



Republic of Namibia
Ministry of Environment & Tourism

A STRATEGIC COLLABORATIVE MANAGEMENT &
DEVELOPMENT PLAN FOR
GREATER SOSSUSVLEI – NAMIB LANDSCAPE
2013 - 2018



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ASSESSMENT DONE BY:



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AUTHORITY OF THE CO-MANAGEMENT & DEVELOPMENT PLAN

This Strategic Collaborative Management & Development Plan (SCMDP) for the “Greater Sossusvlei-Namib Landscape” (GSLN) sets out the five year strategic vision, purpose and objectives as well as the underlying principles for the key issues which the participants (members of the GSLN Association) wish to address in the collaborative management and development of the Landscape. It also lists agreed “actions” under each of the issues, to facilitate the effective implementation of the plan. As such, this plan represents the wishes and intentions of the participants. The five-year SCMDP is accepted as the guiding authority for the Landscape. All subscribing to this SCMDP must strive to ensure that any actions and decisions accordance with this document.

This SCMDP will be reviewed by the members with input from collaborating partners and, if necessary, revised, every five years. The next review should be done in 2016 for implementation in 2017. Any changes that must be made in the interim must be recommended by the members or Management Committee of the Landscape, and reflected in the minutes, and approved by the members by means of a signed and dated amendment. These approved changes must be appended to the master copies of the collaborative management plan, one held by each of the partners.

The SCMDP should be viewed as a valuable and central document by all land owners, custodians, management personnel and subcontractors of all members involved in the Landscape. They should be familiar with its contents, and should make use of it to familiarize existing and new staff with the vision, objectives and policies of the Landscape, as well as the agreed plan of action.

It is part of every member’s responsibility to help implement this SCMDP. It is also every member’s responsibility to propose improvements to the plan, as well as improvements in how the plan may be implemented. Collaborative management is a team effort. The future well-being and development of the Landscape depends on this team approach.

SOME PRINCIPLES OF CO-MANAGEMENT

There has been some confusion around the terms “co-management”, “co-operative management” and “collaborative management”, with concern being expressed that it may allow people to become involved in the management and micro-management of others people’s land, or land that falls under the jurisdiction of other organisations.

Firstly, “co-management” is a term that refers to both co-operative and collaborative management. Co-operation refers to people being willing to help one another, while collaboration implies a more active involvement of working together for an agreed outcome. None of these terms imply that people will be managing other people’s areas or enterprises. Rather, they all involve agreed higher-level consensus on developing an overall vision, objectives and targets that will be to the greater good of all stakeholders, and working to achieve these higher level outcomes by means of an agreed Action Plan (the Strategic Collaborative Management & Development Plan).

Second, co-management does not involve small local issues that are best managed at local level. Rather, it focuses on things that require co-operation and/or collaboration for actions to be effective and desired outcomes to be achieved. It asks the fundamental question – ***what are the things that we can do better and achieve better results by working together rather than working in isolation?***

Third, co-management needs to have a geographic focus that involves enough of the stakeholders to be effective, but not too large an area so as to lose focus and become too general. In the case of the Sossusvlei-Namib initiative, for example, the focus needs to be on and around the Sossusvlei/Naukluft area and specifically on its environmental and socio-economic landscapes. In this context, its biophysical characteristics (topography, landscapes, desert environment, biodiversity and cultures) and its marketability come together as the core theme. By extending the area of involvement too wide, the core theme is diluted and stakeholders are so far away from one another that institutional interactions become limited and ineffectual.

Fourth, stakeholders have to be sufficiently regularly in contact with one another, through meetings, institutional collaboration and other forms of communication that a unity of purpose and common vision is retained and evolves constructively over time. If stakeholders are conceptually marginal or geographically distant to the focus of the core theme, then the endeavour is likely to fail or be disrupted by conflicting interests.

Fifth, stakeholders participate in collaborative management initiatives based on the positive aspects, vision / objectives / outcomes they share, not based on their differences. People see value in being part of the process, and this serves as an incentive. At the same time, stakeholders also need to contribute to the process – they cannot be net extractors of value, they need to put value into the collaborative management process.



PART 1

VISION, PURPOSE AND OBJECTIVES

1.1 Vision

To collaboratively manage the Greater Sossusvlei-Namib Landscape to enhance ecological and biodiversity conservation and socio-economic development, for the sustained benefit of the people within the Landscape and the Region.

1.2 Purpose

To foster and enhance collaboration and co-operation by the members and where appropriate, to help harmonise their planning, management and development at a landscape level, to effectively implement the Vision, Objectives and Activities contained in this Collaborative Management and Development Plan, as may be revised and updated from time to time, within the area comprising the Greater Sossusvlei-Namib Landscape, and to work effectively with its neighbours.

1.3 Objectives

- To conserve and wisely manage the biomes, landscapes, ecosystems, catchments and biological diversity of the Greater Sossusvlei-Namib Landscape (GSNL) and, where necessary and feasible, to restore and rehabilitate degraded systems to their natural, productive states.
- To manage wildlife populations and ecosystems to maintain healthy biological diversity and ecosystem stability under hyper-arid and variable climatic conditions and different land-use practices, and to reintroduce and rebuild wildlife populations indigenous to the area within historic times, as might be appropriate under current and changing conditions.
- To promote socio-economic development opportunities through creation of appropriate enterprises, partnerships and other relevant mechanisms to foster economic growth and thereby, promote job creation and rural development.
- To promote and support appropriate land and natural resource uses that are compatible with the above objectives, with emphasis on sustainable land management practices, well managed tourism, marketing of flagship species, environmental education, awareness and outreach initiatives and research, and to create strategic and focused economic opportunities without compromising on sound conservation principles and practices.
- To establish strong collaborative management partnerships and an appropriate institutional mechanism between the various land custodians, administrators, managers, holders and owners within the Landscape, so as to enhance the management of ecological and socio-economic aspects within the GSNL to the mutual benefit of all partners.
- To harness the ecological, social, cultural and economic viability, sustainability and competitiveness of the GSNL as a model of collaborative management that could be further replicated elsewhere.
- To explore ways of jointly marketing the GSNL and create synergies between the individual economic and financial activities and initiatives of the partners to enhance the development of the overall Landscape to the mutual benefit of all partners.
- To explore the further expansion of the current GSNL as new potential partners seek to join the Landscape and the Association, within the agreed Principles of collaborative management, and to help potential neighbouring Landscapes become established in their own right as may be appropriate.



PART 2

BACKGROUND TO THE LANDSCAPE

2.1 The Area

In accordance with the 3rd and 4th principles of landscape collaborative management (see above), the GSNL has a geographic focus on the Sossusvlei-Naukluft features of the central Namib and immediately adjacent areas. It has an ecological focus on creating connectivity between the Namib Desert to the west and the escarpment zone to the east, and specifically in creating open movement corridors to allow migratory and nomadic species to move east in times of low rainfall, and west in times of good rainfall. It has an economic focus on enhancing the lands uses in this area that are compatible with the Vision and Objectives of the GSNL, and an institutional focus on fostering constructive collaboration between the primary stakeholders, being land owners and custodians, as well as with and between secondary and tertiary stakeholders, to promote and achieve the objectives of this Strategic Plan.

The boundaries of the GSNL, and the involvement of individual land owners and custodians, are dynamic and will change over time. This is not a matter of concern, but more an evolutionary process that is dependent on many internal and external factors. The management approach to the GSNL therefore also requires flexibility, responsiveness as well as pro-active planning.

At this stage, the working boundary of the GSNL extends from the northern side of the Tsondabvlei area south to some 25 km south of NamibRand, east to the top of the escarpment and west to include the adjacent parts of the Namib-Naukluft Park (see Figure 1)

2.2 Recent History Of Land Use

Over the past 20 years the freehold land on the immediate eastern border of the Namib-Naukluft Park (NNP) has increasingly turned from livestock farming to wildlife, biodiversity and landscape conservation. Today the main land-use in much of the area is low-impact tourism with some low levels of wildlife off-take in a few localities. This form of land-use is highly compatible with that of the neighbouring Namib-Naukluft Park, run by the Ministry of Environment and Tourism (MET).

Past land use in the western parts of Namibia was mainly small-stock farming. Land was partitioned into camps by thousands of kilometers of mesh and strand fencing. While many of the internal fences have been removed on farms now used for wildlife and tourism, the boundary fences generally remain. Other impacts of small-stock farming were overgrazing, rangeland degradation and soil erosion, depletion of wildlife and persecution of predators which included poisoning, which severely depleted populations of scavenging species.

When small-stock farming was the dominant land use, the eastern border of the Namib-Naukluft Park was a zone of major conflict between MET staff and neighbouring farmers. Transgressions included unauthorised entry into the Park, large-scale poaching and farmers enticing wildlife from the Park onto their farms (by use of fence funnels, water and licks) for the purpose of hunting and selling the meat. As a result, in the early 1980s a strong fence was built along the entire eastern border of the Namib-Naukluft Park. While this fence significantly reduced poaching and loss of wildlife from the park, it caused another problem. The west-east movement of wildlife from the Namib plains up into the escarpment zone, particularly by Oryx in dry years, was cut off. Similarly, the east-west movement of plains game from the escarpment out onto the grassy Namib plains in good rainfall years was cut off. Animals in the vicinity of the Naukluft Mountains were able to pass through the narrow neck (about 12 km wide) connecting the Namib with the Naukluft, but in other parts of the Namib many animals (mainly Oryx and Ostriches) died against the fence. Over successive dry periods the numbers of Oryx have declines in step-wise fashion, not being able to recover sufficiently in the intervening better rainfall years.

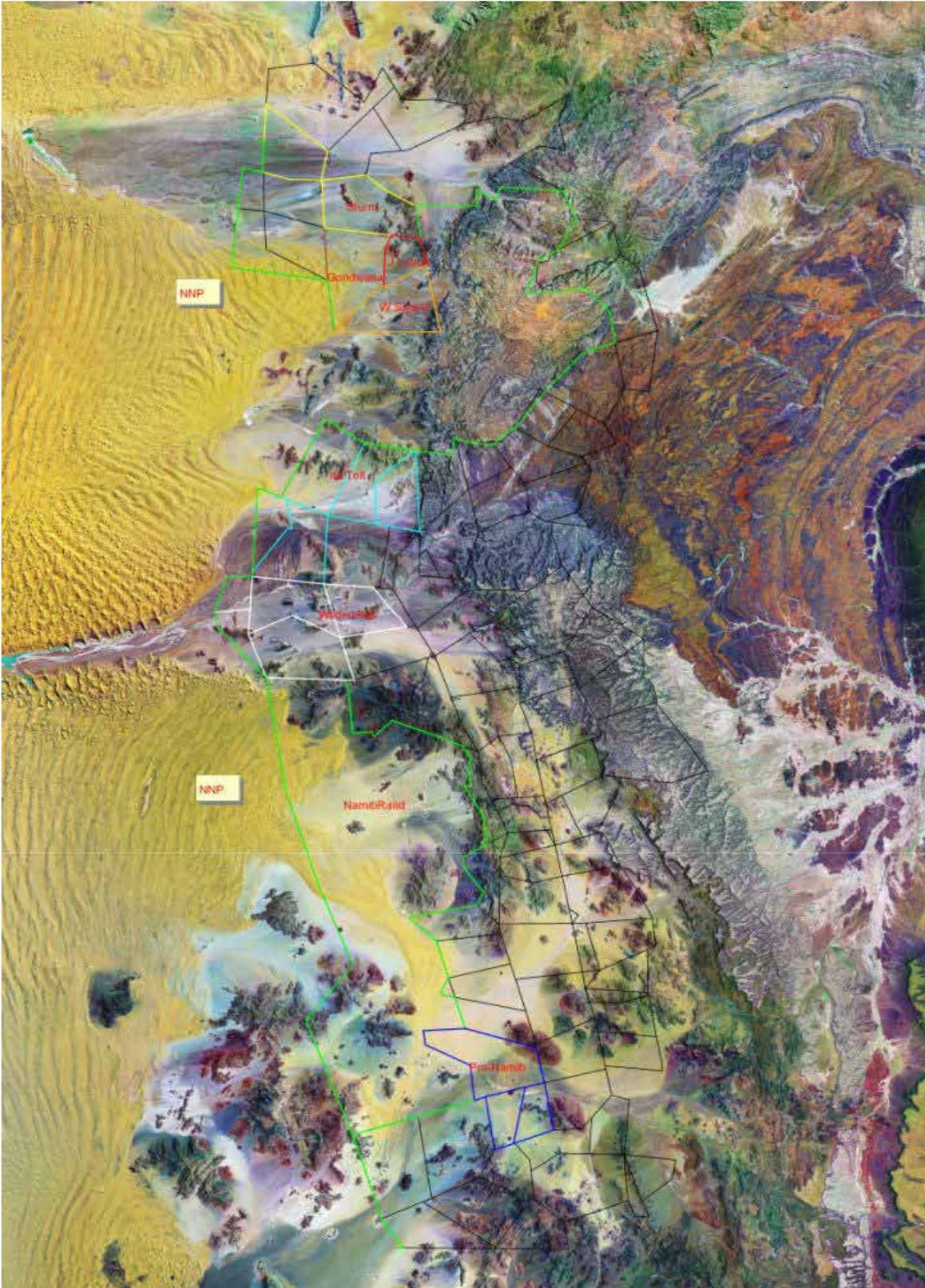


Figure 1: The Greater Sossusvlei-Namibia Landscape Its current approximate borders

There is now compelling evidence for the removal or breaching of this NNP fence, as well as other obstructing fences, to allow the west-east movement patterns to resume. The removal / breaching of the fence should be undertaken in a strategic manner. Not all the fences in the GSNL need to be lifted or breached. Some land uses would make this inappropriate. And some land owners / custodians may not wish to do so at this time. Only where there are land owners that have compatible wildlife and tourism land practices to that of the Namib-Naukluft Park, and where people are willing to participate, would the opening up of landscapes take place. Where there is conflict with neighbours, or conflicting land uses, then the fence should be retained and maintained.

The Ministry of Environment & Tourism, in its Strategic Plan (2007), has embraced the notion of collaborative management approaches to landscapes and biodiversity conservation across different land tenure systems where different land owners, custodians and managers work together towards achieving a common Vision, Objectives and Outcomes, and do so by implementing a set of agreed Actions.

The core Outcomes envisaged by the MET in its Strategic Plan include the establishment of collaboration and collaborative management with partners to promote and enhance broad-based approaches to (a) conservation and sustainable natural resource management and (b) socio-economic development.

These evolving changes in the sector have created opportunities for different land holders with compatible land uses to collaborate and develop collaborative management approaches for landscape conservation.

2.3 Rationale For Landscape Collaborative Management

The main reasons for initiating collaborative management approaches across contiguous landscapes are:

- To promote more effective landscape and biodiversity conservation across a diversity of land uses, and thus enhance sustainable land management.
- To promote economic development, improve livelihoods and combat rural poverty in sustainable ways. This requires integrated, diversified and holistic approaches, and by its nature is inclusive and partnership based.
- To help mitigate and prepare for the impacts of climate change. Namibia is predicted to be severely impacted, with farming being particularly badly affected. Best forms of adaptation involve opening up systems, working collaboratively, and diversifying from a high dependence on farming systems into indigenous biodiversity production systems such as wildlife and tourism, which achieve best results when managed through collaborative mechanisms.
- To support the Ministry of Environment & Tourism with the implementation of its Vision and Strategic Plan towards collaborative management approaches to ecosystems, priority areas and actions/programmes.

2.4 Habitats

The habitats of the GSNL and their ecological status and importance from a conservation perspective are currently poorly known. A reasonable understanding of the habitats, vegetation types and associated biodiversity is fundamental to good landscape planning, zonation and management. The development of a background document on these aspects is important for all future planning

2.4.1 Actions	Timing	Responsibility	Progress
Commission a short study to collect both desktop and field information and prepare a concise report on the habitats, vegetation types and key biodiversity components of the GSNL with emphasis on their ecological status and conservation importance, and with recommendations for zonation and management.	2013-14		
Prepare poster for members, staff and visitors on these landforms and vegetation types, with photographs and sensitivity ratings.	2014		

PART 3

MANAGEMENT PRINCIPLES

3.1 Landscape Management Through Partnership

Principle: Open, contiguous landscapes are secured to ensure that ecosystem functioning is strengthened, through collaborative management of land owners, custodians and partners, to create linkages and corridors between the Namib-Naukluft Park and the escarpment to allow unrestricted west-east movement by wildlife, as well as north-south movement.

Actions	Timing	Record of progress
Hold regular meetings between members, partners and stakeholders in the GSNL to maintain adherence to the common Vision and smooth implementation	Meet at least once per year, more often in early stages and when required	Five planning and preparatory meetings held to date (Feb 2013)
Undertake an intuitive (using maps & local knowledge) identification of potential members and partners (see Figure 1) and then engage with them.		1 st draft map prepared, detailed maps under preparation
Using the regular meetings and other forms of communication, develop and refine a strategic collaborative management and development plan for the GSNL, addressing landscape and biodiversity conservation and socio-economic issues in an integrated fashion		Draft 1 of GSNL Management & Development Strategic 5-year plan (2013-2018) prepared for initial discussion (this document!)
Develop an appropriate and flexible institutional mechanism for the collaborative management of the GSNL		Draft 1 of GSNL Constitution prepared, discussed, and Final draft now ready for adoption
Identify priority and opportune sites for opening up fencing between participating member's and partner's land to facilitate open landscapes and unrestricted wildlife movement		Initial sites identified, process of fence removal started (this needs to be documented).
Where necessary, establish agreements between members and proceed with fence opening and/or removal		Draft template agreement prepared, to be reviewed by committee & then circulated
Monitor and record progress in established agreements & fence removal (no., lengths & map)		Set up data capture system

3.2 Zonation Plan

Principle: Landscapes and ecosystems are optimally managed and used within the GSNL, by means of a broad zonation plan, taking into account the extreme aridity and climatic variability of the area, ecological fragility, biodiversity values, past land uses, economic opportunities, harmonization across the boundaries of different land owners and custodians, the potential for future partnerships to create further linkages and corridors, and developing the economic potential of the Landscape within the context of biodiversity and landscape conservation.

An agreed broad zonation map of the GSNL will be created for enhanced landscape and biodiversity conservation management and appropriate utilization, to minimize potential conflicts between activities and partners, and to facilitate potential "bigger

picture” socio-economic and sustainable development goals for the Landscape.

Zones: The following zones are internationally recognized, and the GSNL will draw on these categories as considered appropriate:

Zones		Activities
a)	Strict nature reserve within Wilderness area (IUCN category 1a)	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
b)	Wilderness area (IUCN category 1b)	Sensitive ecosystems High value “sense of place” Low impact usage No or minimal mechanized access No permanent structures
c)	National park (IUCN category 2)	Managed for conservation and controlled tourism Mechanised access permitted
d)	Natural monument (IUCN category 3)	Conservation of specific outstanding features, including landscapes, geological and archaeological components, fossil deposits, areas of spiritual significance and areas of heritage value
e)	Habitat / species management areas (IUCN category 4)	Protected areas managed mainly for conservation through active management intervention To deliver benefits to people within the scope of sustainable practices
f)	Protected landscapes / seascapes (IUCN category 5)	Relatively open access for public enjoyment Generally higher intensity and lower regulatory areas Add to welfare of local communities
g)	Managed resource protected areas (IUCN category 6)	Managed mainly for the sustainable use of natural resources, and could include commercial fishing, mining, livestock production, agriculture, etc but with biodiversity and conservation high on agenda 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

Actions	Timing	Who?	Progress
Prepare draft zonation map of GSNL for discussion amongst partners, with list of allowable activities per zone.			
Once agreement reached, prepare poster of zonation map for all partners and other stakeholders, including allowable activities per zone.			

3.3 Biodiversity Conservation

Principle: The comprehensive diversity of landscapes, habitats, plants and animals indigenous and endemic to the Central Namib Desert, adjacent Nama Karoo and Escarpment Ecosystems of the GSNL are protected and that both ecosystem functioning and evolutionary processes take place effectively.

- a. Because of the large areas involved, and the intention to create open landscapes 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 by ensuring that they are not over utilized 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.
 - Allow natural veld fires to burn, provided they are not a threat to infrastructure or threaten too extensive an area – the larger the open landscape the less of a concern fires will be.
 - 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), and major herbivores – if these species prosper it follows that the base of the food chain is probably diverse and in good condition.
 - Monitor newly introduced species to ensure that they are settling and prospering, and also selected rare, endangered and/or endemic species.
 - No poisons or pesticides (or other toxic chemicals) should be used in the GSNL.

Actions	Timing	Record of progress
Carry out a baseline biodiversity information needs assessment		
Set up monitoring system for key climatic, biodiversity and ecosystem health indicators, including wildlife numbers, top-of-food-chain species, endemics, important plant communities, etc		
Ensure that monitoring protocols are established for uniform data collection, compilation and dissemination, and that the information is used for adaptive management within the GSNL		
Establish a “field research centre” within the GSL to undertake both applied and academic research within the Namib, Nama Karoo and Escarpment ecosystems		

3.4 Game Population Management

Principle: A rich diversity of indigenous wildlife prospers within open, dynamic and resilient ecosystems within the GSNL.

Game population numbers will be encouraged to increase up 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. Mass mortalities during droughts will be avoided – mainly by working to establish open systems, particularly west-east, and the numbers of a particular species will not be allowed to adversely affect long-term population stability of any other species. Minor population fluctuations due to good breeding and slow attrition during wet and dry cycles, and from predation, will not be cause for concern.

The emphasis will be on non-consumptive utilization of wildlife for tourism.

- Every effort must be made to restore seasonal and opportunistic migratory movements of game as this is critical for their long-term survival.
- 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.
- Game 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.

Actions	Timing	Who?	Progress
Design & implement integrated monitoring system for rainfall, veld condition, wildlife (numbers, age & sex classes and condition) and other key indicators.			
Adaptively manage wildlife populations using minimalist intervention and most appropriate best available practices	As necessary		

3.5 Game Introductions

Principle: The historic diversity of wildlife and their full suite of interactions are reinstated, as far as is practically possible and socially acceptable under prevailing conditions.

- Be mindful that the GSNL is on the extreme western edge of a number of species' ranges. In higher rainfall years such species will move westwards into the GSNL, and in lower rainfall years they will retreat eastwards. Once large, open areas have been secured, reintroductions into the Greater Landscape will be viable for a number of species but which would probably not be so if confined to any sub-part of the Landscape.
- Research and prepare a report on the historic distribution of larger mammals in the GSNL, including recommendations on prioritized species for re-introduction.
- Introduce game in phases as per the re-introductions in the above report, taking into account recent rainfall and veld conditions.
- Acquire game from similar arid habitats (e.g. Namib and Nama Karoo ecosystems) 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 GSNL will be introduced, e.g. blesbok, black wildebeest.
- 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 (e.g. blue wildebeest and disease), full consultations will take place with relevant stakeholders prior to any introductions.

Actions	Timing	Who?	Progress
Research and prepare a report on historic distribution of larger mammals in the GSNL.			
Based on the recommendations above develop an agreed list of priority species for introduction, and develop a phased reintroduction plan (numbers, timing, release sites, co-financing, monitoring, etc)			
Implement introduction plan, as a collaborative management team effort			
Monitor introduced and augmented populations – numbers, condition, breeding, sex and age ratios, distribution and movements, etc.			

3.6 Alien Plants And Animals

Principle: The GSNL is free of all invasive alien plants and animals, and non-invasive alien species are confined to, or based at, the Tourism and Infrastructure Development Areas and are clearly justifiable with there being no viable indigenous alternative.

No feral populations of alien plants and animals will be permitted within the GSNL. Alien and domestic species will only be permitted where these are restricted, intensively managed and an integral part of the operation of the member(s) in the Landscape (e.g. horses for transport, farm-animals, vegetables, fruit for production, etc), and where they pose no threat to the integrity and conservation of indigenous species.

- a. Eradicate feral populations of alien plants and animals in the GSNL, with priority placed on the most invasive species (e.g. *Prosopis*, *Opuntia*, "wonderboom", syringe, etc) and species likely to pollute genetic integrity of wild populations (e.g. domestic cat).
- b. Develop a list of recommended local indigenous plants for lodge and homestead gardens.

Actions	Timing	Who?	Progress
1. Establish programme to eradicate all feral populations of alien species in the GSNL, starting with the most invasive species			
2. Establish a list of recommended trees and shrubs, drawing from indigenous species occurring within the GSNL, for use in tourism gardens and at homesteads and staff quarters.			
3. Follow up on cleared areas and remove regrowth/new seedlings			

3.7 Fencing

Principle: Where appropriate and agreed, open systems are promoted and maintained for the largest possible landscape integrity across the GSNL.

- a. Remove all internal fences excepting those fences that have strategic value (e.g. short-term holding areas for introduced game, domestic livestock, etc).
- b. Remove/breach boundary fences where neighbouring land-use is compatible and where agreements as part of this collaborative management and development plan have been secured.
- c. Secure boundary fences where neighboring land use is a threat to wildlife or where secure fencing is essential for good neighbourliness (e.g. boundaries with small stock farmers where predators are a source of conflict).

Actions	Timing	Who?	Progress
Remove all internal fences where this is appropriate (e.g. exclusive wildlife and tourism land uses)			
2. Breach or remove boundary fences where neighbours have reached mutual agreements in terms of this collaborative management and development plan			
3. Remove road fences between collaborating members – but: (a) roll up and store all fencing materials, and (b) erect road signs informing motorists that there are no fences and wildlife may cross road			

4. Patrol & maintain fences as appropriate with neighbours practicing land uses that are not compatible with that of the GSNL			
5. Keep a record of all fences lifted/breached.			

3.8 Water Management

Principle: A minimalist, ecologically appropriate and tourism friendly water management and development plan is harmonized and implemented across the GSNL, taking into account water scarcity, high evaporation rates, demand management and the need to maintain water quality.

- Water point development and management will be on a critical needs basis only – the default setting is a minimalist approach to artificial water points.
- All natural water points will be carefully managed to avoid disturbance and degradation.
- Water use for domestic and tourism purposes will be kept to a minimum, in line with good eco-tourism practices, and used water will ideally be processed to acceptable quality and recycled or returned to the ground water.

Actions	Timing	Who?	Progress
Create a map and inventory of all natural water points as well as current boreholes / water infrastructure and other related attributes, such as yield & depth			
Look at rationalizing water provision for wildlife across the GSNL (if necessary) and agree on a water plan once fence removal has occurred			
Ensure that all natural water points remain undisturbed			
4. Implement water monitoring gauges in all tourism establishments, including staff and kitchen use of water, and aim to bring levels of use to below 100 litres per person per day.			
4. Implement water cleaning and recycling approaches to waste water			

3.9 Tourism Management And Development

Principle: Tourism is planned and managed to ensure that the character, beauty, diversity and integrity of the fragile GSNL is maintained, and that visitors have a high quality experience that includes a sense of place, isolation and wilderness.

The members of the GSNL will individually and collectively strive to provide for the highest quality eco-friendly tourism experience to visitors through good planning, guiding, interpretation and the application of best and most appropriate practices, and to help raise awareness and educate visitors about the GSNL, the Namib Desert, Nama Karoo and Escarpment ecosystems, local conservation, history and cultural issues and sustainable development within arid environments.

- Tourism management and development will be guided by a GSNL “Tourism Planning Framework”, which will build on the Zonation plan (point 3.2) and will include collaborative approaches to marketing the Landscape, look at adding diversity and value to tourism activities, holding tourists within the Landscape for longer, tourism impact monitoring, etc.
- Develop good local information and interpretative materials for tourists and the general public, including possibly open air museums at selected sites, e.g. geological features and/or outlook points, investigate the potential of developing special focus museums, a Namib-Karoo botanical garden and nursery with propagation facility, etc.

- c. Promote collective marketing of the Landscape as part of all member’s individual marketing.
- d. Ensure that all tour guides are well trained, motivated, and tell the story of the collaborative landscape approach and the GSNL.

Actions	Timing	Who?	Progress
Develop a Tourism Planning and Marketing framework that takes into account potential future developments resulting from World Heritage status of the Namib sand sea			
Explore the idea of a Man & Biosphere status for the GSNL			
Design phased implementation mechanisms for the Tourism Plan			
Set guidelines for tour operators and guides			
Establish monitoring system to document impacts, numbers, levels of visitor satisfaction, etc.			
Explore the feasibility of developing information centres, special interest museums and a Namib-Karoo nursery within the GSNL			
Explore setting up a joint marketing strategy for the GSNL, including a website, working with NTB, etc			

3.10 Security And Law Enforcement

Principle: Unlawful activities, illegal use of wildlife and other natural resources within and adjacent to the GSNL are controlled and kept to a minimum, and the safety and security of visitors, staff and members of the Association and their partners are protected as a priority. A zero tolerance approach to all aspects of unlawful activities will be applied by all members and partners to promote high levels of law and order.

- a. When and where necessary, anti-poaching and law-enforcement work and surveillance will be planned and jointly conducted by members as part of their collaborative management approach, with an emphasis on high-risk areas (e.g. along main access routes, near tourism lodges) and in a highly visible manner, to be dissuasive and pre-emptive to potential threats.
- b. An attractive reward system will be developed and highly publicized, for information leading to arrests and prosecutions.
- c. A radio network and/or cell phone network will be established, for all members and partners within the GSNL, and linked to NamPol.
- d. Discuss with Roads Authority the establishment of “checkpoints” / monitoring points on main access roads to the GSNL, perhaps using booms and recording details of passing traffic.
- e. Rangers and other relevant management staff will be trained to preserve and collect evidence so that arrests result in convictions.

Actions	Timing	Who?	Progress
Disseminate information on zero tolerance approach			
Build partnerships with relevant law-enforcement agencies			
Train staff in collection of evidence			
Carry out harmonized pre-emptive patrols and surveillance work			
Explore radio / cell phone network for all interested Landscape partners			
Explore establishment of road checkpoints on main access routes (camera traps?)			

3.11 Natural Resource Monitoring

Principle: A limited number of carefully selected indicators are monitored to allow for timely and judicious adaptive management and to provide information for visitors.

Minimum, regular monitoring of wildlife and plant resources will be conducted to determine change in populations and distributions. The information produced from the monitoring systems will feed into adaptive management decision-making.

Variables such as rainfall, harvesting (if any), introductions, water distribution, poaching activity, rare species sighted and other key information for management will also be recorded to keep track of those factors that may impact on animal and plant resources.

- a. Monitoring will focus on key indicator processes and species, with an emphasis on ensuring regular data collection at appropriate intervals, cost efficiency and sustainability.
- b. Monitoring systems will be adapted and expanded from existing systems being used in the Landscape and elsewhere in Namibia with a view to efficiency in development and ultimately regional and national integration of data.
- c. 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.
- d. Annual game counts will be undertaken in a systematic, efficient and repeatable manner.
- e. Monitoring systems will be balanced to ensure that the entire range of critical information needs is covered.
- f. Where relevant, monitoring data from across the Landscape (and beyond) will be compiled, analysed and disseminated to all members and contributing partners within the GSNL, and the information will be safely stored and used to make informed adaptive management decisions.

Actions	Timing	Who?	Progress
Develop a monitoring plan based on agreed key indicators			
Implement this plan with appropriate training			
Develop an information system to manage & store monitoring data			
Share and disseminate data and information between partners and use these for adaptive management			

3.12 Research

Principle: Management and development of the GSNL will be information-based, drawing on good quality research and monitoring.

A supportive environment will be created for visiting scientists. Two levels of research are recognized:

- i. research in support of priority GSNL information and management needs, and
- ii. interest research on aspects of the Namib, Nama Karoo and Escarpment ecosystems (both biophysical and socio-economic) identified by outside researchers.

Preferential support will be given to the former, while the latter will be supported when feasible.

- a. A prioritised and open-ended list of key research topics will be developed for the GSNL and disseminated to appropriate research institutions.
- b. An appropriate support mechanism will be developed for visiting scientists, with emphasis on those addressing priority research topics relevant to the GSNL.
- c. Where relevant, links will be established between research activities carried out in other institutions in Namibia and within the broader Namib-Karoo ecosystems, and comparative studies between different southern African desert ecosystems will be encouraged.

Actions	Timing	Who?	Progress
Develop an open-ended list of priority research topics based on information needs for the management and development of the GSNL			
Design a "support package" for researchers addressing priority research topics, including investigation of a "field research centre" within the Landscape			
Participate actively in relevant and comparative long-term monitoring and research programmes in arid zones across southern Africa			

3.13 Information And Education

Principle: The Namib, Nama Karoo and Escarpment ecosystems within the GSNL, and the diverse topography and habitats offer remarkable open-air classroom and laboratory experiences on the subjects of geology, geomorphology, climatology, hydrology, zoology, botany, arid-zone ecology, adaptive evolution, paleontology, archaeology, conservation and many other fields. The GSNL 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 Landscape. In addition there is a rich ancient and recent history in and adjacent to the GSNL.

The challenge that we face is to develop good, accessible and stimulating information on the key biophysical, socio-archaeological, historic and economic aspects of the Karoo biomes that are represented within the GSNL, and to share this information with guests, visitors, youth groups, decision-makers, specialist groups, staff and the general public in interesting and exciting ways so as to promote an understanding of, and commitment to, the conservation and sustainable development of the Landscape, the Namib, Nama Karoo and Escarpment ecosystems and hyper-arid regions of southern Africa.

- a. Establish an Information Centre in the GSNL.

- b. Prepare good quality information in different forms (posters, brochures, displays, booklets, DVDs, website, etc.), that is highly accessible to visitors and the general public.
- c. Ensure that research carried out in the GSNL is translated into accessible and interesting information for the lay person and visitors.
- d. 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.

Actions	Timing	Who?	Progress
1. Establish an information centre in the GSNL			
2. Prepare good quality information on different aspects of the geology, biology, ecology, archaeology, history, etc of the Namib and Karoo ecosystems, represented in the GSNL			
3. Invest in tour guide training, at both the national and local levels.			

3.14 Development guidelines

Principle: All management and development activities within the GSNL shall be based upon the principle of sustainability, and be guided by the sensitivity of the environment and by the unique and unusual socio-economic opportunities that the environment offers for innovative landscape and biodiversity-based development.

In addition, such developments will be conducted in an environmentally sensitive manner according to best practice and applying the precautionary principle, as required by national policies and law, and high environmental ethics.

- a. The GSNL shall strive to foster an environment in which all members, stakeholders and visitors are required to be innovative and fully committed to the highest ideals of sustainable development and to creating the lightest possible environmental “footprint”.
- b. Apply existing published EA guidelines for Namibia to all developments in the GSNL that are likely to have a significant impact.
- c. Apply **eco-awards Namibia** guidelines and criteria to the management and development of the GSNL.
- d. Develop a list of priority issues (e.g. waste disposal, water use, energy use, etc) for which specific guidelines (policies) should be systematically developed, and ensure that they are fully understood and implemented by relevant members, participating partners and their staff.
- e. Explore areas of potential cooperation between members, e.g. in waste separation (glass, plastics, paper), storage and transport.
- f. Prior to any development or any action that may cause environmental damage (e.g. road developments, new lodge or other infrastructure developments), to present the proposed development to the GSNL members via the Management Committee, with information on how impacts will be mitigated and to give partners the security of knowing that such development will not undermine the integrity of the GSNL.

Actions	Timing	Who?	Progress
Be familiar with and use policies, guidelines and criteria from EA and eco-awards Namibia materials			
Develop specific guidelines and policies for priority issues (e.g. waste, water, energy) and explore areas of potential cooperation			
Ensure staff are familiar with and implementing the guidelines to appropriate standards			



Project Coordination Unit

Ministry of Environment and Tourism
Department of Environmental Affairs (DEA)

3rd Floor Capital Center, Levinson Arcade
Private Bag 13306, Windhoek, Namibia
Tel: +264-61-2842728/26 Fax: +264-61-249795

