled with underlying impervious clay or rock layers and thin ironpans contribute to restricted drainage (Schafer 1991). Much of the floodplain of the lake systems are covered with a dark alluvium which is rich in organic matter (Allanson & Whitfield 1983). Sediments on the margins of Swartvlei lakes are composed of virtually pure quartzose sand, whereas highly organic muds cover the lake floor (Birch *et al.* 1978).

The Wilderness lakes formed as a result of the cutting off of rivers by the development of dune cordons during the period 67 to >200 ka BP (Bateman *et al.* 2004), thus preventing them from flowing directly into the sea. The lakes are transient features that through natural erosion and deposition processes are slowly silting up.

1.9. Freshwater & estuarine processes

1.9.1. Hydrology

The catchment area of the Touw System comprises three rivers, namely Touw River (catchment area = 96.2 km²), Duiwe River (42.1 km²) and Langvlei Spruit (8.2 km²) (Hughes & Filmalter 1993; Fijen & Kapp 1995b), with rivers draining into the Swartvlei System being the Diep River (98.3 km²), Klein Wolwe River (17.2 km²), Höekraal River (111.0 km²), and Karatara River (101.6 km²) (Whitfield *et al.* 1983; Hughes & Filmalter 1993).

Virgin mean annual runoff (MAR) in the Touw System is $24.6 \times 10^6 \text{ m}^3 \text{ y}^{-1}$ (Fijen 1995a), and in the Swartvlei System is estimated to be between $66 \times 10^6 \text{ m}^3 \text{ y}^{-1}$ (CSIR 1978) and $70.6 \times 10^6 \text{ m}^3 \text{ y}^{-1}$ (Fijen 1995a). Total flow reduction in the Touw System in 1995 was estimated to be $7.1 \times 10^6 \text{ m}^3 \text{ y}^{-1}$ (29% of virgin MAR) (Fijen & Kapp 1995a; Fijen 1995a) for forestry (15% MAR), agricultural (12% MAR) and domestic (2% MAR) use. It was predicted (in 1995) that future flow reduction will reduce to 62% MAR due to predominantly increasing agricultural and domestic demand (Fijen & Kapp 1995a; Fijen 1995a). Total flow reduction in the Swartvlei System in 1995 was estimated to be $22.6 \times 10^6 \text{ m}^3 \text{ y}^{-1}$ (32% of virgin MAR) (Fijen & Kapp 1995a; Fijen 1995b) for forestry (27% MAR), agricultural (5% MAR) and domestic (<1% MAR) use. It was predicted (in 1995) that future flow reduction will reduce to 63% MAR due predominantly to increasing agricultural and domestic demand (Fijen & Kapp 1995a; Fijen 1995b). Total evaporation from the Swartvlei System has been estimated as $12.1 \times 10^6 \text{ m}^3$ (cf. 1127 mm y^{-1}) or approximately 20% of MAR (Whitfield *et al.* 1983) indicating that under natural conditions Swartvlei Lake is unlikely to become hypersaline.

Flood hydrograph modelling in the Touw System emphasised the short residency time of flood waters and hence potential for rapid increases in water level, particularly in the Touw Estuary (Görgens 1979). Expected water levels (meters amsl) in the Touw Estuary that would result during flood events of different return frequency are 5 yr. = 3.22; 10 yr. = 3.61; 20 yr. = 3.88; 50 yr. = 4.01; 100 yr. = 4.93 (Görgens 1979). Hydrological modelling demonstrated that maintaining the height of the sand sill at the estuary mouth at between 2.1 m and 2.4 m amsl should prevent flooding of low-lying properties by floods with a return frequency of 1 in 50 years or lower, and that dredging of the connecting channels would not significantly reduce the peak water levels. (CSIR 1981, 1982).

In the Swartvlei System when river floods coincide with periods when the estuary mouth is closed, or even with very high spring tides when the mouth is open, flooding of adjacent land can be expected, especially in the Sedgefield Extension 1 area (Howard-Williams & Allanson 1979). To reduce the probability of flooding whilst meeting hydrological and ecological needs for periodic elevated water levels it has been recommended that Swartvlei Estuary mouth be artificially breached at 2.0 m amsl (CSIR 1978; Howard-Williams & Allanson 1979; Whitfield *et al.* 1983).

Mathematical modelling of water movement in the Swartvlei System indicated that the removal of the rail-bridge dividing Swartvlei Lake and Swartvlei Estuary would have no discernible effect on the estuary mouth (CSIR 1978; Huizinga 1987), with the influence of the bridge on flow reduction confined to the immediate vicinity of the bridge as the main restriction to outflow in the system is the narrow estuary mouth (Whitfield *et al.* 1983).

1.9.2. Physical and chemical

Water temperature: Temperature variations in the lakes and estuaries follow a seasonal pattern, with temperatures generally ranging between 10-14°C in winter and 25-29°C in summer (Whitfield *et al.* 1983; Russell 1996). Closure of the Swartvlei Estuary mouth has little effect on water temperature (Whitfield *et al.* 1983), though during summer when the estuary mouth is open, the waters near the mouth are generally 1°C cooler than further up the estuary.

Salinity: Swartvlei Lake is normally meromictic, as a result of its usual stratification into water layers of different densities, caused by vertical stratification in salt concentration (Robarts & Allanson 1977; Howard-Williams & Allanson 1978). The bottom layer of high salinity water can be up to 5 m thick (Whitfield *et al.* 1983). When Swartvlei Estuary mouth is closed, wind mixing of the surface waters of the lakes gradually breaks down the salinity layering (Robarts & Allanson 1977; Allanson & Howard-Williams 1984). No definite pattern of stratification has been recorded in the lakes of the Touw System. The salinity of the lakes of the Touw System increase the further removed they are from the sea, with Eilandvlei averaging between 6 and 10 g kg⁻¹, Langvlei 10 and 13 g kg⁻¹, and Rondevlei between 12 and 16 g kg⁻¹ (Whitfield *et al.* 1983; Russell 1999a).

Turbidity: Turbidity recorded in the lakes and estuaries of the WNP are moderate, with the average of all waterbodies being below 10 NTU (Whitfield *et al.* 1983; Russell 1999a). Water clarity is greatest in Swartvlei Lake, with all systems undergoing periodic dramatic reductions in clarity which is generally associated with flood conditions (Whitfield *et al.* 1983; Russell 1999a).

Dissolved oxygen: Spatial variations in dissolved oxygen in the Swartvlei System depend largely on the distribution of aquatic plants, with higher oxygen values being associated with the presence of submerged aquatic plants (Howard-Williams & Allanson 1979). The closing of the estuary mouth has no effect on the mean dissolved oxygen values in Swartvlei Estuary (Howard-Williams & Allanson 1979). Deoxygenation has been recorded in localised areas in the Swartvlei Estuary towards the end of the open phase (Howard-Williams & Allanson 1979). These areas are at the sides of the channel where mats of floating algae start to rot, and in deeper portions of the estuary. The only recorded incidence of low oxygen concentrations resulting in the death of organisms occurred in Rondevlei during March 1993 when the senescence of a dinoflagellate/algal bloom resulted the mean oxygen concentration in Rondevlei declining to below 1 ppm, which resulted in the death of several large Cape stumpnose (*Rhabdosargus holubi*) and white steenbras (*Lithognathus lithognathus*) (Russell 1994).

Phosphorous: Soluble reactive phosphate (SRP) ($\text{PO}_4\text{-P}$) concentration in Swartvlei Lake is very low ($\pm 1 \mu\text{g l}^{-1}$) and is often present in undetectable quantities (Whitfield *et al.* 1983). Dissolved humic matter from the rivers plays a significant role in binding phosphate, and hence contributing to the nutrient poor status of the waterbody (Howard-Williams 1977). Total dissolved phosphorous (TDP) values range from 10 to 20 $\mu\text{g l}^{-1}$, and total phosphorous (TP) up to 30 $\mu\text{g l}^{-1}$ (Whitfield *et al.* 1983). SRP, TDP and TP in the stratified bottom waters of the lake all exceed 100 $\mu\text{g l}^{-1}$ (Howard-Williams 1977) but are unavailable for plant growth (Howard-Williams 1977). The oligotrophic status of Swartvlei Lake has biological consequences, which include low phytoplankton primary production (Robarts 1976), low zooplankton biomass (Coetzee 1981) and low ichthyoplankton densities (Whitfield 1989b).

TDP concentrations in Swartvlei Estuary remains fairly constant at about 24 $\mu\text{g l}^{-1}$ (Whitfield *et al.* 1983), though increases up to 260 $\mu\text{g l}^{-1}$ have been recorded in deoxygenated saline areas.

SRP concentrations in the Touw Estuary and Eilandvlei generally remain low, not exceeding 2.2 $\mu\text{g l}^{-1}$. In Langvlei and Rondevlei however, TP levels as high as 66 and 117 $\mu\text{g l}^{-1}$ respectively have been recorded (Allanson & Whitfield 1983). Despite these comparatively high levels of TP, only occasionally have SRP levels up to 20 $\mu\text{g l}^{-1}$ been recorded in Langvlei and Rondevlei, which is the point at which, if all other factors are propitious, marked algal growth could occur (Allanson & Whitfield 1983).

The main source of P for the estuaries is the sea, and during the tidal phase there being a net import and accumulation of P primarily in the form of particulate matter (Liptrot 1978; Howard-Williams & Allanson 1979). A net outflow of P occurs from Swartvlei Estuary during the strong outflow phases immediately after the estuary mouth is opened, with most of the P leaving the estuary is in particulate form.

Nitrogen: The concentration of N-ions in Swartvlei Estuary are generally low, with concentrations in 1976 being found to range from not detectable to 21 $\mu\text{g l}^{-1}$ [NO_2+NO_3]-N (Coetzee 1978). Howard-Williams and Allanson (1979) recorded values for nitrate ($\text{NO}_3\text{-N}$) ranging from 3 to 30 $\mu\text{g l}^{-1}$, and Robarts (1973) recorded values for ammonia ($\text{NH}_4\text{-N}$) ranging from not detectable to 4 $\mu\text{g l}^{-1}$.

$\text{NO}_3\text{-N}$ concentrations in the Touw Estuary (1979 to 1981) were found to vary between 7 and 60 $\mu\text{g l}^{-1}$ (Allanson & Whitfield 1983) which is well below that which could be considered to constitute serious organic pollution. Similar low levels of $\text{NO}_3\text{-N}$ were recorded in the other waterbodies of the Touw System during non-flood periods, with the exception of Langvlei, where values as high as 569 $\mu\text{g l}^{-1}$ have been recorded.

Surveillance of water chemistry in the Touw System during flood periods has demonstrated that the inflowing streams are an important source of both N- and P-ions into the system (Allanson & Whitfield 1983). Elevated concentrations of both $\text{NO}_3\text{-N}$ and $\text{PO}_4\text{-P}$ have been recorded in the Touw Estuary, Eilandvlei and Langvlei during flood periods, whereas the concentration of N- and P-ions in Rondevlei, with no feeder streams, remained relatively unaltered (Allanson & Whitfield 1983).

Trace elements: Assessment of the occurrence of trace elements (copper, lead, zinc, iron, manganese, cobalt, nickel, chromium, cadmium, mercury, magnesium, aluminium, sodium, calcium, strontium, potassium) in water samples from the Wilderness lakes in 1977 indicated that, with the exception of iron and manganese in Swartvlei Lake, concentrations were generally low (Watling 1977). High iron concentrations appear to be a natural phenomenon in rivers flowing into the lakes, evidenced by the large quantities of ferric oxide which can be seen to cover the rocks along the river beds (Watling 1977).

A sediment sample collected adjacent to the yacht club in Eilandvlei during April 1977 (Watling 1977) was found to have an elevated level of manganese. A core sample taken in this locality also showed an overall elevation in values for copper, lead, zinc, cobalt, nickel, cadmium and chromium, with it being hypothesised that these levels represent some degree of anthropogenic contamination (Watling 1977). Similarly, high levels of nickel from sediments in Swartvlei Estuary may represent contamination from adjacent residential areas. Elevated levels of lead in the upper portions of sediment cores from both lake systems indicate possible pollution from motor fuels or paint (Watling 1977).

Persistent chemicals: Investigations of the concentration of chlorinated hydrocarbon, PCB and Dieldrin residues in the body tissues of aquatic birds in the Touw System have yielded conflicting results. In 1983 low concentrations of t-DDT and PCB were detected in the body tissues of reed cormorant, darter, white-breasted cormorant, black-necked grebe, great crested grebe and grass owl (De Kock & Boshoff 1987). Similarly, a fish eagle egg, collected at Sedgefield during 1985 had a low concentration of t-DDT ($0.21 \mu\text{g g}^{-1}$ wet weight), and no PCBs or Dieldrin residues (De Kock & Lord 1986). In contrast, in 1984 and 1985 high levels of Dieldrin ($1.89 \mu\text{g g}^{-1}$) and t-DDT (6.26 & $5.08 \mu\text{g g}^{-1}$) were recorded in African marsh harrier eggs from the Touw System, with low ratios of DDE/t-DDT in several eggs indicating recent inputs of DDT into the environment. (De Kock & Simmons 1988).

1.10. Marine & coastal processes

Wind and wave conditions are the main factors in coastal hydraulics affecting the Touw and Swartvlei estuaries. South-westerly winds are dominant throughout the year, though there is a strong south-easterly component during spring and summer, and in winter the north-westerly winds are more frequent (Whitfield *et al.* 1983). South-easterly waves predominate in summer and autumn, and south-westerly waves in spring and winter (Whitfield *et al.* 1983), the sector from which the greatest median wave height of 2.75m originate.

Eastward longshore sediment transport is estimated to occur 53% of the time in the region of Swartvlei Estuary mouth, whereas westward longshore drift occurs 23% of the time (Whitfield *et al.* 1983). Littoral sand movement tends to close gaps in the shoreline such as an estuary mouth. This happens when the longshore sand drift becomes stronger than the forces that keep the inlet open. The majority of mouth closures in Swartvlei Estuary occur in winter, which coincides with the predominance of south-westerly wave conditions that are responsible for the main longshore sand transport.

Open estuary mouth conditions were estimated to be at least 40% (Touw System) and 65% (Swartvlei System) under virgin flow conditions. In 1995 open estuary mouth conditions had been reduced to 25% (Touw System) and 55% (Swartvlei System) (Fijen & Kapp 1995a). As a result of possible future reductions in freshwater inflow (see hydrology) the open mouth conditions can reduce further to approximately 19% (Touw System) and 51% (Swartvlei System) (Fijen & Kapp 1995a).

1.11. Flora

1.11.1. Phytoplankton

Three major categories of phytoplankton have been recorded in Swartvlei Lake viz. diatoms, flagellates and dinoflagellates (Robarts 1976) with the diatom *Coscinodiscus lineatus* the most abundant species. Flagellates and dinoflagellates generally form a relatively minor part of the phytoplankton biota (Robarts 1973), though short-lived blooms do occasionally occur.

1.11.2. Algae

Principal genera of epiphytic algae occurring in the Wilderness lakes include *Enteromorpha*, *Lyngbya*, *Cladophora*, *Percursaria*, *Cocconeis*, *Ectocarpus*, *Polysiphonia*, *Chondria* and *Hypnea* (Howard-Williams 1980; Howard-Williams & Liptrot 1980).

1.11.3. Submerged aquatic plants

Submerged aquatic plants are abundant throughout the lake systems. The production of organic matter in the Swartvlei System was calculated in 1978-1979 as $1.84 \times 10^6 \text{ kg y}^{-1}$ (dry weight) (74% of total production) (Howard-Williams & Allanson 1979), and $334 \text{ } 100 \text{ kg y}^{-1}$ (17% of total production) in the Touw System (Howard-Williams 1980). The bulk of this organic matter is produced in the shallow periphery of the waterbodies. Both long- and short-term changes occur in the abundance, biomass and distribution of submerged aquatic plants, with substantial declines in the abundance and distribution of species periodically recorded in most waterbodies (Davies 1982; Weisser & Howard-Williams 1982; Whitfield 1982; Weisser *et al.* 1992). Theorised reasons for periodic declines in aquatic plants include fungal diseases (Howard-Williams 1980), changing nutrient status of the waterbody (Hall 1985a, 1985b; Weisser 1979), shading by *Enteromorpha* (Hall 1985a) and dinoflagellate blooms (Coetzee & Palmer 1982), reduced water transparency resulting from the influx of turbid water (Whitfield 1982; Allanson & Howard-Williams 1984), and reduced calcium: magnesium ratios in the water column, as a result of persistent flooding (Allanson & Howard-Williams 1984).

Declines in the aquatic plants significantly effect food production, with a 10% decline in submerged aquatic plants resulting in a 20% decline in the total food production in Swartvlei Lake (Howard-Williams & Allanson 1979). As the ratio of food production to consumption in Swartvlei Lake is approximately 1:1 (Howard-Williams & Allanson 1979), while in the estuary utilisation of organic material by the biological community is greater than the production rate, any loss in primary production would result in a corresponding reduction in the number of consumer organisms.

Extensive studies of the role of submerged aquatic plants in nutrient cycling have been undertaken in the Swartvlei System. In Swartvlei Lake, no evidence of phosphorous limitation was found in *Potamogeton* tissues (Howard-Williams 1977), whereas the large algae, *Chara* and *Cladophora* spp. were found to be nutrient limited. *Potamogeton* does not act as an efficient "nutrient pump" (Howard-Williams & Allanson 1979), thus the release of nutrients from the rooted aquatic plants is through decomposition (Howard-Williams & Davies 1979). The rate of uptake of nutrients from the water column by epiphytic algae is approximately ten orders of magnitude greater than that of the *Potamogeton* (Howard-Williams 1977, 1981), thus enrichment of the water with P and N compounds would be expected to result in the growth of epiphytic algae. The sediments of Swartvlei Lake act as a major sink to plant nutrients, absorbing up to 60 % of all phosphorous inputs into the system (Howard-Williams 1977, 1981).

In Swartvlei Estuary the eelgrass *Zostera capensis* acts as a nutrient pump adsorbing nutrients from the sediments and secreting them into the surrounding water (Howard-Williams & Allanson 1979). Two pathways of the take-up of nutrients are thought to exist, the first being a sediment-water exchange system, and the second being that the large mats of *Enteromorpha* algae take up P during the day faster than the rate at which it is released by the *Zostera*, and then in turn release P compounds during the night. There is no evidence of a long-term accumulation of phosphate in Swartvlei Estuary (Howard-Williams & Allanson 1979) which indicates that accumulated nutrients must be periodically removed.

1.11.4. Emergent aquatic plants

Mapping of the distribution of emergent aquatic plants in the 1970s (Weisser & Howard-Williams 1982) and 1990s (Russell 2003) indicated localised increases in common reeds *Phragmites australis*, bulrush *Typha capensis*, Scrub or trees, and Grass or Fields, and decreases in dune rush *Juncus kraussii*, *Schoenoplectus scirpoideus* and Low scrub or fynbos in the Touw System. Probable causes of change include the natural tendency of plants to colonise new areas, as well as anthropogenic manipulation of physical, chemical and biological processes, including the cessation of disturbance by large herbivores, water-level stabilisation, changes in soil salinity and the accumulation of plant litter within wetland areas (Russell 2003).

Phragmites australis is the most abundant of the emergent aquatic plants, calculated in 1979 to produce up to 303 000 kg y⁻¹ organic matter (dry weight) (12% of total production) in the Swartvlei System (Howard-Williams & Allanson 1979), and 1.08 x 10⁶ kg y⁻¹ (55% of total production) in the Touw System (Howard-Williams 1980). Organic matter production by other emergent aquatic plant species is substantially lower, with *Schoenoplectus scirpoideus* producing 351 600 kg y⁻¹ (18.0% of total production), and *Typha capensis* 182 800 kg y⁻¹ (9.4% of total production) in the Touw System (Howard-Williams 1980).

1.11.5. Terrestrial vegetation

The vegetation of the park largely comprises two vegetation types/broad habitat units, i.e. Goukamma Fynbos/Thicket Mosaic and Knysna Afromontane Forest (Cowling & Hejnis 2001). The latter is named "Southern Afrotemperate Forest" by Mucina & Rutherford (2006). The former comprises a mixture of fynbos and subtropical thicket on dunes and was accordingly termed a "Mosaic of Dune Fynbos and Kaffrarian Thicket" by Moll *et al.* (1984), "South Coast Dune Fynbos" by Cowling (1984), and "Southern Cape Dune Fynbos" by Mucina & Rutherford (2006). Structurally, South Coast Dune Fynbos is distinguished from other fynbos types by the strong component of large-leaved shrubs (of subtropical thicket affinity, e.g. *Rhus* species, *Olea exasperata*, *Maytenus procumbens*, *Sideroxylon inerme*, *Pittosporum viridiflorum*, *Pterocelastrus tricuspidatus*) and the lack of proteoid shrubs. Restioids and small-leaved shrubs dominate in the herb and shrub strata respectively, although grass cover can be quite high (Cowling 1984). Several rare and/or endemic species are known from the small (± 212 ha) community between Rondevlei and Swartvlei Lake, including *Satyrium princeps*, *Gladiolus vaginatus*, *Silene sp. nov.* and *Disa sp. nov. cf. hians* which is only known from this population (Vlok 1989).

1.12. Fauna

1.12.1. Zooplankton

Zooplankton communities consist primarily of estuarine species, with 45 forms having been recorded (Grindley & Wooldridge 1973). Two zooplankton communities have been described, namely a mixolimnion community occurring mainly under aerobic conditions, and a monimolimnion community occurring primarily under anaerobic conditions and in the presence of H₂S (Coetzee 1981, 1983). The highest daytime number of individuals in the Touw System has been recorded from Eilandvlei (14 641 indiv. m⁻³) followed by Rondevlei (13 108 indiv. m⁻³) (Coetzee 1983). The highest mean daytime standing crop has been recorded in Langvlei (17 mg m⁻³), followed by Rondevlei (15 mg m⁻³) and Eilandvlei (6 mg m⁻³) (Coetzee 1983). The lowest daytime planktonic standing crop was recorded over deep areas in Swartvlei Lake, where bottom waters were deoxygenated (Grindley 1981; Grindley & Wooldridge 1973).

1.12.2. Estuarine aquatic invertebrates

Aquatic macroinvertebrate communities in the lakes consist predominantly of estuarine species. (Davies 1981; Whitfield 1989e). Most of the zoobenthos in lakes occur on submerged aquatic plants (Davies 1981), with the mean biomass on *Potamogeton pectinatus* in the Touw System calculated during 1979 and 1980 to be 77.6 g dry mass m⁻², compared to the 12.7 g dry mass m⁻² recorded in sediments (Davies 1981).

1.12.3. Marine & estuarine fishes

Fish communities are typically dominated by juvenile marine species (Hall 1985a, 1985b; Kok & Whitfield 1986; Hall *et al.* 1987; Russell 1996). The optimum recruitment period for most dominant species is from October to February (Kok 1981b; Whitfield 1989a, 1989d), with an extended spawning period thought to be an adaptive strategy whereby the period of potential juvenile recruitment is prolonged, in effect creating a buffer against failure of recruitment as a result of adverse marine or estuarine conditions (Whitfield & Kok, 1992). Nearshore marine areas are important habitat for estuarine associated fishes, with larvae and post larvae of 16 families identified from the surf zone off Swartvlei Estuary (Whitfield 1989c, 1989d). Recruitment of juvenile fish from the surf zone into a closed estuary can occur during high seas when the sand bar at the estuary mouth is overtopped (Whitfield 1992). Though an open estuary phase is essential for breeding and recruitment of marine fishes, a closed phase is also important for providing an ideal nursery habitat for juveniles (Kok & Whitfield 1986).

Breaching of Swartvlei Estuary has been observed to result in the mortality of Knysna seahorses (*Hippocampus capensis*). Most die-off's have involved less than 100 individuals though on 18 February 1991 mortality was estimated to exceed 3000 individuals, resulting from high water temperatures (32°C) which occurred in the shallow marginal areas of the Swartvlei Estuary following an extended period of hot weather (Russell 1994).

Extensive studies have been undertaken on the diet of fishes, which consequently can be grouped into five feeding categories (detritivores, herbivores, omnivores, carnivores, piscivores) of which the detritivores are dominant (Whitfield 1988a). The biomass of the littoral fish community in Swartvlei Lake during 1980 was estimated to be 12.4 g m⁻² wet weight (Whitfield 1993), with detritivorous species contributing 3.2 g m⁻², zoobenthic consumers 2.8 g m⁻², piscivorous species 2.3 g m⁻², herbivorous/epifaunal consumers 2.7 g m⁻² and zooplanktivorous consumers 1.4 g m⁻². Estuarine fish biomasses in the Swartvlei system do not exceed those of productive freshwater or marine environments (Whitfield 1993).

1.12.4. Freshwater fishes

Nine freshwater fish species have been recorded in the Duiwe and Touw rivers within the WNP (Russell 1999b), of which three species are alien.

1.12.5. Birds

A total of 257 bird species, including 84 water birds, have been recorded in the WNP and surrounding areas (Boshoff 1991). Rondevlei and Langvlei frequently support the most diverse and abundant water bird communities (Boshoff & Piper 1992), with surveys on Langvlei indicating that at times water bird abundance can exceed 7000 individuals comprising 65 species (Boshoff & Palmer 1981). This abundance of water birds, and in particular Anatidae (ducks and geese) which on Langvlei alone at times exceeds 2000 individuals of nine species, represents the largest concentration of species and individuals along the southern and eastern Cape coasts (Underhill *et al.* 1980). Most water birds which occur on the lakes and estuaries have been observed to undergo a short-term temporal, usually seasonal, variation in abundance (Boshoff *et al.* 1991a, 1991b, 1991c).

2. The Protected Areas Management Planning Framework

The protected areas management planning framework that has been designed for the SANParks guides park management in setting up a management plan implementation thereof and the review of the plan. 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. Setting the Desired State:

After an extensive negotiation period, the transfer of the management responsibility of the 97 000ha of previously DWAF managed indigenous forest, mountain catchment and plantation areas to be rehabilitated to SANParks, took place in April 2005. This has initiated the process for the establishment of a single consolidated Mega-Park in the Garden Route, inclusive of the current proclaimed national parks, i.e. Tsitsikamma NP and Wilderness NP, as well as the Knysna estuary. The vision is to manage all the above mentioned areas as an integrated whole by meaningfully conserving a representative sample of the Garden Route's biodiversity. This is a vision SANParks is actively pursuing. Given this broader vision for the protected areas in the Garden Route, it is felt that the vision statement for the management of the WNP should be consistent and support the notion of the Mega-Park. The following vision statement and desired state for the consolidated Garden Route Mega-Park was derived at through an adaptive planning process at two protected area management planning workshops involving SANParks, CapeNature and key external stakeholders in the Garden Route.

2.2. Vision:

An integrated protected area that effectively conserves a functionally linked mosaic of diverse terrestrial, freshwater, estuarine and marine ecosystems, landscapes, and cultural heritage, representative of the Garden Route, that contributes to the well being of present and future generations."

In order that the current, and future, extent of the park is protected and managed effectively, a desired state for the proposed Garden Route NP to guide park management in its daily operations and longer term planning was developed. This desired state will be reviewed every five years in accordance with SANParks Biodiversity Custodianship Framework (Rogers 2003). It forms a bridge between 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. To set this desired state focus was placed on the park's vital attributes making this park unique, or at least very special in its class. Each was discussed along with important factors determining/ strengthening or threatening/eroding these attributes. Using this information helped focus the exact formulation of park objectives, which must strengthen positive determinants and weaken or remove negative ones, so those objectives are appropriate to the uniqueness and special nature of this national park. In this way the management plan is customized in its fullest local extent, without detracting from some of its more generic functions along with certain other parks.

2.3. Operating Principles & Vital Attributes of the park:

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

2.3.1. Operating Principles

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

- 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.

2.3.2. Vital Attributes

2.3.2.1. Socio-Political Attributes:

- Relationships with local authorities strengthen relationships – IDP's, municipalities, town engineers
- Management forums (catchment, PFM, other forums -, various levels of participation and governance
- Institutional coordination (unification / inter organizational and other government departments)
- Passionate stakeholders that are organized in structured NGO's strengthen relationships and build ambassadors
- Established community structures (Active functioning street comities)
- Resources base with potential to deliver benefits to people
- Diverse cultures and cultural heritage sites that has tourism opportunities
- Polarized social support. (Polarized socio-economic society – two distinct groups (rich and poor) put different pressures on resources. Rich people have greater environmental footprint; poor people puts pressure on natural resources for their survival and cultural needs.)
- Cultural and natural resources that are sensitive to human disturbance.
- Recreational and spiritual resources (experiences)

2.3.2.2. Economic Attributes:

- Established tourism route and brand
- Established partnerships (neighbouring conservation initiatives)
- Ecosystem services (water catchments, scenic landscapes with its impact on property values)
- Extractible resources (timber, etc.)
- Established tourism infrastructure
- Job creation
- Diverse Tourism product (cultural, nature based, adventure, coastal...) - attracting funding (Poverty relief funding, etc.)
- Low crime level area
- Educational opportunities

2.3.2.3. Environmental Attributes:

- Important aquatic ecosystems (Wetlands (Ramsar); all estuary types)
- Potential to conserve whole ecosystems from catchments to sea.
- (Single largest indigenous block in South Africa)
- Outeniqua and Tsitsikamma sandstone fynbos
- Important ecologic goods and services
- Mountains forest and coast in close proximity + mosaic
- Rehabilitation drive and potential (resilience) because of high rainfall
- Scenic beauty
- Functional MPA system representing inshore marine environments.
- Important threatened lowland vegetation

2.4. Setting the Details of the Park Desired State: Objectives Hierarchy for WNP:

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,. The objectives are listed in the table below, along with initiatives and their associated park programmes to meet the objectives,

In addition, the table list SANParks corporate balanced score card objectives as a means of indicating the link between the parks and SANParks corporate objectives. In 2004 SANParks implemented the Balanced Scorecard management tool to provide a comprehensive business measurement and management framework that allowed the organization to translate its value proposition into achievable objectives, measures and targets. These are lumped into four operational quadrants affecting SANParks business, namely: Financial; Customer; Internal; and Learning & Growth. The balanced score card has the following advantages in that it:

- Places SANParks business within a common framework
- Communicates strategy effectively to all levels
- Makes strategic goals operationally implement able
- Align departments and activities
- Links remuneration to performance
- Effects organisational change

2.5. Objectives:

Park specific conservation **objectives** are framed in a hierarchical order that are shown with links to the balanced scorecard quadrants via the far right hand column in the tables below:

Table 1: Management Objectives

2.4.1 Biodiversity & Heritage objectives:

<i>High level objective</i>	<i>Objective</i>	<i>Sub-objective</i>	<i>Initiative</i>	<i>Operational plan</i>	<i>Balanced Scorecard Objectives</i>
<p>CONSERVATION OF REPRESENTATIVE, FUNCTIONAL ECOSYSTEMS : To conserve a representative sample of the regions ecosystems in a linked landscape, with particular emphasis on the Wilderness Lake systems, and the maintenance or restoration of environmental processes to enable natural spatial and temporal variation in structural, functional and compositional components of</p>	<p>Representative ecosystems: To incorporate a spectrum of viable aquatic and terrestrial ecosystems characteristic of the Wilderness area, and to re-introduce missing elements where possible.</p>	<p>Consolidation and expansion of land areas: Consolidation of protected areas focusing on under representative ecosystems, functional linkages and processes.</p>	<ul style="list-style-type: none"> (1) Identification of under represented habitats/ecosystems. (2) Consolidate park boundaries. (3) Consolidate wetland ecosystems. (4) Incorporate untransformed lowland fynbos. (5) Establish corridors linking WNP with mountain catchments. 	Park expansion plan	<p>Custodian of Choice for Protected Area Management</p>
		<p>Reintroduction of biota: Reestablishment where possible, of locally extinct or depleted biodiversity components and populations in accordance with IUCN principles and guidelines.</p>	<ul style="list-style-type: none"> (1) Re-establish indigenous herbivore complement within constraints of park size and urban setting. 	None (refer to Reintroduction Plan for consolidated Garden Route "mega-park")	
	<p>Functional ecosystems: To ensure the long term persistence of biodiversity patterns and processes, enabling natural variation in structure, function and composition over space and time.</p>	<p>Estuary Management: Manipulate appropriate biophysical aspects of estuarine environment to achieve social and ecosystem conservation objectives.</p>	<ul style="list-style-type: none"> (1) Artificial breaching of estuary mouths. (2) Management of aquatic plants Monitor the effects of anthropogenic changes to estuarine ecosystems 	Estuary Management Plan	
		<p>Fire management: Apply appropriate fire regime in fynbos areas (frequency, season, intensity, size).</p>	<ul style="list-style-type: none"> (1) Implement a fire management plan in accordance with objectives of conserving biodiversity and threatened biota. (2) Monitor impact of fire management regime. 	Fire management plan	

biodiversity.		<p>Threatened biota: Maintain viable populations of threatened species in order to meet SANParks obligations in terms of international agreements and conventions.</p>	<ol style="list-style-type: none"> (1) Maintain estuarine and wetland conditions suitable for rare/threatened water birds, including species where local population periodically exceeds 1% global population. (2) Maintain viable population of red-data fishes, with particular emphasis on the Knysna seahorse in Swartvlei Estuary. (3) Maintain viable populations of rare/threatened plant species (identify, locate & monitor populations of priority species) 	Threatened biota plan	
	<p>Rehabilitation: Rehabilitate degraded areas, including the re-establishment of natural biodiversity patterns, and the restoration of key processes which support the long term persistence of biodiversity.</p>	<p>Wetlands: Re-establishment of physical, chemical and biological processes in degraded wetland areas.</p>	<ol style="list-style-type: none"> (1) Rehabilitate eroding channel banks. (2) Halt, and where possible reverse directional trends in reed and grass domination of wetland areas. (3) Reconstitute more natural wetland flooding regime (where possible). 	Wetland Rehabilitation plan	
		<p>Alien plants and other alien biota: Control and where possible eliminate alien biota to facilitate re-establishment of natural biodiversity pattern and process in invaded areas.</p>	<ol style="list-style-type: none"> (1) Establish the distribution and density of invasive species. (2) Prioritise areas for alien removal focusing biodiversity restoration. Implement removal programmes for priority species and areas. (3) Investigate options for the control of alien fishes. 	Invasive alien plant management plan ; Alien biota management plan	

<i>High level objective</i>	<i>Objective</i>	<i>Sub-objective</i>	<i>Initiative</i>	<i>Operational plan</i>	<i>Balanced Scorecard Objectives</i>
MITIGATE INTERNAL and EXTERNAL PRESSURES: To reduce threats and pressures and limit environmental impacts resulting from non-biodiversity management aspects of SANParks operations and surrounding land and resource use.	Reconciling biodiversity with other park objectives: To ensure that non-biodiversity management aspects of SANParks operations (revenue generation including tourism, resource use, developments, management activities, etc.) are informed and constrained by biodiversity conservation objectives, and that the impacts of these activities on biodiversity are minimised.	Internal developments: Minimise the impacts associated with the development of tourism and park management infrastructure, and ensure that such developments do not compromise biodiversity objectives.	(1) Park zonation Develop and implement CDF. (2) Developments in accordance with EIA process (NEMA) and corporate policies. (3) Establish tourism carrying capacities. (4) Implement green standards and environmental best practice based on corporate policy	CDF	
		Internal activities: Minimise the impacts associated with tourism and park management activities, and ensure that such activities do not compromise biodiversity objectives.			
		Extractive resource use: Minimise the impacts of extractive resource use, and ensure that such activities are aligned with corporate guidelines; are within management capacity constraints, and do not compromise biodiversity objectives.	(1) Quantify current extractive resource activities. (2) Define opportunities and constraints in line with corporate guidelines. (3) Regulate resource use, according to adaptive management process	Sustainable resource use management plan	
	Reconciling biodiversity with external threats: To reduce external threats and pressures, and limit impacts of surrounding land & resource use on biodiversity conservation within the park.	External developments: Minimise the impacts associated with inappropriate developments outside the park	(1) Engage with regional land management authorities, incl. IDPs and SDFs at local & regional level. (2) Alignment with bioregional planning, including explicitly identified areas for the maintenance of importance for biodiversity pattern and processes with appropriate land use guidelines. (3) Provide input into planning and decision making process for external development that may compromise park biodiversity objectives. (4) Negotiate to ensure that external developments are not visually obtrusive or out of character with the park.	(Cooperative governance and communication plan)	

		<p>External activities: Negotiate to ensure that external resource and land use do not detrimentally affect ecological processes within the park.</p>	<ol style="list-style-type: none"> (1) Negotiate to mitigate or improve the management of external potentially detrimental impacts. (2) Encourage eco-friendly resource use and land management practices on adjacent properties. (3) Mitigate the impacts of oil and other marine pollution events, through appropriate contingency planning 	<p>Oil Spill Contingency Plan (Cooperative governance and communication plan)</p>
		<p>Hydrological and water chemistry changes: Participate in activities for the maintenance of river flow regimes and water chemistry within limits for the maintenance of ecosystem processes in aquatic ecosystems within the park.</p>	<ol style="list-style-type: none"> (1) Lobby for appropriate catchment categorisation (currently General Authorisation). (2) Encourage the determination and implementation of ecological reserves for surface and subsurface aquatic resources. (3) Encourage enforcement of legislation applicable to the management and protection of aquatic resources. (4) Facilitate regular assessments of River Health. (5) Address the issue of sewage and other point source pollution into aquatic systems 	<p>Cooperative governance and communication plan</p>
		<p>Illegal harvesting of resources: Prevent the illegal collection, removal and destruction of physical and biological resources.</p>	<ol style="list-style-type: none"> (1) Public liaison (2) Law enforcement 	<p>(Park Protection Plan, Security and Safety Programme)</p>

High level objective	Objective	Sub-objective	Initiative	Operational plan	Balanced Scorecard Objectives
WILDNESS / REMOTENESS: To maintain and restore wildness/remoteness in Wilderness NP such that the spiritual and experiential qualities of wildness are maintained, enhanced, or where necessary restored	Range of experiences: Provide a range of visitor experiences.		(1) Park zonation (2) Develop CDF and sensitivity-value analysis.	(1) CDF (2) Park expansion plan (3) Invasive alien plant management plan	
	Sense of place: Maintain or restore appropriate sense of place.		(1) Implement & update CDF (2) Establish and apply appropriate tourism carrying capacity (3) Negotiate to ensure that external developments are not visually obtrusive or out of character with the park.		
Attain leadership in Cultural Heritage Management	Conserve and manage cultural heritage assets	N/A	Develop a database of all tangible and intangible cultural assets which include and inventory, maps and relevant documentation.	Cultural Heritage Management Plan	Attain leadership in Cultural Heritage Management
			Develop site Management Plans for each Cultural Heritage site with monitoring systems in place for management priorities and prescriptions.		
			Facilitate appropriate Interpretation of cultural heritage associated with the park		

2.4.2 Socio-economic objectives hierarchy:

High level objective	Objective	Sub-objective (where required)	Initiative	Low level plan	BSC Objective
Nurture productive and mutually beneficial partnerships that result in gains in economic and/ or biodiversity equity.	Enhance socio-economic benefits to local communities	N/A	Contribute to local community development by supporting the Expanded Public Works / Poverty Relief Programmes Contribute to local skills development by supporting the Skills Programmes and Learnership programmes	Local socio economic development plan	Contribute to Local Educational and Socio Economic Development
			Identification and facilitating the creation of business opportunities in association with the park. Support community based Social Development Initiatives.		
	Increase environmental awareness and encourage participation in conservation initiatives	Inspire visitors and communities towards considering the environment as an interrelated and interdependent system of which they are an integral part.	Develop and implement an Interpretation Plan that feeds into both the Education and zonation plans. Implement environmental education and youth development programmes suited to the needs of each focus group (I.e. Tailor made programmes for each focus group)	Education development plan	
		Educate learners, educators and other community focus groups to be able to take environmental action.			
Support educators and community leaders with resource and information materials	Establish and market an environmental resource centre and outdoor classrooms with a range of interpretive and information resources.				

<i>High level objective</i>	<i>Objective</i>	<i>Sub-objective (where required)</i>	<i>Initiative</i>	<i>Low level plan</i>	<i>BSC Objective</i>
<i>Support co-operative governance that will build in custodianship</i>	<i>Maintain good park/community/stakeholder relations</i>	<i>N/A</i>	<i>Identify and involve all relevant stakeholders for participation in the park forum. Develop effective communication mechanisms and responsibilities for representatives. Establish task teams and working groups (with inclusion of the Park Forum) around key issues.</i>	<i>Stakeholder relationship plan</i>	<i>Custodian of Choice for Protected Area Management</i>
	<i>Effective co-operative governance</i>	<i>Minimise degrading impact and consequences of inappropriate development in and surrounds of the park</i>	<i>Establish and maintain good working relationship with relevant government departments and local government.</i>		
		<i>Ensure support / buy-in for management decisions through participatory decision making processes</i>	<i>Define roles and responsibilities with stakeholder groups, partnerships and government through written agreements/ToR's/MoU's/commitment statements</i>		
			<i>Facilitate the management of natural resources through establishment of CBNRM projects.</i>		
<i>Become the Nature Based Tourism destination of choice in the region</i>	<i>To develop, manage and enhance a range of sustainable tourism products</i>		<i>Design customer satisfaction survey</i>	<i>Tourism plan</i>	<i>Become the Nature Based Tourism destination of choice in the region</i>
			<i>Analysis of current product usage and identification of opportunity</i>	<i>Infrastructure programme</i>	
			<i>Plan for tourism infrastructure and facilities as identified by the CDF</i>		
			<i>Develop and implement the infrastructure management plan (in compliance with state of infrastructure report)</i>		
	<i>Conserve and manage cultural heritage assets</i>		<i>Compile a state of infrastructure report</i>	<i>Cultural Heritage Management plan</i>	<i>Attain leadership in Cultural Heritage Management</i>
			<i>Develop a database of all tangible and intangible cultural assets which include and inventory, maps and relevant documentation.</i>		
			<i>Develop site Management Plans for each Cultural Heritage site with monitoring systems in place for management priorities and prescriptions.</i>		
			<i>Facilitate appropriate Interpretation of cultural heritage associated with the park</i>		

High level objective	Objective	Sub-objective (where required)	Initiative	Low level plan	BSC Objective
Transform the domestic Guest Profile, through growth, to be representative of South African society	Transform the domestic Guest Profile of the park, through growth, to be representative of regional demographics	N/A	Promote and manage access to the park	Marketing plan	Transform the domestic Guest Profile, through growth, to be representative of South African society
			Develop and support dedicated access programmes. Incorporate a "dedicated access" element into existing programmes		
			Actively market park resources and services		
Enhance SANParks Reputation	Enhance the Park's reputation	N/A	Develop and implement a Communication Plan to promote park activities	Communication programme	Enhance SANParks Reputation
Ensure Best Practices in Managing and Understanding HIV and AIDS (& 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	Ensure Best Practices in Managing and Understanding HIV and AIDS (& associated diseases)
			Implementation of SANParks guidelines		
			Implementation of SANParks guidelines		
Advance Strategic Human Resource Management	To ensure good human resource management	N/A	Implement and support Learnerships and Volunteer Programmes	Staff Capacity Building Programme/ Institutional Development and staff capacity building programme	Advance Strategic Human Resource Management
Improve Income to Cost Ratio	Continuously Improve the Income to Cost Ratio of the Park to ensure that the Park meets its conservation mandate and contribute to SANParks' overall conservation mandate	N/A	Manage cost to income ratio	Financial sustainability programme	Improve Income to Cost Ratio
Achieve Good Corporate Governance Management	Effective management of risk profile	N/A	Do legal review	Risk management programme	Achieve Good Corporate Governance Management

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 details in what are called *operational* or *lower-level plans*, referred to in appendices but not included here.

The various programmes are classified into the five activity groupings as reflected in the SANParks biodiversity custodianship framework, namely Biodiversity and Heritage Conservation, Sustainable Tourism, Building Co-operation, Effective Park Management, and 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.

3.1. Biodiversity and Heritage Conservation

3.1.1. Park expansion programme:

The park sits in a nationally identified priority conservation area as identified by the South African national conservation assessment (Driver *et al.* 2005). As such, the expansion of WNP remains important for SANParks in its attempt to consolidate the essential ecological patterns and processes associated with the marine-wetlands-forest-mountain fynbos associations' characteristic of the Garden Route area.

The expansion programme is in full congruence with SANParks accepted biodiversity values and follows the SANParks land acquisition framework. In this regard the park falls within the Garden Route Initiative (GRI), part of the wider regional CAPE (Cape Action Plan for the Environment) programme that is aimed at building a comprehensive protected area system in the Cape Floristic Region fully integrated into the regional land use mosaic (Lochner *et al.* 2003). The envisaged expansion would include a multiple number of different land agreements across the marine, terrestrial and wetland environments, and as such expected to be affected by the environmental legislation governing these different environments. The desired state of the park, in the context of park expansion, includes:

- The consolidation of remaining wetlands, and associated forest/fynbos interface
- Protection of important Touw and Swartvlei river catchment systems, and their marine interfaces via their respective river mouths.
- Rehabilitation of degraded lands included into the park;
- Encourage conservation friendly land management activities in the surrounding land-use mosaic, and catchments to further the identified important aquatic processes.

The park currently conserves some of the country's important coastal wetlands (Howard-Williams & Allanson.1979), as well as pockets of endangered Garden Route shale/granite and Knysna Fynbos vegetation types that remain hardly protected (Cowling & Heijnis 2001), but remain under threat owing to poor regional linkages. To meet the desired state, via the least conflicting route, the park would need to expand to a total of 110 845 ha (Fig. 1). This in turn would further link to the expanded Tsitsikamma National Park section making a total conservation area of about 250 000 ha. The greater WNP would include 73 309 ha of State owned DWAF land, made up of 29 831 ha of DWAF forests, 11 780 ex SAFCOI, 25 211 ha Forestry exit land, and 6 487 ha of additional DWAF forestry corridor lands would be needed. Inclusion of 20 840 ha of Cape Nature land under a co-management agreement would include the necessary State land. Private land is limited to a required 7466 ha, and 4000 ha of secondary importance. Inclusion of this land could be largely via contractual/stewardship type arrangement, precluding the need for expensive acquisitions.

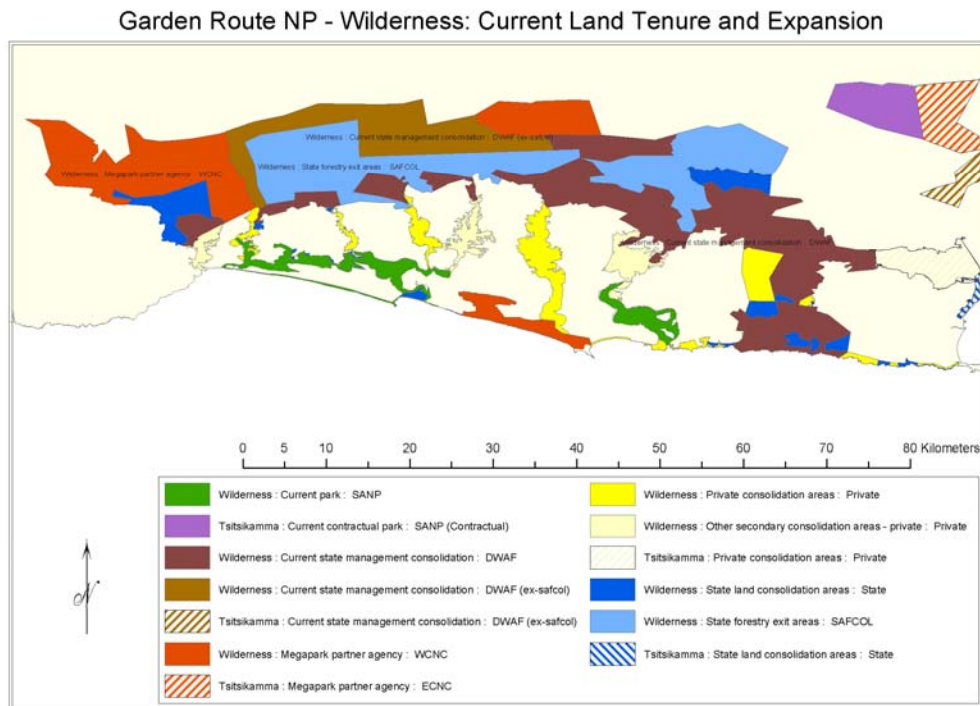


Figure 1: Park Expansion Map

3.1.2. Sustainable use of natural resource programme:

At present, the only consumptive resource utilization practiced in WNP is recreational fishing in Swartvlei Estuary, Swartvlei Lake, Touw Estuary and Eilandvlei; and bait collecting in the Touw and Swartvlei estuaries. These activities are undertaken in accordance with the Marine Living Resources Act (1998) regulations. It is foreseen that the removal of marine derived sediments may be undertaken in the Touw Estuary. Sand mining activities will be of limited scale, and confined to the area of active sediment deposition by marine processes. Resource use activities in WNP will in future be aligned with SANParks corporate policy on extractive use, which is still to be developed.

3.1.3. Rehabilitation programme (aliens, erosion etc):

The dominant terrestrial vegetation types within the Wilderness National Park [WNP] are fynbos and thicket as well as a complex of fynbos/thicket mosaics with pockets of Afromountain Forests. Along the coastal forelands 'mobile' and vegetated dunes are susceptible to invasion by AIP.

Fire prone fynbos vegetation, the ecotones and disturbed areas of both the thicket and forest vegetation types are susceptible to infestation by Alien Invasive Plants [AIP]. Along the coastal forelands 'mobile' and vegetated dunes are susceptible to invasion by AIP.

Invasion of natural vegetation by aggressive AIP disturbs the processes and equilibriums within the natural systems by out competing natural vegetation as well as increasing the frequency and intensity of fires through increased fuel loads.

Vegetation mapping in the Wilderness lakes indicated that between 1975 and 1997 prominent increases occurred in the distribution of *Phragmites australis* (+53.9ha), Grass & fields (+23.1ha) and Scrub & trees (+12.2ha). Over the same period substantial declines occurred in the distribution of *Juncus kraussii* (-76.2ha), *Schoenoplectus scirpoideus* (-10.1ha) and Low scrub & fynbos (-7.8ha). The most prominent changes have occurred at Langvlei and the Serpentine channel. Probable causes of change in the distribution of wetland plants include the natural tendency of plants to colonise new areas, as well as anthropogenic manipulation of physical, chemical and biological processes, including withdrawal of disturbance by large herbivores, water level stabilisation, changes in soil salinity, and accumulation of plant litter within wetland areas. A possible means of controlling the establishment *P. australis* reeds in wetland areas, currently being trailed by SANParks in Eilandvlei, entails the subsurface cutting of plants in inundated areas. If these methods are found to be effective in controlling the growth and establishment of reeds, future management actions may entail periodic flooding of wetland areas in the upper lakes of the Touw system through operation of the sluice gate in the Serpentine channel to increase water levels, in conjunction with mechanical cutting in inundated areas.

3.1.4. Damage causing animals:

Damaging causing animals in the park are chameleons *Papio ursinus* and vervet monkeys *Cercopithecus aethiops*. Baboons and vervet monkeys often frequent rest camps and picnic sites in the park. They are primarily attracted by food and refuse bins. On occasions these animals do lose their fear of humans, resulting in "food grabbing" and raiding of chalets and tents. Park staff has embarked on a programme to raise awareness levels among park visitors about the problems experienced in these conflict areas. The park is also modifying all refuse bins so that they are animal proof. These two initiatives are focused at minimizing the people/animal conflict.

Any sick or injured animal is carefully assessed. Should the need arise the individual animal is euthanized in accordance with the Standard Operating Procedures for the Management of Wildlife in South African National Parks.

3.1.5. Species of Special Concern (Rare & endangered species) programme:

The WNP supports populations of several species of special concern, including localised plant species in the fynbos component of the Goukamma Dune Fynbos/Thicket Mosaic between Rondevlei and Swartvlei Lake; three red-data listed fishes including one of only three populations of the Knysna seahorse; and several species of water birds where the size of local populations supported on the Wilderness lakes regularly exceeds one percent of the world population. Threats to plant SSC include invasion by aliens and an inappropriate fire regime in fynbos areas. The Knysna seahorse is threatened by habitat destruction resulting from recreational boating and altered hydraulic of Swartvlei Estuary. Water birds are vulnerable to disturbance by boating activities and destruction of their food base (mostly aquatic plants) through altered water chemistry and hydraulic processes in the lakes. Management actions to conserve SSC should include both internal activities such as alien plant clearing, institution of an appropriate fire regime in fynbos areas, park zonation with respect to recreational activities (particular boating), as well as external activities such as negotiations with government departments and catchment management agencies for the maintenance of flow and water chemistry in rivers, and the prevention of potentially negative impacts from external sources such continued destruction of indigenous vegetation, and the introduction of alien species.

3.1.6. Aquatic programme:

3.1.6.1. Freshwater systems

Many of the challenges SANParks faces with respect to managing river ecosystem in national parks are common to all parks. Prominent issues include:

Fragmented catchment ownership: For most rivers in parks, only portion of river ecosystems or catchment occur within the park boundaries. In WNP only the very lower reaches of the Duiwe River occurs within the park and a portion of the lower Touw River is managed by SANParks on behalf of the regional government. Many anthropogenic changes to rivers originate in catchment areas outside of parks, and are consequently processes or activities over which SANParks has little or no influence.

Reduced ecosystem variability: Scientific studies have demonstrated that the maintenance of inherently variable physical processes, and in particular variability in the flow of water, is essential for healthy functioning of river ecosystems. Past river management by government agencies, however, was frequently directed at minimizing fluctuations in flow to ensure stability of supply for off-channel, non-ecological uses. This has resulted in a legacy of, for example, water storage behind dams and regulating flow for irrigation or domestic supply, which presents considerable operational challenges when attempting to achieve a new ideal of managing for healthy river ecosystem rather than just predictable water supply.

Legislated management: 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 acting through the Minister of Water Affairs and Forestry 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. Although CMA's will provide opportunity for cooperative catchment management, the Gouritz CMA to whom management of river catchments of the Wilderness lakes will be devolved, has not yet been established.

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.

3.1.6.2. Estuarine systems

Management activities undertaken in estuaries and estuarine lakes consists predominantly of regularly artificial breaching the Touw and Swartvlei estuaries to reduce the threat of flooding of residential and other properties that have been developed on the estuarine floodplains; and cutting of submerged and emergent aquatic plants in selected localities to facilitate water movement between water bodies and migration of fishes, facilitate access to water bodies at selected localities, and enhance selected recreational opportunities.

Swartvlei Estuary is breached when waters levels achieve 2.0m amsl., and the Touw Estuary when water levels are within the range of 2.1 to 2.4m amsl. Breaching heights are based on hydrological modelling undertaken by the CSIR and biophysical studies undertaken by Rhodes University. The method and timing of breaching are intended to maximise sediment scour by out-flowing waters. Deviation from the defined breaching heights could be considered in response to extreme conditions, such as where there is strong evidence that it would be essential for the restoration of environmental processes or reduction in an immediate threat to estuarine biota, or where it reduces an immediate and significant pollution or flooding treat.

Regular cutting of submerged and emergent is undertaken by SANParks in channels between lakes in the Touw system. Restricted cutting of aquatic plants may also be undertaken in front of bird-hides, and selected boat slipways in Swartvlei and Eilandvlei. Cutting of emergent plants may also be employed by SANParks for the purpose of altering plant distribution and establishment pattern where the objective of such management is to reinstate appropriate biodiversity patterns and processes. Cutting of emergent aquatic plants will not be undertaken or permitted in areas where banks are eroding or at risk to erosion, or to improve the view of water bodies from private waterfront properties

Human occupation of estuary catchments, along with manipulation of biological, physical and chemical processes through activities such as resource utilization and management, may effect changes within the estuarine ecosystem. Multi-disciplinary monitoring will be undertaken to quantify changes thereby facilitating adaptive management. Monitoring will include meteorology, sandbar heights, water level,

estuary opening and closure, patterns of sedimentation distribution, water quality, submerged aquatic plant biomass, and water bird abundance, subject to the availability of resources and information needs as determined in periodic efficiency reviews. The level or extent of change that would elicit concern in respect to non-compliance with park objectives are described, and where possible quantified as thresholds of potential concern.

3.1.7. Integrated fire programme:

The Goukamma Fynbos/Thicket Mosaic found within WNP is dependent on fire to maintain the co-existence of dune fynbos and dune thicket in a mosaic pattern, to stimulate recruitment of many fynbos species, and thus to retain maximum species richness. The frequency, intensity, season and size of fires are critical determinants of plant species composition, vegetation structure and successional patterns. Hot fires at 12-40 year intervals in late summer/early autumn are deemed suitable for dune fynbos vegetation. Knysna Afromontane Forest and solid dune thicket are largely fire-free under natural conditions and should be protected from wild fires of unnatural cause. Fynbos fires on the forest edge and within the dune fynbos/thicket mosaic are however essential to maintain the fynbos/forest- and fynbos/thicket ecotones (i.e. transitions) and should not be artificially suppressed indefinitely. Wetland reed beds may be left to burn during wild fires, but active burning is not necessary. The WNP is limited in terrestrial extent (ca. 500 ha) and located in a highly fragmented environment. Public roads and the Outeniqua Steam Train dissect the park in numerous places and are potential sources of wild fires. Mitigation measures need to be in place to prevent inappropriate burning of vegetation types not driven by fire and too frequent burning of fire-dependent vegetation types. Records should be kept of fires occurring in and around WNP, preferably in GIS format. Little additional monitoring is done or proposed on account of capacity constraints and the small extent of fire-dependent habitat. Fire management procedures should at all times comply with the regulations of the National Veld and Forest Fire Act (101 of 1998).

3.1.8. Cultural heritage resource programme:

The Wilderness area incorporates various cultural heritage sites ranging from Khoisan cultural heritage sites such as Ebb and Flow Shelter, Oakhurst Shelter, Settlers' graves, St. Aidan's church, Outeniqua choo-tjoe railway lines and the Seven Passes Road.

Running concurrently is an Oral History Collection and a Cultural Mapping Project, both of which are implemented with the purpose of identifying and cataloguing all Cultural Heritage assets (tangible and intangible) associated with the Park. These projects are currently being developed in conjunction with local community members, the organisations representing community interests, as well as relevant academic institutions and researchers.

Discussion groups and presentations were hosted to create awareness and encourage involvement in the proposed projects. It is envisaged that a local Cultural Heritage Forum will be established to form working groups that will co-ordinate activities. Local youth will be trained as field researchers and will work in conjunction with the community working groups.

The project will be managed in line with legislation relating to property rights and intellectual property rights

Programme Objectives:

- To facilitate the **research** of information and documentation of available resources through a series of projects

- To recover the **oral history** and information relating to cultural heritage, specifically related to the areas incorporated within the park in collaboration with local communities, academic researchers and other relevant sources and stakeholders
- To enhance the relationship between the park and communities by **interpreting** information relating to **cultural heritage** in collaboration with local communities, academic researchers and other relevant sources and stakeholders

To identify and **map Cultural Heritage sites** incorporated within and related to sites within the park.

- To develop **management plans** to ensure the conservation of cultural heritage site, relics and the related intangible heritage associated with the park
- Enhance the relationship between the park and communities through the implementation of a **partnership approach** to achieve the above

3.2. Sustainable tourism

3.2.1. Park Zoning Plan (including Knysna):

The primary objective of a park zoning plan is to establish a coherent spatial framework in and around a park to guide and co-ordinate conservation, tourism and visitor experience initiatives. A zoning plan plays an important role in minimizing conflicts between different users of a park by separating potentially conflicting activities such as quiet forest walks 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. The zoning of Wilderness 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. The zoning for WNP needs to be seen in the context of it being integrated in the short term into the Garden Route National Park.

Overview of the use zones of Wilderness National Park:

The use zoning plan for WNP is shown in Figure 1. Full details of the use zones, the zoning process, the Park Interface Zones (detailing park interaction with adjacent areas) and the underlying landscape analyses are included in the Garden Route National Park Zoning Document which is available on request.

Primitive Zone: This is a largely undeveloped zone with access controlled in terms of numbers, frequency and size of groups. Although the zone can contain limited access roads and the potential for basic small-scale self-catering accommodation facilities such as a bush camp, this would be inappropriate within the limited extent of the high conservation value area protected by the Primitive Zone in WNP. In WNP, Primitive areas were designated to protect the high conservation value and Ramsar listed Rondevlei, Bo-Langvlei and surrounding areas from tourist and infrastructure impacts.

Quiet Zone: This zone is characterized by unaccompanied non-motorized access without specific access control and permits. Tourist infrastructure is limited to trails, viewpoints and hides. Larger numbers of visitors are allowed than in the primitive zone and contact between visitors is frequent. In WNP, quiet zones were designated to allow visitors access on foot to hiking trails around the low intensity leisure areas. Sections of beach away from major access points (such as west of Gericke Point) were also zoned Quiet. Sensitive lake and estuary areas such as the Serpentine, the far western and eastern sections of Swartvlei, Swartvlei Estuary below the railway and above Sedgefield lagoon, and Knysna Estuary above the road bridge, were zoned Quiet to limit access to non-motorized vessels only. As far as possible, the sensitive sections of the park which were not included into the Primitive zone were zoned quiet to protect them from infrastructure development and excessive tourist impacts.

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 areas were designated in most of the high use beach areas of the park (except around the Touw River mouth), in the area between the Touw River mouth and the Ebb and Flow Rest camp, Eilandvlei, Swartvlei above the railway bridge, Sedgefield Lagoon, and Knysna Estuary south of the road bridge. Current public access roads around Bo-Langvlei and Rondevlei (including access to the hides), as well as park infrastructure at Rondevlei were accommodated within this zone. In lake and estuary areas, Low intensity leisure implies that motorized vessels are generally allowed, but they may be excluded from certain sections either to minimize environmental impacts or to reduce conflict with other recreational water users. Low intensity leisure does not imply motorized access to beaches.

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. In WNP, High Intensity Leisure areas designated around the current Ebb and Flow Camp, at the Touw River Mouth and to accommodate major public access roads through the park.

Overview of the Special Management Overlays of Wilderness National Park:

Special management overlays which designate specific areas of the park that require special management interventions were identified. Two overlay types were designated:

Special Conservation Areas – Wetlands: High conservation value wetlands such as Rondevlei, Bo-Langvlei, Eilandvlei, the Serpentine channel and floodplain, and Swartvlei Estuary below the railway line were identified for special protection in order to reduce any potential habitat loss and minimize tourist and development impacts.

Special Conservation Areas – Fishing exclusion area: Rondevlei, Bo-Langvlei and the channels between them were designated as fishing exclusion areas to prevent impacts associated with fishing and bait collection.

Special Conservation Areas – Bait collection exclusion area: The eastern sections of Knysna Estuary were designated as a bait collection exclusion area to prevent impacts associated with bait collection.

Current status and future improvements:

The zoning for WNP needs to be seen in the context of it being integrated in the short term into the Garden Route National Park. This rapidly changing context will potentially require re-assessment of the current park zoning. The current park use zonation is based on the same biodiversity and landscape analyses undertaken for a Conservation Development Framework (CDF); however certain elements underlying the CDF such as a tourism market analysis are not be fully incorporated into the park use zonation. A full CDF will be developed for Garden Route National Park within the current update cycle.

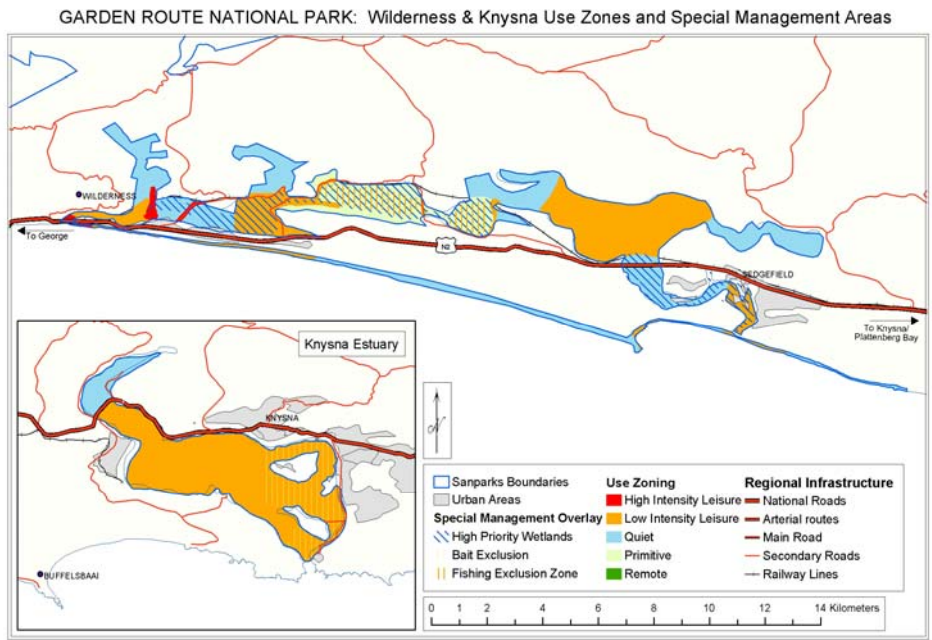


Figure 2: Wilderness NP and Knysna Zonation map

3.2.2. Tourism Programme:

The park’s borders are intertwined with residential and farmlands to the extent that it becomes difficult to know when one is in the park and when not. The park is mainly

a coastal park, with outstanding scenery, that can offer the visitor a variety of water based activities.

The park is well located in terms of national roads, airports and major shopping centres. The accommodation in general is well located, although it is in a need of an upgrade. The park will also become part of the greater Garden Route Protected Area and the existing accommodation will form part of a tourism node. Added to this the park has an opportunity to develop a new tourist facility that can have a significant impact on income generation. The area is surrounded by various tourism establishments such as Bed and Breakfast establishments, Hotels, timeshare facilities and luxury resorts. Activities include Paragliding, horse riding, picnics, fishing, golfing, mountain biking, art routes, farm routes, adventure sports, offshore boating, hiking etc.

Accommodation include a number of camping and caravan sites, log and brick chalets, log forest huts and rondawels, providing 139 beds and 124 camping units. Occupancy rate in 2005 was 42 %. A conference facility that can seat 30 people exists, but is not used by the general public. Activities include bird watching, canoeing and trails. Income generated through tourism in 2005 came to R 3 998 940, making up 81% of the parks' total revenue. The park employs 24 people in the tourism function.

The desired state for tourism in the park is: **“To develop the park's infrastructure and facilities in order to enhance the tourist experience as well as to integrate the current park as a tourist node in the greater Garden Route protected areas.”** Objectives to achieve this desired state are as follows:

- To consolidate land ownership under SANParks management or protection
- To develop the tourist infrastructure in order to enhance the visitor experience
- To develop more tourist activities in order for the park to be more competitive
- To increase and to train staff to render a quality service

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 objectives, which according to the SANParks values, must take precedence. Product development and diversification is high on the list of the parks objectives

3.2.3. Marketing Programme:

Most tourists to this area came from Western Cape (66, 8%) followed by 8, 29% from Gauteng and 6, 27% for Eastern Cape. Approximately 85% of all tourists are from South Africa. 92% are white people that stay at the park overnight and only 7.6% of blacks stay overnight. Most of the foreign tourists are from Germany (9, 2%), followed by United Kingdom (1, 3%) and the Netherlands (1, 2%).

Current strategies to market the park and therefore attract more visitors, includes 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, Effective marketing materials that include new brochures and a visitor map have been developed and are to be reviewed on a bi-annual cycle.

Based on the above profile and current strategies a marketing programme is currently under development.

3.2.4. Commercial Development Programme:

The park currently has only one concessionaire in the form of Eden Adventure which offers canoe hire in the Rest Camp. Commercial operators and concessions potentially offer an important source of income for the WNP, 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 WNP 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 with small, medium and macro enterprises (SMMEs) from the immediate communities.

3.3. Constituency Building

3.3.1. Stakeholder relationship 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 **National and Provincial Government** such as the Department of Environmental Affairs and Tourism (DEAT), The Department of Water Affairs and Forestry (DWAF), Public works, Agriculture, regional and local government planning to have park plans integrated into the Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) **Conservation entities** such as Marine and Coastal Management (MCM), Fire Associations, etc; **Tourism entities** such as South African Tourism Association (SATOUR), etc and the **local communities** through the park forum, ward committees and the local sub-committees.

A Park Forum is to be established to encourage the building of constituencies in support of natural and cultural heritage conservation goals of SANParks. It is expected that the Park Forum will facilitate constructive interaction between the park and surrounding communities and other stakeholders. Park Forums are a means of providing a legitimate platform to communicate park/SANParks issues and to ensure participation of stakeholders on matters of mutual relevance affecting the Park.

Co-operative governance systems are being developed and strengthened for the Park. 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 community custodianship that in itself 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. Therefore 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 organisations' conservation mandate. SANParks fosters good medial 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.

3.3.2. Educational Development Programme:

The greatest part of the work conducted by the People and Conservation Department is directly or indirectly related to Environmental Interpretation & Education and focuses on the various park user groups and local communities. Local schools and communities were highlighted as potential focus groups that are not yet part of the main park user groups by the initial analysis process that guided the design of the various educational programmes. Hence, the programmes that form part of this plan aims to address this "imbalance".

The various programmes have each been designed with specific focus groups in mind. However they are often integrated with one another. This combination of processes forms an integrated network of solutions that work together to support each other and so ensure their sustainability (cross pollination) as well as the enhancement of park-community relations.

The park offers a range of day programmes as well as overnight programmes to interpret the park's rich natural and cultural heritage. Every programme has its own set of interpretive activities complemented with various interpretive displays, signage and information resources. Activities have different themes to ensure a variety of experiences that cater for wide participant interest. Self-guided and / or guided experiences are offered. Self-guided options are supported with the necessary information resources. When guided, the level of detail and presentation are adapted to suit the audience. The various activities are sometimes grouped and offered as packages or conducted as part of different programmes. This makes it possible to be integrated with community outreach programmes, training programmes, programmes for conference groups, holiday programmes, tourist programmes, etc.

To reach park goals and develop a healthy community custodianship for the park, most projects are implemented in partnership with various Non Government Organisations (NGOs); Community Based Organisations (CBOs) and community liaison structures as well as the private sector. A detailed Programme Document is developed for each programme to serve as guide for the implementation of programmes and activities. These documents are developed in liaison with the relevant stakeholders to ensure relevance and effectiveness. All programmes are included in the applicable Business Plans with its relating Budgets and Annual Plan of Operations (APOs).

A high degree of *reflexivity* is built into programme design. All activities are continuously monitored and adjusted to ensure their continuing relevance to the various user groups as well as to the park context that is subject to change. Monitoring tools such as feedback questionnaires, a suggestion box, guides' report forms, etc. will facilitate a continuous process of critical reflection, contextual review, and formative evaluation of programme processes and activities.

3.3.3. Local socio economic development Programme:

The park contributes to local socio economic development in the following ways:

Skills development and capacity building

Skills development and capacity building is regarded as a cornerstone to enable economic activity. The park facilitates Skills and/or Learner ship programmes annually. Both processes involve park staff and unemployed members from local communities.

Business opportunities and support of local entrepreneurs

The park procures contracted services ranging from maintenance to tourism related services. Where possible, local Small, Medium and Macro Enterprises (SMMEs) and especially HDEs are favoured when sourcing contractors, provided that all procurement conditions as stated in the SANParks Procurement Policy can be adhered to.

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, etc. Where more continued collaboration is required, mutually beneficial initiatives or partnerships are established.

Social Development Support

Local social development initiatives are supported through collaboration on environmental calendar campaigns and other programmes where mutually beneficial arrangements supports SANParks goals and contribute to local social upliftment.

Government Expanded Public Works Programmes

The Expanded Public Works Programme (EPWP) remains a significant focus area of the organisation to effectively contribute to local socio economic development. The park currently manages three programmes, namely Working for Water, Coast Care Working for the Coast and a Special Public Works Programme. These programmes all focus on poverty alleviation and are therefore labour intensive projects that create temporary jobs in the short term (three year cycles). Great importance is also afforded to the skills development component of these programmes, with specific targets set for both hard and soft skills development. Sustainability is further supported by investigating and implementing exit strategies through the development of entrepreneurial opportunities for local communities.

Local Government involvement

Co-operative governance systems are being developed and strengthened for the Park with the aim to promote inclusivity and to ensure compliance with legislation. Improved relationships with Regional and Local Government will also ensure a more effective contribution to local economic development. Collaboration currently focuses on planning i.e. the integration of park plans into the Integrated Development Plans (including Local Economic Development plans and Spatial Development Frameworks.)

3.3.4. Communications Programme:

The Communication objectives of WNP are to build, maintain and to constantly improve relations between the park's relevant stakeholders. To ensure that there is effective representation in both the print and electronic media, to create and maintain a positive image of SANParks, to manage media coverage of contentious issues and to inform the media of relevant emerging conservation and tourism issues.

The objectives will be achieved by the formulation of a comprehensive Communication Strategy for the park that will ensure that stakeholders and clients alike are interacted with on a continuous basis through various medium such as Park Forums, Newsletters, PR Campaigns and the SANParks website.

3.4. Effective park management

3.4.1. Environmental management programme:

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. 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 has been adopted and implemented in the park. This system will assist the park and park management in the achievement of their environmental management responsibility.

The main objectives of utilizing and maintaining an Environmental Management System (EMS) is to allow for the WNP Management to address their environmental challenges in a consistent manner.

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 WNP, such as:

- The compliance of legal requirements,
- Provides improved organizational:
 - Image
 - Competitiveness
 - Relationship with all neighbours
 - Regulatory relationships
- Improved efficiency in the WNP's environmental responsibility
- Increase in the raising of environmental awareness and
- Placing environmental issues on the WNP'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 identifies access and communicates legal and other requirements that are applicable to the park
- Environmental Objectives and Targets: The park develops 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 identifying 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 identifies potential for and responds to accidents and emergency situations, and for preventing and mitigating the environmental impacts that may be associated with them.

3.4.2. Security and Safety Programme:

Firstly, securing visitor safety to the WNP is about securing SANParks' international reputation as the custodian of choice for protected area management.

Secondly and directly related, visitor safety is both about securing the SANParks tourism income stream from the WNP and securing the WNP'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 WNP 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 Security and Safety Operational Plan comprehensively addresses both the strategic and operational aspects of visitor safety and security within the framework set out by the SANParks Safety and Security Plan.

A detailed SWOT analysis has been completed inclusive of planning for capacity and detailed budgets for the following two year cycle. The following challenges face the park to operationalise this plan:

- Ensure the provision of adequate enforcement training for, effective deployment of, and proper resources to, all park field staff personnel
- Direct field staff enforcement activities toward the management of the sustainable use of marine resources, control of boating activities, control of net-fishing, regulation of building activities within the “control area”, safety and security of visitors, mitigating visitor impacts, control of poaching/hunting and the control of feral dogs and cats. Maintain regular park patrols
- Establish and maintain collaborative inter-agency relationships with SAPS, MCM, municipal traffic services and Cape Nature
- Maintain working relationships with, and provide relevant supporting information to, local magistrates
- Identify fencing requirements for the park, construct and maintain as required.
- Apply to the MLRF to support the enforcement of the MLRA in the coastal zone of the park

WNP 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 Wilderness and Sedgefield Police, the National Sea Rescue Institute (NSRI), ambulance and fire brigade, air traffic control and the municipalities of Eden, Wilderness, George and Sedgefield.

3.4.3. Infrastructure Programme:

Tourism infrastructure programme

The parks tourism infrastructure consists of a rest camp, three day visitor areas several hiking trails and three bird-hides.

Overnight Facilities

The Ebb & Flow rest camp situated on the banks of the Touw River and the Serpentine and provides for both campers and non camping visitors. The camping sites are divided into two, sites with power and without power. All river view sites have power. Theses sites are serviced by six ablution blocks. The camping site is star graded by the SA grading council and has three stars. The sites are all demarcated by numbers.

The accommodation section has the following unit types:

- 5 Family Cottages (with one double bed and two single beds each)
- 4 Log Cottages (with one double bed and two single beds each)
- 4 Log Cottages (with four single beds each)
- 10 Forest Cabins (two single beds each)
- 10 Forest Cabins (four single beds each)
- 10 Rondawels (two single beds with en suite)
- 05 Rondawels (two single beds without en suite)
- One Family Cottage and one Forest cabins are suitable for disable people.

The accommodation units apart from the Rondawels are in acceptable condition. Some internal refurbishment of the units are scheduled for 2007 and the replacement of the outside furniture is required. The Rondawels need to be demolished and replaced with accommodation units that reflect the image of a National Park.

Day Visitor Facilities

Day picnic facilities are located at Touwriver Mouth, Eiland vlei and Tarantal. These areas all have rudimentary braai facilities and inadequate Ablution facilities that are linked to conservancy tanks. These facilities are all in need of an upgrade to reflect the standards of a National Park. Routine maintenance is performed to ensure that the areas can meet the basic demands of day visitors.

Trails and Bird hides

The park has five day hiking trails scattered throughout the Park and three bird hides. Routine maintenance is performed on these to ensure that they are kept in good order.

Administrative Infrastructure:

The Parks Administrative office, Technical Stores and Tourism Stores are all located in the main Rest camp at Ebb and Flow. These all need to be relocated so as not to negatively impact on the visitors' experience.

Staff Accommodation

The Staff Accommodation is located in three Clusters viz Rondevlei (5 houses); Kranzvlei (13 houses) and Wilderness (4 houses). There are also two houses in the township of Kleinkrans that is owned by the Park. The houses at Wilderness, KleinKrans and Kranzvlei are all in an acceptable condition and only minor maintenance is required to keep them in good order. The Housing at Rondevlei are old and in a poor state of repair. Some upgrading of the structures are required to maintain these units.

Roads and Services

Almost the entire park is serviced by municipal infrastructure (water, electricity and refuse and sewage). Exceptions are Rondevlei (no water, sewage is via soakaways), Wilderness Staff houses and Day visitor ablution facilities (conservancy tanks).

The park is criss-crossed with provincial roads. The only internal roads are at Ebb and Flow which has been recently paved and the gravelled access road to Rondevlei (1km). These area the only roads that are maintained on a regular basis.

Fencing

The Park has several kilometres of boundary fencing that are maintained on a regular basis.

3.4.4. Staff Capacity Building Programme:

The park has an establishment figure of forty five (45). Most of this vacancies if not all have been filled. The competency level of the staff component is very important, if the performance level of the park has to be maintained; hence therefore a staff capacity building programme is necessary.

The corporate balanced score card measure for SANParks measures the percentage of employees who have achieved set goals in terms of defined individual development plans. Every employee will have his/her individual plan to include training needs. The park management will therefore see that all the training and capacity building programmes are implemented. Park management will also see that training needs are identified, budget for the training, and also ensure that training happens. The use of the SETAs for funding the training will be explored both at head office and park level.

A Work Place skills Development Plan is also produced for the park every year as required by legislation. This is coordinated at head office level, with input from the park and the Employment Equity Forum. Most of the staff is involved and encouraged to make inputs into the plan.

Following the transfer of management responsibility of the staff of the Indigenous Forest Management section of DWAF in the Garden Route to SANParks in April 2005, SANParks is undertaking a re-organisation of the operations for the Garden Route region.

3.4.5. Institutional Development and Administration Programme:

The WNP 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 and standards as set out in various sets of legislation pertaining to administrative procedures.

3.4.6. Financial Sustainability Programme:

Table 2 provides an estimation of the costs involved in striving towards the desired state for WNP within the proposed Garden Route NP context over the next 5-year period through all of the objectives and associated programmes detailed in this management plan. For logistical purposes this budget reflects the budgets for the areas of Wilderness NP, Knysna Lake Area, Knysna Scientific management, the mountain catchment area, Knysna administration office, the regional office and functions, Diepwalle and Farleigh forests. The allocated costs account for Infrastructure Development Plans, Working for Water, Coast Care, Extended Public Works Programmes and the WNP and DWAF operational budgets. It is significant to note that there is shortfall of approximately R128 million over the next five years. This shortfall mostly accounts for additional developments, infrastructure and forestry and marine operating costs, which had been applied for but allocation is unknown. Although most of the development and infrastructure will be in place by the fourth year, the shortfall does not decrease significantly, as this is when the World Bank funding will have run its course and SANParks would have to account sustaining the project. An important omission that requires urgent attention is an estimated costing for liability and risk. Corporate support (i.e. not included in the WNP's budget) will be required in the form of a technician and operating budget to undertake the monitoring necessary to evaluate TPCs and feedback as part of the adaptive management process. No cost estimates have yet been included for the adaptive management components of non-biophysical aspects of the plan. A detailed breakdown of these figures can be found in the associated lower level plan, available from the park manager upon request.

Table 2 – Estimated costs (in Rands) of reaching the desired state for WNP

Costing	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Acquire the park	R -	R -	R -	R -	R -
Develop the park	R 41,647,540	R 39,915,543	R 30,164,397	R 21,112,429	R 20,788,607
Manage the park	R 28,101,514	R 29,787,605	R 30,974,861	R 32,771,352	R 34,737,634
Total	R 69,749,054	R 69,703,147	R 61,139,258	R 53,883,781	R 55,526,241
<i>Allocated costs</i>	R 45,441,514	R 38,087,605	R 30,974,861	R 32,771,352	R 34,737,634
Shortfall	R24,307,540	R 31,615,543	R 30,164,397	R 21,112,429	R 20,788,607

3.4.7. HIV/AIDS

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 Wilderness 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 TNP 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.

3.4.8. Risk management Programme:

Risk awareness and management within the WNP 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 (Table 1).

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.

3.4.9. Adaptive and integrative strategies to sustain the desired state for WNP

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. This will be further developed in consultation with public participation, especially in the light of the proposed Garden Route National Park.

Most objectives as indicated in objective hierarchy table contained above need to be seriously addressed in the next 5 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 effort to work towards the proclamation of the Garden Route National Park 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 WNP will be practicing an acceptable if not sophisticated level of adaptive management, and in accordance with our overarching values around complex systems, will have the best chance of achieving the desired state in a sustainable way.

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