

Management Plan

TSAU //KHAEB (SPERRGEBIET) NATIONAL PARK

2013 - 2018



Ministry of Environment and Tourism
Directorate of Regional Services and Parks Management



Republic of Namibia







Republic of Namibia
Ministry of Environment and Tourism

ACKNOWLEDGEMENT

This report was commissioned and published by the Ministry of Environment and Tourism (MET) with funding from the Government of the Federal Republic of Germany through KfW.

The views expressed in this publication are those of the publishers.

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Citation

Ministry of Environment and Tourism, 2013.
Management Plan for TSAU //KHAEB (SPERRGEBIET) NATIONAL PARK 2013-2018

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FOREWORD

Namibia's parks are invaluable for tourism with more than 70% of tourism activities attributed to protected areas. Approximately 17% of the surface area of Namibia is currently gazetted as protected areas. Furthermore, tourism is the fastest growing sector in Namibia contributing approximately 16% to the country's GDP and immensely important as a source of employment. The importance of protected areas, not only for tourism and revenue creation, but also for biodiversity, cannot be stressed enough. It is thus imperative that protected areas are managed effectively and efficiently. Management plans for protected areas is viewed as the guiding light for proper management.

This management and development plan sets out the vision, objectives and guidelines for the management and development of the Tsau //Khaeb (Sperrgebiet) National Park. As such, it represents the policies and intentions of the Ministry of Environment and Tourism (MET).

All involved with the Park, including MET decision-makers and management staff, personnel of other Ministries and Parastatals, private sector companies and individuals, all contractors, partners, tourists and any entity and individual dealing in any way with the Park, must ensure that any actions and decisions relating to the Park are in strict accordance with this document. The management plan must be viewed as a valuable and central document by all management- and policy-level staff involved with the Park. They should be familiar with its contents, and should make use of it to familiarize new staff with the aims, objectives and policies of the Park.

It is part of every staff member's job to help implement this management. Park management is a team effort. The future well-being and development of the Park depends on this team approach.



Uahekus Herunga, MP
MINISTER



PREFACE

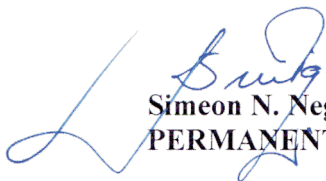
The Management Plan for the Tsau //Khaeb (Sperrgebiet) National Park has been designed and structured to be priority focused and action orientated, to facilitate implementation and the achievement of outputs and outcomes. The Plan is linked to an annual cycle of management and oversight, involving the preparation of annual work plans and budgets.

The Plan is “principles” based. These principles serve essentially as policy statements. Not all eventualities can be planned for, but if the basic principles are established, decisions can be readily made against these principles and thus be in line with Park policy.

The Plan is designed around a uniform structure for easy reference and use, and the language (apart from some basic technical terms used in the conservation sector) is kept simple for broad accessibility. This Plan should be used in conjunction with Park legislation and regulations, as well as with other relevant literature on the area.

It gives a brief background to the Park, including its purpose and objectives, and placing it in a regional setting, before focusing on park management aspects. Chapter 2 focuses on the management of natural resources in the Park while Chapter 3 addresses aspects of regional conservation, park neighbours and resident relations. The zonation of the Park is detailed in Chapter 4. The management of prospecting and mining, and tourism development are covered in Chapters 5 and 6, respectively. Detailed management considerations for infrastructure are included in Chapter 7, while the last chapter covers aspects of administration and management.

Acknowledgements are due to all the individuals and organisations who contributed towards the finalisation of this Management plan.


Simeon N. Negumbo
PERMANENT SECRETARY




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ABBREVIATIONS

AHGP	/Ai-/Ais Hot Springs Game Park
ARTP	/Ai- /Ais-Richtersveld Transfrontier Park
CITES	Convention in the trade of Endangered Species of Fauna and Flora
DEAT	South Africa's Department of Environmental Affairs and Tourism
DVS	Directorate Veterinary Services
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EPL's	Exclusive Prospecting Licenses
HWC	Human Wildlife Conflict
IBMS	Incident Book Monitoring System
ICDP	Integrated Conservation and Development Plan
IPA	Important Plant Area
IUCN	International Union for the Conservation of Nature
JMB	Joint Management Board
LOR TFCA	TFCA along the lower parts of the Orange River
MET	Ministry of Environment and Tourism
MFMR	Ministry of Fisheries and Marine Resources
MME	Ministry of Mines and Energy
NACOMA	Namibian Coast Conservation and Management Project
NGO's	Non Government Organisations
NWR	Namibian Wildlife Resorts
PON	Polytechnic of Namibia
RNP	Richtersveld National Park
SKE	Succulent Karroo Ecosystem
SNP	Sperrgebiet National Park
SPAN	Strengthening the Protected Area Network
TDA	Tourism Development Area
TFCA	Transfrontier Conservation Area
UNAM	University of Namibia

CHAPTER 1

1.1 Overview of the park

The Tsau //Khaeb (Sperrgebiet) National Park is located in the south-western corner of Namibia, between about 26° and 28.5°S and 13° and 17°E. It is about 320 km at its longest (running nnw-sse) and up to about 100 km wide (e-w). It covers an area of about 2.6 million ha. The park is bounded by the low water mark on the Atlantic Ocean in the west, the Orange River in the south, the Namib-Naukluft Park in the north and mainly freehold farmlands to the east. Two town lands also occur on the eastern boundary, those of Aus and Rosh Pinah, which currently fall under the jurisdiction of Local Authorities. Two other urban areas are located within the SNP, namely Lüderitz, which has its own Municipality, and Oranjemund, which falls under the management of Namdeb. It is envisaged that Oranjemund will evolve into a Municipality in the years ahead. The town has been surveyed and excluded from the park. These towns have a great role to play in the Tsau //Khaeb (Sperrgebiet) in supporting economic development of the Park such as tourism by providing goods and services.

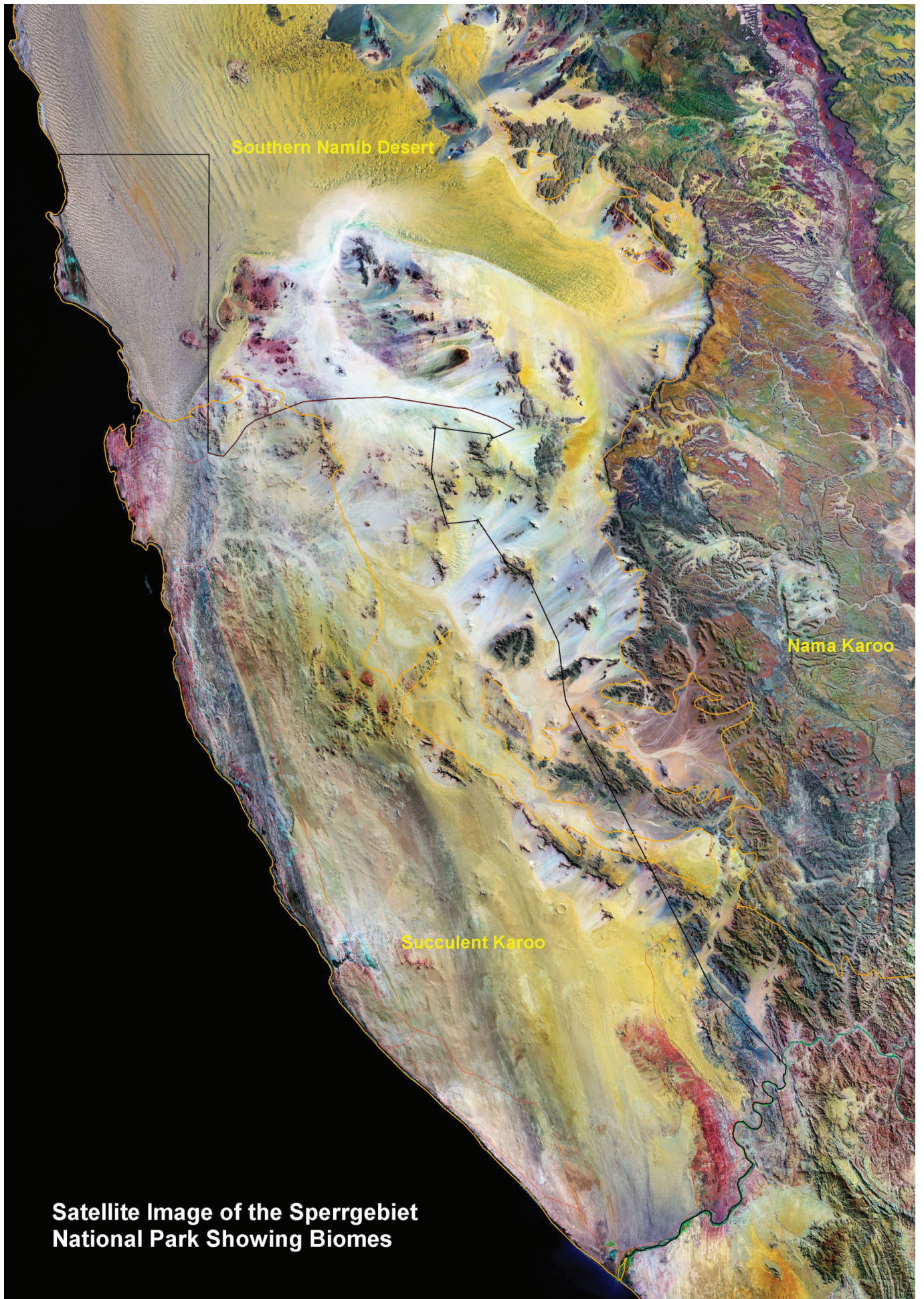
The greater area of the park falls within the Succulent Karoo Biome, while small areas in the north east and north west fall within the Southern Namib Desert (Figure 1). In effect, these areas are transition belts, and contain elements of both biomes. To the west the park extends down to the low tide line on the Atlantic Ocean. The coast comprises mainly sandy shores in the south and rocky headlands and inlets in the north. At least 17 “islands” occur off the Tsau //Khaeb (Sperrgebiet) National Park, ranging in size from small rocky outcrops to islands of a few ha, and some of these, together with their contiguous coastal and marine areas, and extending landwards up to the high tide mark, will be proclaimed as coastal/marine reserves by the Ministry of Fisheries and Marine Resources. The inter-tidal zone will thus be an area of management between the Ministry of Environment and Tourism and the Ministry of Fisheries & Marine Resources.

The median annual rainfall varies between about 15 and 70 mm, is highly unpredictable (coefficient of variation of 70-90%), and rainfall events are equally unlikely in all months of the year. The fact that a significant component of the small amount of rain comes into the southwest Namibia as cold fronts from the Cape in winter results in a vegetation that is dominated by succulents.

The main landscapes of the SNP comprise sandy and rocky coastal plains with bays, sandy and gravel inland plains, sand dunes, mountain ranges and inselbergs, and the Orange River valley, comprising a highly modified river system. The river mouth is a registered Ramsar wetland of international importance.

Because of its diamond riches, the Tsau //Khaeb (Sperrgebiet) has been closed to the public, under tight security restrictions, for 100 years. In areas where open-cast mining takes place environmental impacts are unavoidable. However these areas make up a small portion of the Tsau //Khaeb (Sperrgebiet) and are restricted to the coast and along the Orange River. Large parts of the Tsau //Khaeb (Sperrgebiet), where no mining has taken place so far, are in a fairly undisturbed condition. However, indications of exploration activities and emergency grazing in the past in the eastern section of the Tsau //Khaeb (Sperrgebiet) are evident in some places.

The Succulent Karoo ecosystem is the most diverse desert system in the world. In particular, there is high plant – particularly succulent – diversity. Some 1,050 species are known to occur in the SNP, nearly 25% of the entire flora of Namibia on less than 3% of land area of the country. It is for this reason that the Succulent Karoo is listed amongst the world’s top 25 “biodiversity hotspots”. The area is also identified as an Important Plant Area (IPA) for Namibia. IPAs are sites of high importance for wild plants which provides a framework for implementation of target 5 of the Convention on Biological Diversity’s Global Strategy for Plant Conservation. Target 5 aims for “protection of 50% of the world’s most important areas for plant diversity assured by 2010”.



Satellite Image of the Sperrgebiet National Park Showing Biomes

Figure 1: Satellite image of the Tsau //Khaeb (Sperrgebiet) National Park and surrounding areas showing the biomes, topography and landforms

In addition to plants, the park has a rich but poorly studied diversity of animal life. These include some 80 terrestrial and 38 marine mammal species, the latter including the Cape Fur Seal with over 600,000 animals (almost 50% of the world population), most of which are to be found in four main colonies at Wolf and Atlas Bays and on North and South Long Islands. Some 35 coastal and marine birds have been recorded, with islands such as Possession, Ichaboe, Sinclair, Plumpudding, Pomona and Albatross providing critical breeding grounds for up to 10 or more species, including African Penguin, Cape Gannet and various cormorants, gulls and terns. Almost 60 wetland (mainly along the Orange River) and some 120 terrestrial bird species have been recorded; almost 100 reptile species; some 16 frog species and a great number of insects and other invertebrates, probably 90% or more of the invertebrates yet undescribed to science.

In addition to the biological values of the park, the area has spectacular terrestrial desert, coastal and island landscapes, is a rich open-air laboratory for geology and geomorphology, rich paleontological and archaeological records and a fascinating history of exploration and mining. At the same time, the Succulent Karoo Ecosystem is highly sensitive and fragile. Inappropriate land use would have a devastating impact on the biodiversity of the area, as well as on its future economic potential. A number of areas are considered to be of particularly high sensitivity.

These include:

- The Orange River valley
- The coast, coastal dune hummock habitat and coastal rocky outcrops
- Inland inselbergs, mountain ranges and rocky outcrops
- The offshore islands, particularly those supporting significant breeding populations of red data bird species.

Habitat units

The park comprises 16 different landform units (Figure 2) and some 56 different vegetation types (Figure 3). These are described in detail by Burke (2006).

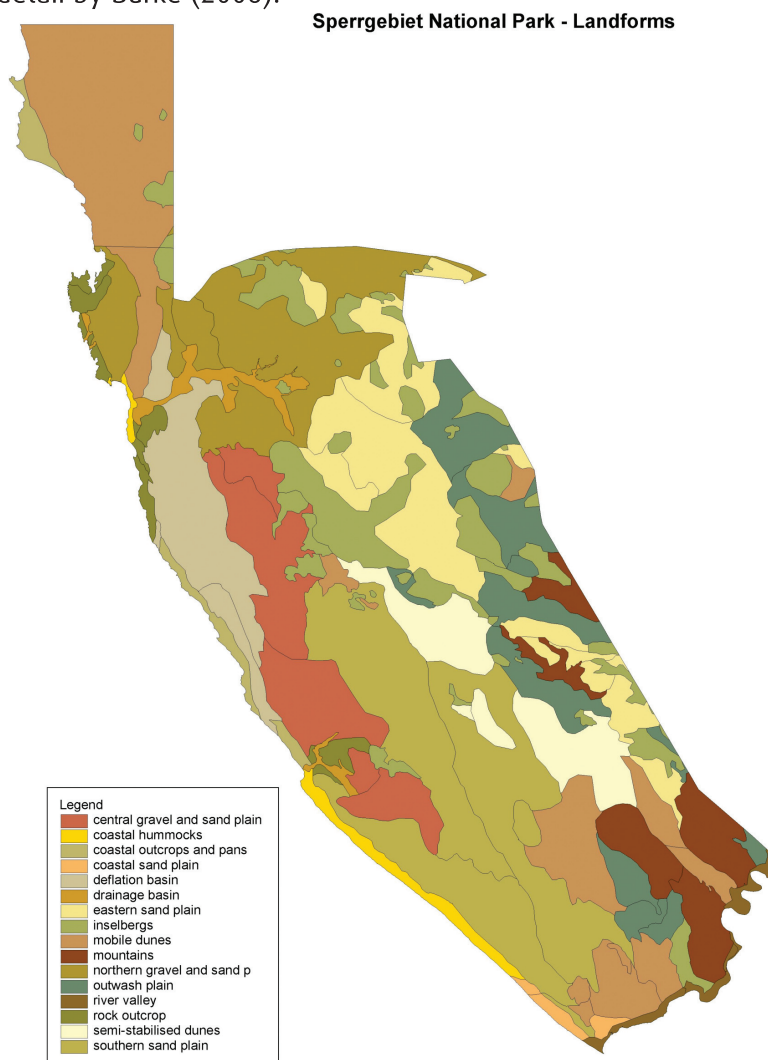


Figure 2: Landforms of the Tsau /Khaeb (Sperrgebiet) National Park

Sperrgebiet National Park - Vegetation

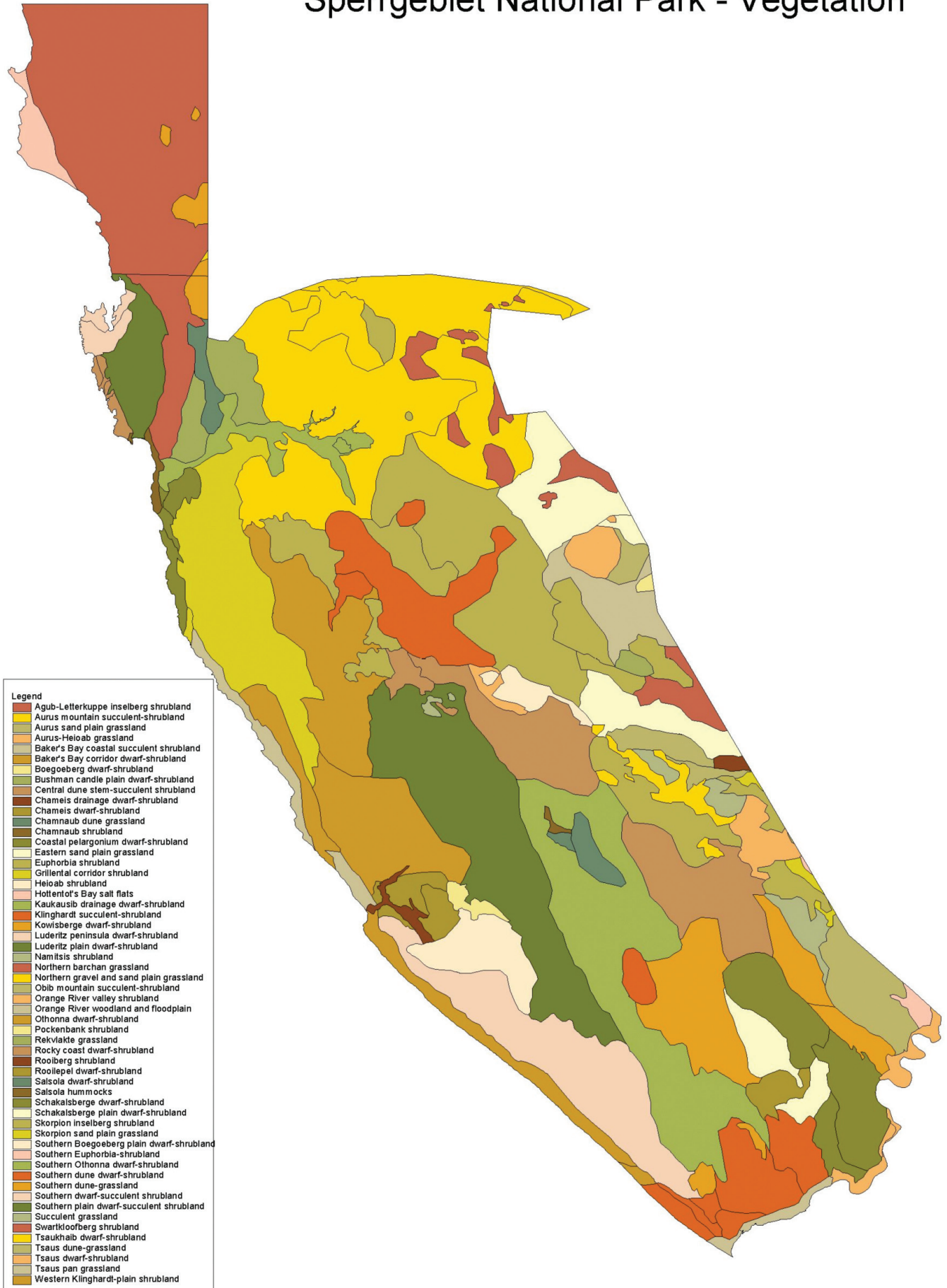


Figure 3: Vegetation types within the Tsau //Khaeb (Sperrgebiet) National Park

1.2 Purpose

This Management Plan set out the vision, objectives and guidelines for the management and development of the Tsau //Khaeb (Sperrgebiet) National Park. As such, it represents the policies and intentions of the Ministry of Environment and Tourism (MET). The Management Plan are accepted as the ultimate authority for the Park. All involved with the Park, including MET decision-makers and management staff, personnel of other Ministries and Parastatals, private sector companies and individuals, all contractors, partners, tourists and any entity and individual dealing in any way with the Park, must ensure that any actions and decisions relating to the Park are in strict accordance with this document.

This must be viewed as the 'constitution' for the area – a broad mandate that includes values, policies and principles on which management decisions will be made. Although this will be improved over time, it is not anticipated that there will be significant or radical changes. The document must therefore be seen as being relatively constant and will only be revised every five years. Under this framework MET may develop medium-term development plans, which will set specific targets over a defined period and linked to outputs. These plans will require resources, which must be identified, and mechanisms needed to source them, which will be detailed in this process.

Shorter-term operational plans (or work plans) may also need to be developed. These will identify specific actions, which need to be performed to address issues in this plan. Not all items in the plan necessarily need constant attention – many issues may 'manage themselves' – however, for most some management intervention may be appropriate. These will be addressed by means of short-term operational plans, which will also identify and allocate resources to achieve them. It is anticipated that the annual work plans will be 'internal' issues within MET, and will be dealt with accordingly.

The Management and Development Plan must be viewed as a valuable and central document by all management- and policy-level staff involved with the Park. They should be familiar with its contents, and should make use of it to familiarize new staff with the aims, objectives and policies of the Park.

1.3 Objectives

- To conserve and wisely manage the landscapes, ecosystems, character and biological diversity of the Tsau //Khaeb (Sperrgebiet) National Park and, where necessary and feasible, to restore and rehabilitate degraded systems to their natural productive states;
- To manage wildlife populations and ecosystems as may be necessary and appropriate to maintain optimal biological diversity and ecosystem stability under highly variable climatic conditions, and to reintroduce and rebuild populations of plants and animals indigenous to the area within historic times (written records, i.e. late 1700s), as might be appropriate under current and changing conditions;
- To promote and support appropriate land and natural resource uses that are compatible with the above objectives, with emphasis on non consumptive and low impact tourism, strategic prospecting and mining, sensitive and sustainable coastal and marine resource harvesting, environmental education, awareness and outreach initiatives and research, and to create strategic and focused economic opportunities with a focus on poverty reduction, without compromising on sound conservation principles and practices.
- To establish strong partnerships with line Ministries (Mines and Energy, Fisheries and Marine Resources, Lands and Resettlement), Regional Government, private sector (e.g. mining, fishing, tourism, neighbouring landowners and administrators) so as to enhance the management and viability of the greater area within the Succulent Karoo Ecosystem and the transition zones to the adjacent Southern Namib Desert to the north, the Nama Karoo ecosystem to the east and the coastal/marine ecosystem to the west;
- To harness the ecological, social and economic viability, sustainability and competitiveness of the park, and to use the park as an engine for wise economic growth and a model of collaborative management that could be further replicated elsewhere;
- To link and seamlessly integrate the management and development of the Tsau //Khaeb (Sperrgebiet) National Park with the adjacent national protected areas of the Namib-Naukluft Park to the north, and

the /Ai-Ais Hot Springs Game Park complex to the south-east, together with neighbours that practise compatible land-uses;

- To work harmoniously with the fishing, mining and tourism sectors, both public and private, for the greatest long-term advantage for biodiversity conservation and socio-economic development of the area, the region and the nation.



CHAPTER 2

Management of natural resources

2.1 Habitats and special sites

Biodiversity conservation

The comprehensive diversity of landscapes, habitats, plants and animals indigenous to the Succulent Karoo Ecosystem and adjacent Transition Belts are protected and both ecosystem functioning and natural evolutionary processes take place effectively.

Specific objective

To protect and conserve the diversity of landscapes, habitats and biota in healthy and productive condition within the Tsau //Khaeb (Sperrgebiet) National Park

Strategies and principles

- Because of the large areas involved, and the intention to create corridors for west-east movement of wildlife, ecosystem management should be minimal, and indeed a minimalist and largely hands-off approach should be adopted;
- Should it become necessary to apply active management, interventions should aim to manage the arid ecosystems for long-term diversity, health and productivity and climate change variations, by ensuring that they are not over utilised to the extent that long-term damage results;
- Allow and promote variability in management and “patchiness” in ecosystem expression in response to variable climatic conditions and ecosystem functioning.
- Build up a good monitoring record of ecological and bio-climatic information, including the diversity and abundance of various species in different taxa, including the less studied lower plants, invertebrates, etc.;
- Monitor the health of populations of species high on the food chain (e.g. key predators and scavengers), flagship and key-stone species and other strategic key indicator species (including indicator species for early warning of climate change impacts) – if these species prosper it follows that the base of the food chain is likely to be diverse and in good condition;
- No poisons or pesticides (or other toxic chemicals) will be used in the Park under any circumstances other than MET approved herbicide for eradication of *Prosopis* (Mesquite) infestations.

Flora

Areas of exceptional plant diversity, with high numbers of range-restricted endemic species within a biodiversity hotspot of global significance are afforded the highest levels of protection that legislative, zonation and management practices can provide.

Specific objective

To protect, document, understand and conserve the rich plant diversity within the SNP, with particular attention to areas of exceptional succulent richness and endemism, such as inselberg and mountain shrublands, the Orange River valley shrublands, the Lüderitz peninsular and Boegoeberg dwarf shrublands.

Strategies and principles

- Extend the vegetation mapping to detailed assessments of biodiversity hotspots;
- Establish a national succulents atlas project, with particular attention to the SKE and the SNP;
- Set up a monitoring programme for carefully selected critical plant populations;
- Monitor areas at high risk to invasion by alien vegetation, such as drainage lines, roadsides, mining and prospecting areas and around human settlements, and implement control measures as required;
- Support and promote botanical surveys and research that will lead to a better understanding of the flora of the SKE and the SNP.

Activities

- a) Key habitats, special sites and invasive alien species should be clearly identified and mapped, and management guidelines developed in year two.
- b) The status and threats to habitats and special sites must be reviewed every five years and new management strategies developed to counter any significant threats.
- c) Threats posed by aliens must continually be assessed and addressed.

2.2 Rehabilitation

Natural landscapes and biodiversity are, as far as possible and practical, re-established to their pristine condition or in line with agreed future land use.

Specific objective

To remove all unnecessary evidence of human occupation from the Park, except agreed infrastructure and impacts in designated sites, which will serve as historic museums, and to rehabilitate landscapes and biodiversity, using best available practices, with emphasis on those areas of greatest ecological and aesthetic importance.

Strategies and principles

- Commission a rehabilitation plan based on an inventory and criteria (log of areas, prioritisation, costs and timelines) for the whole SNP;
- Identify responsibilities for rehabilitation;
- Namdeb, MET and other relevant parties to systematically implement rehabilitation in areas and on aspects of respective responsibilities, to agreed standards and levels, starting with the affordable priorities;

Activities

- a) Identify and map areas where ecosystem functions or processes are compromised by human activities every year.
- b) Explore the possibility of allowing tourism operators to rehabilitate areas allocated to them within concessions every year.
- c) Establish a forum for regular reporting and exchange between MET and Namdeb's rehabilitation programmes.
- d) Liaise with the National Heritage Council and other agencies to ensure that important cultural, historical or other assets are not lost or inadvertently damaged during rehabilitation every year.

2.3 Wildlife population management and introductions

A rich diversity of indigenous wildlife prospers within an open, dynamic and resilient ecosystem.

Specific objective

To ensure that wildlife population numbers increase to levels where biomass carrying capacity is considered conservatively appropriate and sustainable, per species and for the total wildlife population, under different rainfall and range conditions.

Strategies and principles

- Population trends, health (age and sex structures and body condition) and distribution of populations will be monitored and decisions taken based on rainfall, veld condition and other variables;
- Wildlife management decisions will be taken in an adaptive manner, with a minimalist intervention philosophy, and based on good monitoring and research information, as may be decided from time to time.
- Carry out an assessment of species that historically occurred in the Succulent Karoo Ecosystem and Transition belt vegetation types;
- Review which species that no longer occur, or occur at below optimal numbers, could be re-introduced under current conditions, and prepare a prioritized list;
- Be mindful that the park is on the extreme western edge of a number of species' ranges. In higher rainfall years such species may/would have moved westwards into the park area, and in lower rainfall years they would have retreated eastwards into the escarpment. Once large, open areas have been secured, reintroductions into the greater area may be viable, but which would probably not be so if confined to the park;
- Introduce game in phases as per the list, and subject to rainfall and veld condition being adequate to enhance survival chances;
- Acquire game from similar habitats (e.g. Namib and Karoo Transition ecosystem) for genetic integrity and optimal chances of success;
- Introduce game in sufficient numbers to be viable, rather than having small token introductions;
- Where species are likely to recolonise or to augment existing populations by in-migration, allow this to happen rather than active reintroduction;
- No species exotic to the park will be introduced;
- No subspecies or components of populations from elsewhere will be introduced if there is any risk of genetic pollution to the indigenous populations' genetic integrity, and where suitable animals can be acquired from within the required gene pool;
- In the case of introductions that have a potential impact on neighbours (including transboundary implications, e.g. Hippo on the Orange River), full consultations will take place prior to any introductions.

Activities

- a) Implement and maintain the Incident Book Monitoring System (IBMS) to monitor populations of key species every year.
- b) Investigate, and if necessary develop strategies to meet population performance targets for important species which are threatened or rare in year two.

- c) Develop effective anti-poaching programmes to eliminate or reduce the impact of poaching, as a major potential threat to the economic value of the Park and surrounding areas in year one and two.
- d) Take the following steps before species are re-introduced or populations bolstered through introductions:
 - explore what management actions may be taken to create conditions for the species to increase or re-populate the areas;
 - undertake appropriate research to understand why populations are low or locally extinct, and to determine whether causal factors can be eliminated;
 - develop re-introduction plans to ensure that pre-release and post-release management strategies and resources are in place.

2.4 Artificial water points and management

A minimalist, ecologically appropriate and tourism friendly water plan is implemented, taking into account neighbouring land use and water provision.

Specific objective

To ensure that the provision of water for wildlife is undertaken only under exceptional circumstances, in the interests of maintaining biological diversity and good rangeland management.

Strategies and principles

- Water point development and management will be on a critical needs basis only – the default setting is no artificial water points;
- In a critical situation, e.g. water needed by wild horses, wildlife building up along fenced eastern boundary in times of extreme drought, then temporary water provision may be availed if considered absolutely necessary;
- The Park-neighbour policy and strategy will be energetically pursued to explore partnerships to east, and the opening up of west-east corridors with landowners that share compatible values and land-uses with those of the park;
- All natural water points will be carefully managed to avoid disturbance and degradation, and an appropriate monitoring system will be established;
- Abstraction of groundwater from the park, and in adjacent areas that would impact on groundwater, should be avoided. In the event of this being essential, a full EIA must be undertaken;
- Use of water for tourism, mining and other purposes must be judicious, minimalist, demand managed and monitored. Sustainable sources of water must be used. No unsustainable extraction will take place or any extraction that may have negative biodiversity impacts.

Activities

- a) Conduct risk analyses for all artificial water points in year three.
- b) Establish a baseline monitoring system to assess negative impacts on vegetation and key animal species.
- c) Maintain a register of all artificial water points; this must include the purpose of each point and its associated monitoring data every year.

2.5 Domestic animal management

No domestic animals are allowed in the Tsau //Khaeb (Sperrgebiet) National Park and no facilities (e.g. kennels) are available for tourist pets.

Specific objective

To remove all domestic animals should these occur at any time within the park as domestic animals potentially affect the genetic diversity (e.g. domestic/feral cats) and threaten indigenous wildlife directly either through hunting (e.g. dogs, domestic/feral cats), competition (e.g. ungulates) and/or disease (e.g. all domestic animals).

Strategies and principles

- Destroy any dog, donkey, horse or any other riding or pack-animal or with the consent of the Cabinet, kill any live-stock or domestic animal found in park, other than any such live-stock or domestic animal which is in the lawful possession or under the lawful charge of an officer or which is being conveyed through such game Park or nature as determined in the Nature Conservation Ordinance 4 of 1975;
- Identify responsibilities for destroying domestic stock located within the park;
- Identify responsibilities and facilities of impoundment of live-stock located within the park;
- Identify ownership of livestock (i.e. brands, ear tags) and liaise with neighbouring farmers regarding the removal thereof from the park;
- Determine the need for confinement facilities (i.e. kennels) for tourists with pets;
- Establish a forum for regular reporting and exchange between MET and other relevant parties (e.g. Namdeb, Scorpion, Lüderitz & Rosh Pinah Municipalities, neighbouring farmers) on domestic livestock issues.

Activities

- a) In collaboration with affected stakeholders, develop and enforce a livestock management strategy aimed at reducing human-wildlife conflict, preventing the spread of disease, and maintaining habitats for conservation and livestock grazing in year three.
- b) In collaboration with affected stakeholders, develop and enforce a livestock removal strategy for the Park.

2.6 Fencing

No domestic animals are allowed in the Tsau //Khaeb (Sperrgebiet) National Park and no facilities (e.g. kennels) are available for tourist pets.

Specific objective

- To remove all internal fences excepting those fences that have strategic value (e.g. security fencing).
- To secure boundary fences where neighbouring land use and/or security is a threat to the Park's integrity, or where secure fencing is essential for good neighbourliness (e.g. small stock farmers and predators).

Strategies and principles

- Boundary fences where security is of concern and where neighbours practise incompatible land uses will be strengthened, monitored and maintained.

Activities

- a) Repair and maintain fences as appropriate.

2.7 Human wildlife conflict management

The Tsau //Khaeb (Sperrgebiet) borders various commercial livestock farms (mainly sheep) to the east as well as the Lüderitz and Rosh Pinah Municipal areas. Predators such as Black-backed jackal, Brown Hyena, Caracal, Leopard and Spotted Hyena residing (or perceived as) in the Park and preying on neighbouring domestic stock could potentially lead to conflict situations.

Local communities living around the Park are stakeholders and in order to ensure their support and cooperation with Park management and development, it is important that HWC issues are addressed from the onset as a priority and, when relevant, involve local people in the mitigation/ prevention of HWC.

Specific objective

To reduce Human Wildlife Conflict among immediate Park neighbours, provide incentives for people to live with wildlife, promote collaborative management of HWC between the local communities, MET Park staff and other stakeholders and promote a better understanding of the behaviour of species that cause problems in order to guide management activities.

Strategies and principles

- Establish, in consultation with the various communities and Park staff, a HWC Management Plan for SNP which includes/ addresses:
 - Developing, testing and mainstreaming methods to reduce and/ or minimise/ mitigate the impacts of HWC. This could include the improvement of kraals and pens, reinforcing the protection of water infrastructure, ensure reliable available water for animal wildlife, etc.;
 - Collaborative research and monitoring to generate pertinent information and data to improve the understanding of the behaviour of problem causing species, the nature of the problems and the effectiveness of the actions taken to address these problems;
- Ensure that the Park fence is maintained and repaired in a timely manner to prevent the escape of animals from the Park, especially fences bordering commercial farmers and municipal areas. Regular patrols must be carried out to inspect the condition of the fence and to repair damages immediately (see sections on Park Fencing and Disease Control);
- Generate awareness and educate Park staff and local communities about the dangers and risks posed by animal wildlife;
- Informing visitors about potential dangers and how to avoid conflicts;
- Individual problem-causing animals should be removed (lethal removal or translocation) based on national legislation and according to the National Policy on HWC Management (MET, 2009), in the most cost-effective and humane way possible;
- Training Park staff in HWC; i.e. how to respond to, what to do and how to secure people and their assets if the animal(s) is (are) still present;
- Establish an inventory of common HWC animals in the Park and damages associated with them and establish regular monitoring of such animals to have pertinent data in the event that HWC is reported.

Activities

- a) Develop and refine HWC management plans and procedures in collaboration with local communities, and ensure these are widely communicated to community members and relevant staff within MET.

2.8 Diseases and parasites

The Tsau //Khaeb (Sperrgebiet) borders various commercial farms to the east as well as towns (Lüderitz, Oranjemund & Rosh Pinah) with domestic animals (e.g. dogs & cats). In the event of any disease outbreak, it is important for SNP to be prepared to proactively respond by effectively and efficiently preventing the spreading of diseases. The best preventative measures include i) ensuring that Park fences are in good condition and in compliance with height, construction and alignment specifications provided by the Nature Conservation Ordinance 4 of 1975 and Directorate Veterinary Services and, ii) avoid contact between cloven hooved livestock (cattle, goats and sheep) and other domestic animals (e.g. dogs & cats) and wildlife.

Specific objective

To safeguard the animal wildlife of the park against disease outbreaks in the general area and preventing the spreading of any diseases into the park.

Strategies and principles

- Ensure that Park fences are maintained at all times to serve as a 'quarantine facility' against the spreading of diseases;
- Avoid contact between livestock and domestic animals and wildlife at all times;
- Develop a working relationship with neighbouring landowners, municipalities and DVS for effective and efficient response to animal disease issues in and around the Park.

Activities

Work with other government agencies and local institutions such as farmers and communities to find environmentally acceptable solutions to the control of human, livestock and wildlife diseases and ensure that appropriate technologies and methods are applied.

2.9 Alien species

Specific objective

To ensure that no feral populations of alien plants and animals is permitted within the Park, with the exception of the wild horses, which will be confined to the Garub area and treated as part of the history of the area.

Strategies and principles

- Eradicate feral populations of alien plants and animals in the SNP, with the exception of the wild horses at Garub, with priority placed on the most invasive species (e.g. Prosopis, Opuntia, Nicotiana, Eucalyptus, Port Jackson, Rooikraantz) and species likely to pollute the genetic integrity of wild populations (e.g. domestic cat);
- Establish a monitoring system for alien species, with particular attention to high risk areas such as along rivers and drainage lines, roadways, mining areas, water points, etc.

Activities

- a) Clearly identify and map key habitats, special sites and invasive alien species, and develop management guidelines in year two.
- b) Manage and where practical eradicate invasive alien species throughout the Park.
- c) Continually assess and address threats posed by all alien species.

2.10 Law enforcement and crime prevention

To enforce a zero tolerance approach against all illegal activities within and adjacent to the park.

Strategies and principles

- Develop a practical, harmonised approach to the implementation of various pieces of legislation within the park, particularly those relating to the Park and the Diamond Act, but also including MME and MFMR legislation;
- Plan, develop and implement, in partnership with Namdeb, an efficient and effective tourism management and access control system;
- Ensure security and anti-poaching (including plant, reptile and other natural resource collection/theft) patrols and surveillance are conducted at regular but unpredictable intervals, particularly in high risk areas (e.g. along main access routes and around urban and mining areas) and that they are highly visible;
- Develop an attractive reward system and let it (and the zero tolerance approach) be widely known in the area;
- Develop active security relationships with Namdeb Security, government law enforcement agencies (including customs officials) and neighbours;
- Ensure rangers and staff are trained to preserve and collect evidence so that arrests result in convictions.

Activities

- a) Develop a practical plan for implementing law enforcement in the context of this management plan and relevant legislation in year one.
- b) Develop (with relevant partners) an effective tourism management and access control system in year three.
- c) Develop good relations with all tourism operators and, with their help, develop a systematic reporting process whereby they can report any illegal or illicit activities that they observe during their normal activities.
- d) Disseminate information on law enforcement approaches and reward schemes.
- e) Carry out regular patrols to ensure a high level of presence and visibility.



2.11 Environmental Impact Assessment and management

To enforce a zero tolerance approach against all illegal activities within and adjacent to the park.

Specific objective

To prevent negative effects and enhance positive effects by conducting an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) on development activities.

Strategies and principles

- EIA's are to follow the policy guidelines as provided by the Environmental Management Act of 2007;
- The following is a list of activities that may not be undertaken without an Environmental Clearance Certificate:
 - Energy generation, transmission & storage
 - Waste management, treatment, handling & disposal
 - Mining & quarrying activities
 - Forestry activities
 - Land use & development
 - Tourism development activities
 - Agriculture & aquaculture activities
 - Water resource developments
 - Hazardous substance treatment, handling & storage
 - Infrastructure
 - Other: Military demonstration & testing sites and construction of cemeteries, camping, leisure & recreational sites
- Other activities that may impact on the Park, although do not require formal EIA's, would include all activities that affect the general habitat or species (e.g. artificial water installations, burning programmes, re-introduction of mega-herbivores, etc.) and should be assessed – i.e. apply precautionary principle;
- EIA's should always include the evaluation of potential impacts and ways to prevent, avoid or mitigate these impacts;
- EMP's and monitoring plans should be implemented;
- Development should be aligned to the Park management and zonation plans;
- Adaptive management strategies should be adhered to at all times.

Activities

- a) Ensure that zonation plans, tourism development plan and guidelines are followed in the planning and implementation of all activities and developments.

2.12 Consumptive resource utilisation

Specific objective

To allow for sustainable use of natural resources as a wildlife management strategy in line with the National Policy on Utilization of Game in Protected Areas and Other State Land and the Nature Conservation Ordinance, 1975 (4 of 1975) as amended.

Strategies and principles

- Clearly define, as far as possible, the consumptive and non-consumptive wildlife use benefits as generated from the park;
- Consumptive will be based on annual trophy hunting and own use quotas, problem animals and permits issued for plant uses;

- Harvesting yields will be determined prior to utilisation, based on regular monitoring and according to adaptive management principles;
- Trophy hunting will be permitted dependent on annual quota's set and according to the Park Zonation plan;
- Harvesting for festivals and other important functions will be in accordance with the National Policy on Utilisation of Game in Protected Areas and Other State Land;
- Tsau //Khaeb (Sperrgebiet) will be used as a source of wildlife for introduction to other areas – i.e. live capture;
- The sharing of consumable and non-consumable wildlife goods must be in compliance with the existing national and international legal frameworks and conventions especially pertaining to species listed by CITES.

2.13 Research

Management and development of the Tsau //Khaeb (Sperrgebiet) will be information-based, drawing on good quality research and monitoring. To ensure that good data is available, the park will implement a research friendly and supportive philosophy and encourage the non-invasive use of the Park as an open air laboratory.

Specific objective

To base park management on pertinent available information and data to support an adaptive management approach, and to create a research friendly environment.

Strategies and principles

- A prioritised and open-ended list of key research topics will be developed for the Park and disseminated to appropriate research institutions;
- An appropriate support mechanism will be developed for visiting scientists, with emphasis on those addressing priority research topics relevant to the Park;
- Visiting scientists should present their findings to park management;
- Appropriate mechanisms will be developed to ensure that optimum feed-back and other values from researchers are obtained;
- Links will be established between research activities carried out in other Parks, particularly in the arid regions, as well as with other relevant research organisations in Namibia, and comparative studies between the different desert ecosystems will be encouraged, including transboundary with other components of the Succulent Karoo Ecosystem in South Africa;
- Copies of all research output – i.e. publications and reports – as conducted in the park should be made available as hard and electronic copies and be filed accordingly.

Activities

- a) Identify gaps in knowledge relating to management and where appropriate, through collaboration, find solutions to improve the understanding of the natural system and the socio-economic benefits from the Park in year two.
- b) Develop an open-ended list of priority research topics based on information needs for the management of Tsau //Khaeb (Sperrgebiet) National Park in year one.
- c) Ensure research outputs and findings are made available to park staff and integrated with monitoring data to inform park management decisions on all levels.

2.14 Monitoring

Specific objective

To ensure that minimum, regular monitoring of wildlife and plant resources, climatic variables and impacts of human activities will be carried out to determine and track environmental changes. The information produced from the monitoring systems will feed into adaptive management decision-making.

Strategies and principles

- Monitoring will focus on key indicator species with an emphasis on ensuring regular data collection at appropriate intervals, cost efficiency and sustainability;
- Monitoring data will have both spatial and temporal components, and will include sites of “Special Scientific Interest”;
- Monitoring systems will be adapted from existing systems being used within arid zones in western and southern Namibia with a view to efficiency in development and ultimately regional and national integration of data;
- Plant resource monitoring will focus on regular estimates of rangeland condition, including veld biomass to serve as an early warning of forage restrictions, but long-term vegetation trends will also be monitored, particularly for plant diversity and endemic, range restricted succulent and other species and communities, within the context of climate change;
- Annual game counts will be undertaken in a systematic, efficient and repeatable manner;
- Monitoring systems will be balanced to ensure that the entire range of critical information needs is covered.

Activities

- a) Develop an appropriate monitoring framework to include the monitoring requirements of Tsau //Khaeb (Sperrgebiet) National Park, and incorporate ongoing monitoring initiatives and where appropriate, adapt other national systems such as the IBMS with appropriate training for staff and other implementing partners in year two.
- b) Make time-series data and analysed information available for adaptive management and for distribution to interested stakeholders, decision-makers and the general public in year two.

2.15 Coastal management

The intertidal coastal zone, its biota and the species that transcend the marine/terrestrial interface are managed jointly by the MET and MFMR under agreed co-management principles and protocols that promote synergy, efficiency and elevated conservation management, monitoring and protection of habitats, processes and species.

Specific objective

To ensure that management of the coastal environment for the Tsau //Khaeb (Sperrgebiet) National Park is done properly.

Strategies and principles

- A close and mutually supportive working environment must be created between the Park MET and MFMR institutions and their respective staff. To this end, a Park MET-MFMR working committee should be established;
- The above committee to identify the key areas, issues and species that require monitoring and management;
- The above committee to establish operational principles, procedures and protocols for monitoring, managing and reporting on the areas and biota of mutual interest, as well as means of collaboration, communication and mutual support.



CHAPTER 3

Regional conservation, park neighbour and resident relations

3.1 Transfrontier conservation

Specific objective

To ensure that the Tsau //Khaeb (Sperrgebiet) National Park will contribute to and be managed within the context of a regionally integrated conservation area that encompasses Namibia and South Africa, possibly Angola.

Strategies and principles

- Management of the Tsau //Khaeb (Sperrgebiet) should harmonise with management approaches used for conservation areas in neighbouring South Africa;
- TFCA institutions will be used for purposes of collaboration and dialogue with conservation managers in South Africa;
- Collaboration will take place at the highest level possible through the TFCA structures to ensure that the objectives of this plan are aligned with the plans and objectives of neighbouring conservation areas in South Africa;
- Encourage and support knowledge and information exchange programmes between conservation managers in Namibia and South Africa;
- The integrity of the Namibian natural resources will not be compromised by activities or requirements of neighbouring South Africa.

Activities

- a) Investigate possibilities of integrating the Tsau //Khaeb (Sperrgebiet) National Park under existing TFCA arrangement, in year two.
- b) Encourage and support knowledge and information exchange programmes between conservation managers in Namibia and neighbouring countries.

3.2 Regional land use planning and landscape level management

Open, contiguous landscapes of sufficient size are secured to ensure that the linkage between the Succulent Karoo Ecosystem and the plateau / escarpment zone to the east, and the /Ai-/Ais National Park is conserved and strengthened, as well as linkages to the coastal and marine ecosystems.

Specific objective

To increase the area of land available to wildlife and indigenous biodiversity, through partnerships with neighbours, with particular emphasis on:

- the transition between the Tsau //Khaeb (Sperrgebiet) and the Huns Mountains escarpment belt of the /Ai-/Ais National Park;
- linkages and corridors across the eastern boundaries of the Tsau //Khaeb (Sperrgebiet) with neighbours practicing compatible land uses;
- linkages between the terrestrial, coastal and marine ecosystems to the west, including the off-shore islands;
- micro-habitats not adequately represented in the current Park;
- areas adjacent to the park where present land use is a threat to biodiversity conservation in the Tsau //Khaeb (Sperrgebiet);
- areas likely to help buffer the impacts of climate change on species loss.

Strategies and Principles

- Establish collaboration and cooperation procedures and practices with other management units.
- Identify specific priority areas for attention.

Activities

- a) Ensure that the key elements of this management plan are accommodated in all regional planning.
- b) Ensure that regional authorities are fully aware of the economic impacts of the Park, and of the negative impacts that inappropriate planning will have on conservation and its ability to contribute to the regional economy.
- c) Pro-actively embark on planning at the local and regional level to mitigate conflicts and maximise synergies between land uses.

3.3 Park neighbours and resident communities

Specific objective

To establish good working relations with all neighbours in the target area of collaboration, monitoring and development and, where appropriate, to engage in joint and/or assigned implementation for enhanced conservation and sustainable development of the area.

Strategies and principles

- To engage pro-actively with selected neighbours, to share the park's management plan to build confidence and transparency, and to build a coalition of the willing;
- To explore the establishment of a collaborative management and development plan for the "Greater SNP Complex" to enhance the development of a shared vision, common objectives and agreed principles, and promote a common management approach, as well as to facilitate Park-to-neighbour liaison;
- To identify a few collaborative initiatives, such as larger-scale zonation, boundary fence removals, invasive alien control, joint monitoring (e.g. game counts), wildlife re-introductions, etc.;
- To engage with Park staff in the /Ai-/Ais National Park and the Namib-Naukluft National Park to ensure seamless collaboration and cooperation;
- To engage with industries and initiatives taking place in the western parts of the park, including fishing and mining, to promote harmonious collaboration;
- To work closely with relevant Regional Government and Local Authority/Municipality personnel (elected and appointed) to keep people informed of developments, to invite their input and to help resolve any problems at an early stage.

Activities

- a) Identify areas that are critically important for biodiversity, engage with the relevant stakeholders and explore opportunities for leveraging benefits for the protection of these areas.
- b) Establish and maintain management forums with park neighbours and stakeholders.

3.4 Private partnerships

Conservation of populations that range further than the Park borders, as well as monitoring and research, will require collaboration and the formation of partnerships with relevant stakeholders.

Strategies and principles

The MET and the Park management should promote, initiate and accept collaborations and partnerships by following the guiding principles below:

- MET has the responsibility to strengthen ties with relevant stakeholders;
- MET should form partnerships with tertiary education institutions, particularly but not exclusively, in Namibia such as PON and UNAM, with regard to research and training;
- MET should encourage visiting researchers to conduct research at the Park on a wide variety of topics;
- Formal agreements on procedures and responsibilities should be set between the MET and collaborators / partners;
- Agreements should be consistent with the management plan of the Park;

3.5 Environmental education

The Tsau //Khaeb (Sperrgebiet) offers a unique open-air classroom and laboratory on the subjects of geology, geomorphology, climatology, hydrology, zoology, botany, coastal and marine ecosystems and processes, arid-zone ecology, adaptive evolution, endemism, palaeontology, archaeology, history, conservation and many other fields. The park thus has huge educational and awareness-raising potential, which will be exploited in the interests of ensuring that visitors and staff are well informed and enriched by associating with the Park.

Specific objective

To develop good, accessible and stimulating information on the key biophysical and socio-archaeological aspects of the Succulent Karoo and Coastal ecosystems that are represented within the SNP, and to share this information with guests, visitors, youth groups, specialist groups, decision-makers, community leaders, staff and the general public in different interesting and exciting ways so as to promote an understanding and commitment to the conservation and sustainable development of the SKE and the arid and semi-arid zones of Namibia and southern Africa.

Strategies and principles

- Establish an Information Centre near Kolmanskop linked to the EE centre, and rezone this site to be outside the security area, and explore the establishment of other Information Centres (on parks-neighbours management and partnership basis) at strategic entry points to the SNP;
- Prepare good quality information in different forms (posters, brochures, displays, booklets, DVDs, website, etc., that is available to visitors and the general public;
- Ensure that research carried out in the SNP is translated into accessible information for the lay person;
- Ensure that tour guides are well trained at national and local levels, and that they create exceptional field experiences for tourists by sharing their knowledge in interesting and stimulating ways.



CHAPTER 4

Zonation

Landscapes and ecosystems are optimally managed and used within the SNP, by means of a zonation plan, also taking into account the greater context of past land uses, neighbouring land uses and the potential for future partnerships, linkages and corridors, and developing the economic potential of the greater area within the context of biodiversity and landscape conservation.

Specific objective

To zone the SNP for enhanced conservation management and appropriate utilization, to minimize potential conflicts between activities and to facilitate potential “bigger picture” conservation goals for the area.

Zones

The following zones have been identified and mapped, based upon and similar to IUCN categories (Figure 5):

Zones	Activities	Specific application in the SNP
Unique areas	<ul style="list-style-type: none"> • Highly sensitive and high value conservation / biodiversity areas • Set aside for sensitive and low non-intrusive scientific study • No or minimal mechanized access • No permanent structures 	<p>Areas of high endemnicity with highly range-restricted species:</p> <ul style="list-style-type: none"> • Kowisberge • Tsaukhaib-Haalenberg • Letterkuppe • Grillental outcrops Dreizackberg and Drachenberg • Schwarzer Berg • Tsabiams and Klinghardt Mountains • Agub • Kleiner and Grosser Münzenberg • Namtsoab • Morgen • Heioab-Namitsis- Namiams Aurus Mountains • Rooiberg • Chamnaub • Boegoeberg and Boegoeberg lichen fields • Schakalsberge • Obib mountains Gomtsawibberg – Skorpion inselbergs
Wilderness areas	<ul style="list-style-type: none"> • Sensitive ecosystems • High value “sense of place” • Low impact usage • No or minimal mechanized access • No permanent structures 	<ul style="list-style-type: none"> • Tsabiams wilderness area • Namtsoab wilderness area • Heioab wilderness area • Chamnaub wilderness area • Schakalsberge wilderness area
National Park	<ul style="list-style-type: none"> • Managed for conservation and controlled tourism • Mechanised access permitted 	<p>Whole SNP proclaimed under this category. The other categories are managed as land-use zones within the overall National Park. Where no other zone is provided, the zone is taken to be “National Park”</p>
Natural monument	<ul style="list-style-type: none"> • Conservation of specific outstanding features, including landscapes, geological and archaeological components, fossil deposits, areas of spiritual significance and areas of heritage value 	<ul style="list-style-type: none"> • Bogenfels Arch • Roter Kamm meteorite impact crater
Habitat / species management areas	<ul style="list-style-type: none"> • Protected areas managed mainly for conservation through active management intervention • To deliver benefits to people though within the scope of sustainable practices 	<ul style="list-style-type: none"> • Orange River mouth Ramsar site • Lüderitz lagoon, Agate beach • Bogenfels- van Reenen Bay • Baker’s Bay • Atlas and Wolf Bay
Protected landscapes / seascapes	<ul style="list-style-type: none"> • Relatively open access for public enjoyment • Generally higher intensity and lower regulatory areas • Add to welfare of local communities 	<ul style="list-style-type: none"> • Areas where people can have easy access to take dogs for walk go horse riding, have zoned areas for 4x4 trails and quad bikes, etc. • Lüderitz peninsula (Diamond Coast Recreation Area), • Lüderitz dune sacrificial area • Oranjemund 4x4 dune sacrificial area • Orange River floodplain (horse riding)

Zones	Activities	Specific application in the SNP
Managed resource protected areas	<ul style="list-style-type: none"> • Managed mainly for the sustainable use of natural resources, e.g. fishing, mining • Managed to ensure long term protection and maintenance of biological diversity while providing at same time a sustained flow of natural products and services to meet local and national development needs, e.g. mining 	<ul style="list-style-type: none"> • Marine diamond areas • Coastal and Orange River mining areas • Base metal mining areas (Skorpion) • Aquaculture (restricted to ponds in MA1) • Irrigation agriculture (restricted to Hohenfels) • Gas abstraction, piping, etc

(Note: Zoning does not exclude Namdeb, Skorpion and other licensed companies and entities from prospecting and mining throughout their licence area, subject to their meeting the necessary conditions).

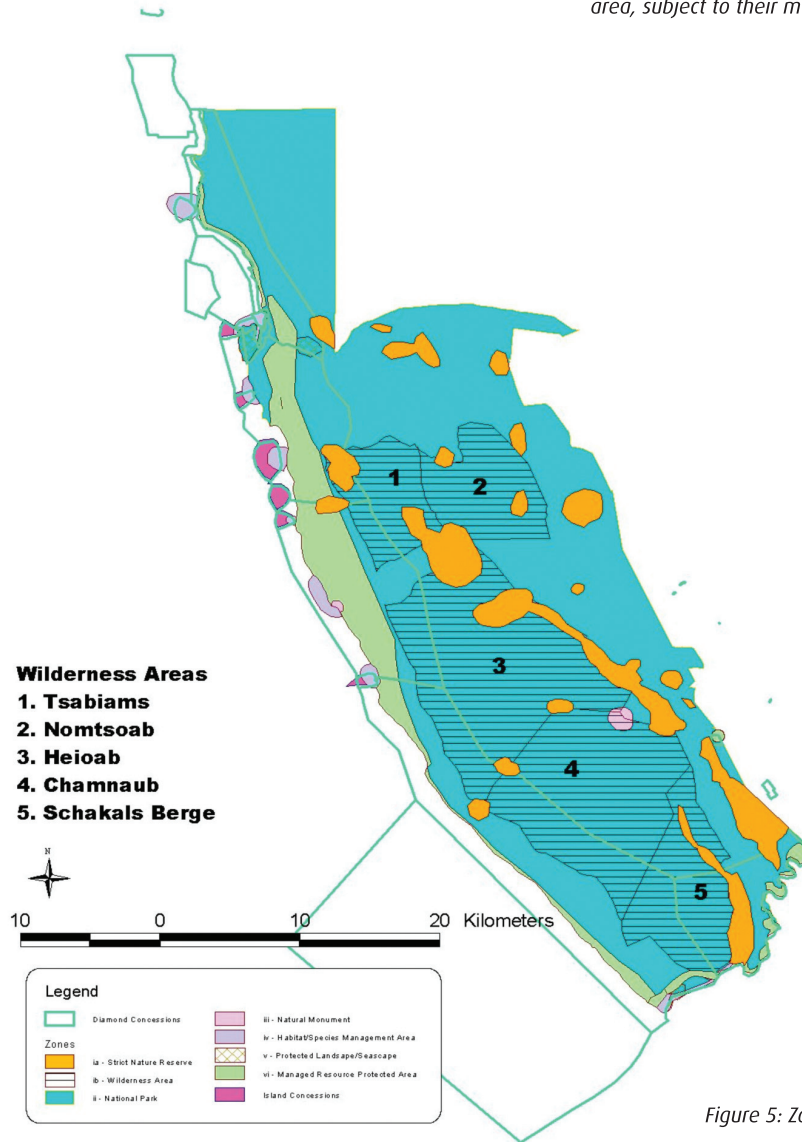


Figure 5: Zonation map of the Tsau //Khaeb (Sperrgebiet) National Park

Activities

- Implement the zoning system prescribed in this document during park level operational planning each year.
- Continually assess zones and sites allocated for economic purposes to ensure that socio-economic goals are optimised. This should be done in collaboration with interested and affected parties.
- Continually update and refine the habitat zones as new information is obtained.

CHAPTER 5

Prospecting and mining

All prospecting and mining activities are planned, managed and decommissioned using best available practice, taking into account long-term national benefits vis-à-vis benefits from other current and potential land-uses, and applying precautionary and polluter pays principles and due caution so as to minimize negative environmental impacts.

According to the National Policy on Prospecting and Mining in Protected Areas 2011, all areas except for the areas zoned as Category VI Management Resource Protected Areas (See Figure 5) should be excluded from future prospecting and mining activities.

Specific objective

- To integrate high value nationally strategic prospecting and mining activities into the land-use and management of the SNP in ways that minimize environmental and socio-economic impacts and that optimize biodiversity, ecosystem and landscape conservation.
- To restore areas damaged by past prospecting and mining to as near a natural state as can reasonably be expected, or as may be decided for agreed future land use (e.g. retaining roads, retain selected mining infrastructure for tourism information purposes), and to disallow any low value mining (e.g. dimension stone).

Strategies and principles

- Prospecting and mining in the Tsau //Khaeb (Sperrgebiet) will be for high value nationally important minerals only. No low value, non-strategic prospecting and mining will be permitted;
- The long-term national benefits from the use of the land for mining must clearly outweigh benefits from other appropriate forms of land use. The onus is on the proponent to demonstrate such national comparative benefits;
- Geological research in the park will be encouraged, provided this does not have significant biodiversity, ecosystem or landscape impacts. The onus is on the researcher to demonstrate the ecologically sensitive nature of the research;
- A close and mutually supportive working environment must be created between the Park and Mining sectors.
- Applying safeguards is a key strategy for avoiding and/or reducing impacts to acceptable levels. All prospecting and mining activities MUST be preceded by an Environmental Impact Assessment in accordance with the word and spirit of Namibia's EA Policy (1995). The logical consequence of the EIA is the compilation of an Environmental Management Plan (EMP). The EMP must define both outcomes and the methodology (in some detail) as to how the outcomes will be achieved;
- Approved prospecting and/or mining company must provide park staff with an environmental report every 6 months, showing its progress towards meeting agreed upon safeguard targets. Once prospecting and/or mining has ceased, the impacts must be rehabilitated in accordance with the stipulations of the EMP;
- Communication with prospecting and mining companies is conducted on a regular basis to ensure that mutual-expectations are clear and reinforced. Mining representatives will serve on the Strategic and Consultative Forums, but it is still necessary for the Park staff to visit and talk to operators on the ground. Regular visits will not only facilitate dialogue, but they will also demonstrate MET's "hands on" approach towards monitoring;

- Monitor implementation of EMPs, paying special attention to the achievement of safeguard targets. A detailed inspection report must be completed after each visit to the prospect or mine by park staff, with copies sent to MET Head Office, the mining representative on the Strategic Forum, the mine/company inspected and the Mining Commissioner within MME. The report must include an “action” column, where it is clear what action needs to be undertaken by whom and by when, to remedy an environmental concern. As far as possible, the inspecting office should take photographs of key issues of concern. These should be digital since the camera will record date and time – both essential pieces of information. If possible, the inspecting officer must obtain the counter-signature of the prospector/miner who was present during the inspection;
- In the case of non-compliance, park staff must immediately report the matter to the Mining representative on the Park Advisory Forum in order to enable “in house” remediation. If this fails, the matter must be reported to MET HQ for higher level attention. The SNP could request external review/inspection should they not have the technical capacity to assess the situation themselves. If possible (i.e. within the provisions of the law), the prospector/miner must be responsible for carrying all the costs of external consultants. Refer to the Environmental Management Act (2007) for specific actions to be taken.

Activities

- a) Compile an inventory of all prospecting and mineral licenses in the Park, noting type of license, its boundaries, conditions of approval, ownership, status, timeline and contact person in year two.
- b) Develop and implement a monitoring schedule.



CHAPTER 6

Tourism development and management

Specific objective

To preserve and promote visitor enjoyment and appreciation of the Parks remoteness, desolate nature, wild arid areas and coastal sections, the succulent Karoo vegetation, dramatic landscapes, arid area wildlife, coastal bird and sea life, and an alluring history of diamond mining in a restricted area.

Strategies and principles

- Finalise a detailed "Tourism Development Options Plan" for the Park that includes a feasibility assessment, sets the carrying capacities, management actions and tourism impact monitoring within the context of the Park's zonation plan;
- The focus should be on high return, low impact tourism;
- Ensure that the zonation plan is implemented correctly, and that it is reviewed, refined and updated from time to time;
- Aerial zonation, heights and no-flying zones to be determined and form part of the zonation and tourism plan;
- Adaptively manage, based on tourism impact monitoring;
- From time to time carry out "tourism satisfaction surveys" that assess tourist's and concessionaire's views on the quality of their experience, and encourages them to suggest improvements;
- Ensure that tour guides are well trained, motivated and well tuned to visitor's needs and local conditions;
- The recommended strategy is to zone the park into areas that represent two key products of the area namely the coastal mining zone and a desert zone. Therefore, visitors to the park will be able to enjoy two types of visitor experiences which will be "branded" and promoted as distinctly different experiences;
- The Park has been zoned into TDAs that provides a strategic long term framework to guide the development of activities in the Park while still ensuring that features of the Park are preserved and that visitors will receive a quality visitor experience befitting of this unique conservation area. Each of the TDAs is presented in the following map. Further information can be obtained from the Tourism Development Options Plan for the SNP;
- Each TDA will be planned for tourism as an individual entity but within an integrated whole for the Park.

Activities

- a) Periodically review the recommended tourism developments and activities for the Park
- b) Finalize the Tourism Development Plan in year two.
- c) Identify priorities for visitor management such as maps, interpretative materials, visitor facilities, etc. from this management plan and other associated plans, and start implementation.
- d) Address accessibility to the Park by reviewing the Diamond Act with Ministry of Mines and Energy.



Figure 6: Tourism development areas

The TDAs for the Tsau //Khaeb (Sperrgebiet) National Park are:

The Northern Dunes TDA

The Northern Dunes TDA is the area of the SNP north of Lüderitz and is bordered on the west by the Atlantic Ocean and to the north and east by the Namib-Naukluft National Park. There are two primary tourism related resources in this TDA, namely the coastline and the desert sand dunes.

The purpose of this TDA is, through the provision of adventure tours to the dunes and wild beaches in 4x4 dune vehicles, to encourage visitors to stay longer in Lüderitz and thereby increase tourism's contribution to the local economy.

The nature of the tourism activities undertaken in this TDA should be significantly different to those undertaken in other TDAs in order to differentiate the experiences gained in each TDA thereby offering visitors a suite of tourism experiences and activities in the SNP.

Aus – Lüderitz Link TDA

The Aus-Lüderitz TDA is the northern central section of the SNP that borders onto the B4 tarred road and tourist route from Aus to Lüderitz. The TDA is strategically located between the town of Lüderitz and the small settlement of Aus. This location is strategic as it forms a potential tourism link between the two tourism settlement nodes. The TDA possesses a number of tourism resources, namely the migratory Namib Feral horses; Tsaukhaib Mountains; an old disused railway line that is in the process of being rehabilitated; views to the north east of Dicke Willem mountain. The landscape is generally sandy with rocky outcrops but can be transformed into endless plains of grassland after rain.

The purpose of establishing the Aus – Lüderitz TDA is to establish a tourism link between Aus and Lüderitz into which tourism activities and experiences can be developed. The main purpose of establishing these activities and experiences is to encourage the visitors to spend more time in the SNP and tourism region.

Northern Desert Adventure TDA

The Northern Desert Adventure TDA is located in the northern part of the Tsau //Khaeb (Sperrgebiet). The TDA is bordered in the east by private farm land, the bulk of which is being used for game farming or other land uses compatible with the park. The spatial location of this TDA is strategic relative to the location of the sub-regions two tourism nodes, namely Aus and Lüderitz.

The purpose of establishing this TDA is to create a zone that mimics the proclaimed wilderness zone of the Park. However, the difference is that it can be used for low intensity tourism activities and facilities including vehicular access. It would be in this area, which is well known for its stunning landscapes which are considered to be amongst the best in the SNP, that high value tourism products and activities could take place. These products and activities would be managed as concession activities

Eastern TDA

The Eastern TDA is located on the eastern side of the park and is bordered to the west by the wilderness zone and private farm land in the east, most of which is currently being used for land use activities that are compatible with the Park's management plan. This TDA links into the Northern Desert Adventure TDA to the north and the Southern Drive TDA in the south thus creating the potential for link tours between the other two TDAs. The Eastern TDA has varied landscapes and a number of natural features that could be considered tourist attractions within the context of the park. These attractions include the Roter Kamm Crater, Aurus mountains, Tsausa mountains, views of the Klinghardt Mountains and other good landscapes. There are a number of man-made relicts left by prospectors and when the area was used for emergency grazing during periods of drought.

The purpose of this TDA is to create an eastern tourism destination area in the park that may provide:

- Tourism related economic opportunities to the community of Rosh Pinah;
- Traversing opportunities for nature-based tourism products to bordering land owners on the eastern boundary of the park;
- To encourage the future development of tourism accommodation products outside of the park on bordering land;
- To create space for the potential development of one up-market, luxury lodge.

Coastal and Mining History TDA

This TDA is located along the northern section of the Atlantic coastline just south of Lüderitz. This TDA has a high energy coastline which is a rich marine environment with many opportunities to interpret its natural and marine history. However, the most startling aspect of this TDA is the history, current operations and impact that diamond mining has had on the landscape. This impact coupled to the ghost mining towns (particularly Pomona & Grullenthal ghost towns), settlements and diggings that have been left behind after the mines have closed creates a wonderful and interesting tourism experience. The Bogenfels Arch and Bakers Bay seal colony make interesting must see tourist attractions for visitors to the area.

This TDA is focused on the coast and the mining history of the TDA. The purpose of tourism in this TDA is aimed at extending the length of stay of tourists to Lüderitz by one night.

Oranjemund Coastal / Orange River TDA

This TDA is situated at the south western corner of the park. It is bordered to the west by the Atlantic Ocean, to the south by the Orange River and to the east by the wilderness zone. Oranjemund is the gateway to this TDA and is situated in the extreme south of the TDA.

The purpose of this TDA is to act as a south west gateway into the park, a service zone from which the TDA and park can be serviced and a recreation zone for local inhabitants.

Southern TDA

This TDA is located in the south-western corner of the park. It borders the Rosh Pinah – Aus road in the east, the wilderness zone in the west and Oranjemund coastal / Orange River TDA in the south. Rosh Pinah is the gateway to this TDA. It is an area that is predominantly rocky with a central sector of windblown sand with deep, eroded gullies draining to the Orange River. This area is predominantly located in a strict nature reserve and therefore any activities must be guided or escorted.

The purpose of this TDA is to attract the largest sector of tourists currently visiting southern Namibia, South African self-drive tourists, and to extract some economic benefit from this market segment for the inhabitants of Rosh Pinah, Oranjemund and the Park. A further purpose is to provide a “must do” attraction for these tourists that, since the opening of the ferry at Sendelingsdrift, undertake a circular tour route through Richtersveld, northern Namaqualand and southern Namibia. This tour route does add tourism economic value to the region on both sides of the international border and, in the future, to Oranjemund.

Grand Circular Safari Route

This circular safari route is designed as a multi-day safari around the park for a limited number of departures. The safari group will follow a fixed route (established by concessionaire operators in conjunction with Park Management) in one direction around the Park, attempting never to come into contact with other tourist products or infrastructure.

The purpose of this safari route is to establish a transitory product that gives visitors the opportunity to experience a multi-day desert safari in the SNP while generating revenue for both the Park and the operator.

CHAPTER 7

Infrastructure

7.1 Access and roads

Specific objective

To rationalise and maintain a road network to serve the tourism, management and monitoring needs of the Park. Close and rehabilitate obsolete roads. No new roads developed without strong rationale and EIA, and no off-road driving except in clearly designated areas (e.g. crossing mobile dunes).

Strategies and principles

- A carefully selected network of roads will be maintained for the effective management of the Park and its activities;
- Existing roads and tracks not forming part of the network will be closed and rehabilitated;
- Borrow pits for past and future road building materials and other gravel & sand use will be carefully sited with ecological and aesthetic considerations in mind, and be fully rehabilitated after use.

7.2 Buildings

Strategies and principles

- New buildings and architectural upgrades should be designed and constructed to blend in with the environment and cause little disturbance to the natural landscapes;
- Cost-effective sustainable construction techniques should be applied in order to minimise the carbon footprint;
- Where possible, buildings should be located as close to existing service infrastructure and major access routes as the product will allow;
- Any new buildings or improvements must take into account the long-term management costs and responsibilities;
- Conservation staff must be concentrated near areas where management and control demands are highest. Ideally they should be located near services, and where practical in towns or villages where support infrastructure and services are available for staff and operations;
- All staff residing within the Park must be accommodated in facilities that meet acceptable standards, especially as regards their safety when residing in the area and commuting to work;
- The waste disposal of tourism facilities and staff quarters must comply with the Environmental Management Act 2007;
- Structures containing fuel, gas and oil must comply with the Environmental Management Act 2007, and containment structures must be erected to minimise the effects of leakage and spillages;

7.3 Tourism infrastructure

Tourism infrastructure is currently non-existent in the park. Such infrastructure can assist the economic potential of a park, however should be planned, designed, located and developed adequately prior to construction so as not to impact negatively on the biophysical environment and overall "sense of place". Ongoing maintenance is imperative for the proper functioning of such infrastructure and should be budgeted for and conducted by skilled contractors using material of good quality.

Specific objective

To ensure that infrastructure is limited, properly constructed, adequately maintained and contribute to the "sense of place" and vision of park.

Strategies and principles

- An environmental clearance certificate would be required prior to the creation of new infrastructure in the Park;
- Infrastructure should be located close to existing services and major access routes;
- Infrastructure should blend into the overall landscape and not detract from the “sense of place”;
- Good quality material and workmanship is critical;
- Green building designs – e.g. solar heating, natural ventilation, etc. – should be encouraged;
- Development should follow the Park Zonation Plan.

7.4 Airstrips and aircraft

The Park is located approximately 700 km south of Windhoek. The general mountainous terrain and overall sensitive habitats make aircraft access a less viable alternative. The closest airstrips are indicated in the table below.

Specific objective

To ensure that the park remain without a landing strip or should this be necessary in future, a suitable area outside the Park should be given preference.

Location of airstrips near and inside the Park

Name	ICAO designator	Latitude	longitude	Elevation above sea level (feet)	Runway Orientation	Runway length (metres)
Luderitz	FYLZ	26:41:00	15:15:00	426	04/22 12/30	1830 1192
Oranjemund	FYOG	28:35:00	16:27:00	16	02/20	1310
Rosh Pinah	FYRP	27:58:00	16:42:00	1200	15/33	2133
Aus	FYAS	26:41:00	16:18:00	4720	11/29	1432

Strategies and principles

- Should an airstrip be required in future, preference should be given to suitable areas outside the Park;
- Helicopters should use airstrips outside parks and helipads will only be permitted if there is no impact on other Park users;
- An environmental clearance certificate would be required prior to the creation of new airstrips in the vicinity of the Park;
- The ‘no flying’ below 1,000m restriction should still generally apply over the Park although there may be designated corridors for approved landings;
- All flying below 1,000m should be approved by the Director MET;
- No low level aerial safaris will be permitted;
- Noise pollution to other Park users must be avoided in any flying operations.

7.5 Waste management

All wastes, solid, liquid and toxic, are currently dumped into the Oranjemund landfill created by Namdeb. Park staff domestic waste is collected by Namdeb and dumped at the site. Other waste in the Park is collected randomly by MET staff and dumped at the official landfill site, including liquid fuels and oils. This is an extremely unsustainable and environmentally detrimental practice. No site suitability assessment was carried out which would have considered topography, underground water, solid and superficial geology, vegetation and types of waste to mention a few. To date it is thus not known what the direct and indirect environmental impacts are especially concerning underground water resources. The volume of leachate is a function of water that comes into contact with uncovered waste. Given liquid fuels and oils and other toxic wastes are dumped, this could have serious detrimental effect over time. It is important for Park staff to address this matter as a priority as waste generation in the Park will increase once a tourism operation is established.

Specific objective

To ensure that the Park remains free of any waste and pollution by implementing cost effective and environmentally friendly waste management practices.

Strategies and principles

- Establish clear guidelines and procedures for waste collection, sorting and dumping;
- Provide signage at the Park entrance, office, staff accommodation and future tourism facilities to promote zero tolerance for littering and pollution in the Park;
- Enforce the “polluter pays principle” under the Environmental Management Act (EMA) of 2007;
- Assess the feasibility of i) creating an environmentally friendly and long-term sustainable landfill site or ii) developing a mechanism whereby wastes and pollutants are collected regularly, transported and dumped at designated sites in Oranjemund, Rosh Pinah and Lüderitz;
- Liaise with Namdeb regarding waste disposal issues;
- Initiate a recycling programme where recyclable materials can be sent to the recycling plant in Windhoek on a regular basis;
- Provide international standards and best practices for the treatment and handling of toxic wastes, emphasising the protection of humans, flora and fauna;
- In the absence of a landfill site, implement an interim waste management policy that ensures the provision of waste collection bins at the Park entrance, office, staff accommodation and future tourism facilities;
- Generate awareness and enhance the capacities of Park staff to manage waste and pollutants.

Activities

- a) Park management must assess existing sites and if necessary initiate a monitoring programme to ensure they comply with national legislation, policy and standards.
- b) Disposal sites/temporary storage sites that are found to be inadequate, especially where water is being polluted, or at risk, must receive urgent attention to resolve any problems, if necessary closing the existing sites and relocating them.
- c) Park management must develop an appropriate waste management procedure and enforce compliance by all staff, tourism providers and other agencies.
- d) Park management must assess the existing sites and if necessary initiate a monitoring programme to ensure that they comply with national legislation, policy and standards.
- e) Those found to be inadequate, especially where water is at risk of or is being polluted, are to receive urgent attention and a strategy implemented to resolve any problems.

7.6 Human safety

Wildlife may pose a threat to tourists and staff within the Park. Management needs to monitor those instances and areas where this is likely to happen.

Strategies and principles

- Protective barriers should be erected where the threat is likely to be high. Barriers should be monitored to assess their effectiveness;
- Notices and warning signs must be displayed in appropriate places;
- Access to the Park is conditional on a waiver of liability for visitors and families of staff;
- All Park users should be made aware of actions which will increase the likelihood of injury or death; animal feeding should be prohibited;
- Facilities should be designed and developed with a view to preventing or minimising the risk to life or property, but not impacting negatively on the level of visitor experience.

Activities

- a) All protective and precautionary measures, such as barriers, firebreaks, notices, and signs should be regularly maintained and assessed for their functionality and effectiveness.
- b) New threats or human safety incidents need to be monitored and acted upon immediately by park management and staff.

7.7 Fencing

Fences are imperative on boundaries adjacent livestock farmers so as to avoid conflict situations. The fences should conform to the Nature Conservation Ordinance 4 of 1975 – See Regulations 147 which describes fences suitable for wildlife found in the SNP as stipulated below. The removal of fences along other land use not in conflict with wildlife management could be investigated to facilitate wildlife movement and migration patterns, especially in the Greater Succulent Karroo Complex.

Specific objective

Fences are necessary in areas where potential land use conflict exists (i.e. Namdeb high security areas, Oranjemund township, Scorpion Mine activities, livestock farmers, etc.) while the removal of fences along boundaries with a more compatible land use could be investigated.

Strategies and principles

- Fences are imperative on boundaries adjacent livestock farmers so as to avoid conflict situations.
- The fences should conform to the Nature Conservation Ordinance 4 of 1975 as described by Regulation 147.

Activities

- a) All existing fences should be properly maintained.

CHAPTER 8

Administration and management

General guidelines on management of the Park

- All MET assets are accounted for and if necessary protected and maintained in working order and applied to contribute towards this Plan's Vision and Objectives;
- Close control of maintenance is required to ensure assets do not deteriorate;
- Ensure all relevant MET policies are complied with, where there are obstacles, recommendations must be made and solutions sought to improve the system;
- Establish a system of monitoring and recording all aspects of the Park so that control can be exercised and management improved, especially of the following:
 - The socio-economic impact of the Park;
 - That tourism products are developed and operated responsibly;
 - All collaboration agreements are complied with;
 - Financial records are kept and budgets are adhered to;
- Identify gaps in knowledge relating to management and where appropriate, through collaboration, find solutions to improve the understanding of the natural system;
- To develop a respectful and efficient working relationship with staff and other groups and ensure MET policies are complied with in this regard;
- Ensure all areas of the Park are adequately managed and controlled;
- To make recommendations and follow-up on any reviews or changes to this Plan, relevant legislation, development requirements, funding, research and other management related issues;
- Monitor any changes in legislation and advise on their impact on the Park and associated operations;
- Research needs are attended to and where possible/ necessary/ feasible, done in collaboration with scientists, students, research/ academic institutions and other appropriate partners.
This management & development plan will be thoroughly reviewed and, if necessary, revised, every five years.

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