



South African
NATIONAL PARKS

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SANParks

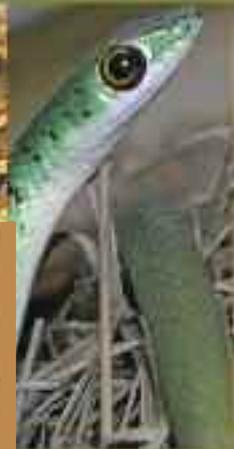
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A FRAMEWORK FOR DEVELOPING AND IMPLEMENTING MANAGEMENT PLANS FOR SOUTH AFRICAN NATIONAL PARKS

Published by SANParks Scientific Services – April 2008



OBJECTIVES AND STRUCTURE OF THIS PUBLICATION

This brochure is for SANParks employees, collaborators and interested members of the public who need, or wish, to understand the management planning process, especially Strategic Adaptive Management, as practiced by SANParks.

It provides an overview of the process with some step-by-step guidelines.

A more comprehensive document is available on request (on a CD) or on the SANParks web site at



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The longer document provides more detail and gives an overview of the contextual and theoretical basis for management planning. It also provides guidelines for the planning processes in individual national parks. These guidelines range from the technical aspects of setting goals for ecosystem management, to approaches for engaging stakeholders and integrating their inputs into the planning process.



A FRAMEWORK FOR DEVELOPING AND IMPLEMENTING MANAGEMENT PLANS FOR SOUTH AFRICAN NATIONAL PARKS

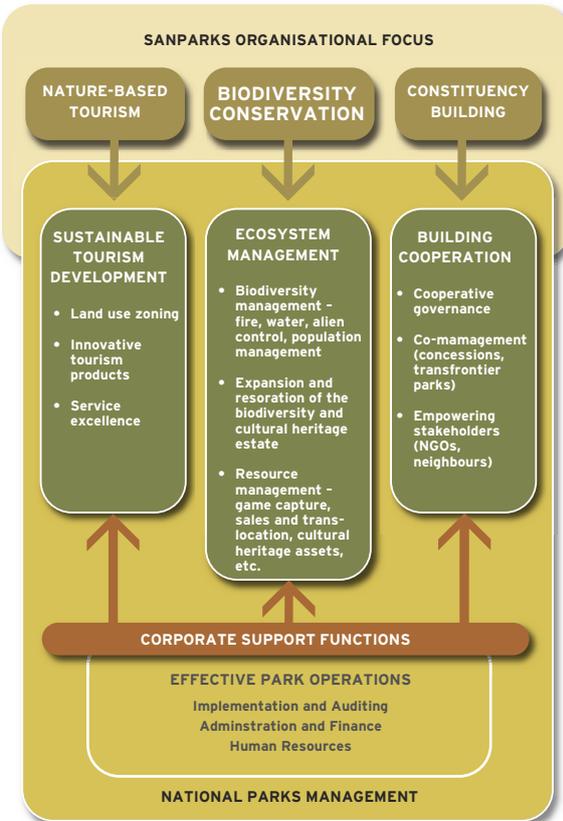
SANParks is the leading conservation authority in 22 national parks around South Africa. A national park is the highest order of protection that a country can accord a conservation area.

Our operations are guided by our vision, mission and values:

- ✦ **SANParks Vision:** National Parks will be the pride and joy of all South Africans.
- ✦ **SANParks Mission:** To acquire and manage a system of national parks that represents the indigenous wildlife, vegetation, landscapes and associated cultural assets of South Africa, for the joy and benefit of the nation.

Our primary mandate and top priority is to conserve South Africa's biodiversity, landscapes and associated heritage assets, through a system of national parks. No other activity or lesser objective may put this mandate at risk. SANParks also has two secondary mandates:

- ✦ promoting and managing of nature-based tourism; and
- ✦ building a constituency that shares its values for conservation and management.



KEY FUNCTIONS OF NATIONAL PARK MANAGEMENT PLANS

A South Africa National Park Management Plan should have clear objectives and an implementation strategy for:

1. Managing the park ecosystem for biodiversity conservation;
2. Sustainable nature-based tourism;
3. Building co-operation with the constituency.

The plan should also:

- ✦ ensure that a national park is managed according to the purpose for which it was declared;
- ✦ be a tool that guides the management of protected areas at all levels, from the basic operational level to the Minister of Environmental Affairs and Tourism;
- ✦ form the basis for building accountability into all levels of management of national parks;
- ✦ make it possible to evaluate progress against set objectives;
- ✦ provide guidelines to help generate key performance indicators for staff (linked to the Balanced Score Card in SANParks);
- ✦ set the intent of the park, and provide explicit evidence for the financial support required;

- ✦ streamline procedures, including:
 - gaining permission to buy extra land for inclusion into a park in terms of section 81 of the Protected Areas Act (Act 57 of 2003);
 - scoping for environmental impact assessments;
- ✦ provide for capacity building and future direction;
- ✦ be versatile and flexible enough to allow for changes in ecosystems that arise over time as a consequence of their complexity.

SANPARKS' BIODIVERSITY MANDATE

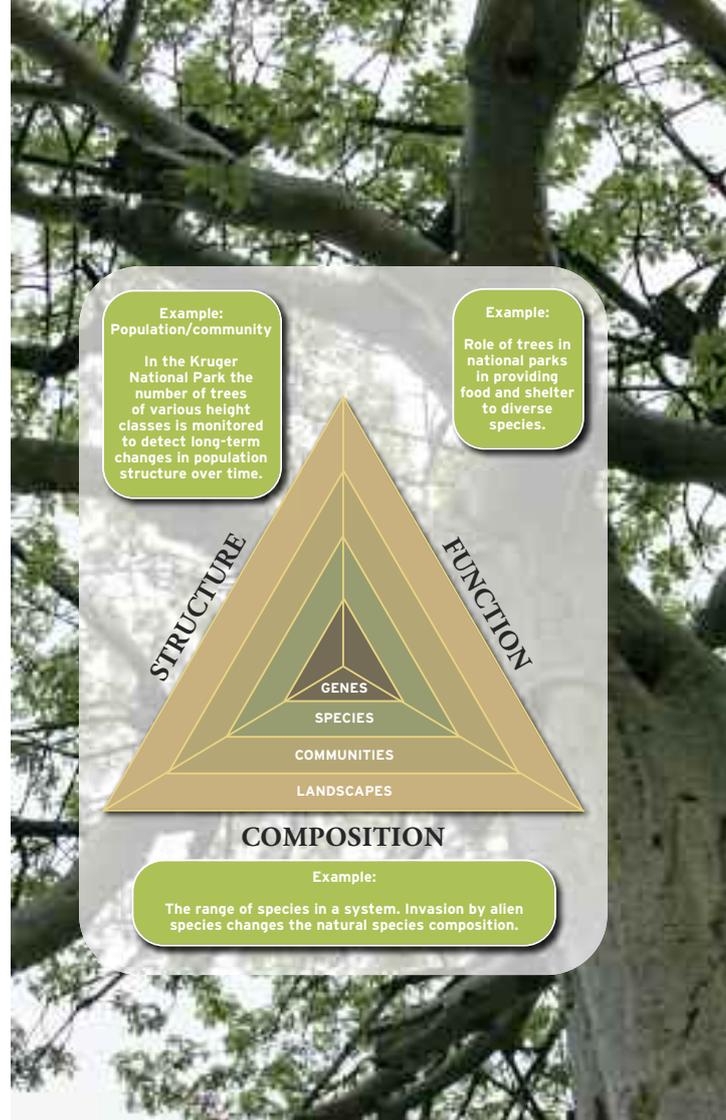
Our primary mandate and top priority is to conserve South Africa's biodiversity. **Biodiversity*** refers to **the variety of life and ecosystem processes:**

This includes

- ✦ **what there is** in what proportions (composition);
- ✦ **its form and how it is distributed in space and time** (structure); and
- ✦ **what it does** (function).

Composition, structure and function are considered at all levels of organisation, from genes to species, communities, ecosystems and landscapes.

* This widely accepted definition of biodiversity was first published by Reid Noss in 1990.



SANPARKS' BIODIVERSITY CONSERVATION VALUES

Managing and using ecosystems is guided by science, but also by the values of the organisation and society. Conservation management often involves trade-offs between conflicting objectives within a variety of operational constraints.

SANParks is committed to the following **conservation values**:

- ✦ Respect the complexity, richness and diversity of the socio-ecological systems making up each national park and its wider landscape and context.
- ✦ Respect the interdependency of the formative elements, biotic and landscape diversity, aesthetic, cultural, educational and spiritual attributes of the socio-ecological system.
- ✦ Strive to maintain natural processes in ecosystems, along with the uniqueness, authenticity and worth of cultural heritage, to safeguard the resilience of these ecosystems.
- ✦ Manage, with humility, the systems under our custodianship, recognising and influencing the wider socio-ecological context in which we are embedded.
- ✦ Strive to maintain a healthy flow of ecosystem and cultural goods and services, and to make these benefits available and accessible to people.
- ✦ When necessary, intervene in a responsible and sustainable manner, complementing natural processes as far as



possible, using only the level of interference needed to achieve our mandate.

- ✦ Act in such a way as to preserve all options for future generations, while also recognising that systems change over time.
- ✦ Acknowledge that conversion of some natural and cultural capital has to take place for the purpose of sustaining our mandate, but that this should never erode our core values.

We adhere to the following **principles** that flow from these values:

- ✦ Biodiversity forms an important basis of the ecosystem services that sustain the benefits people derive from conservation.
- ✦ Each of us is an integral part of the web of life and depend on it for survival.

- ✦ People are part of ecosystems, though the ways in which they interact with ecosystems may vary widely in different parks and circumstances.
- ✦ Thoughtful experimentation is essential to promote learning.
- ✦ There are many ways of acquiring and integrating new knowledge.
- ✦ The involvement of all stakeholders and neighbouring communities is important in interpreting and documenting the value and meaning of cultural, biodiversity and landscape assets, including their tangible and intangible value and full natural and cultural context.
- ✦ We measure our performance in all that we are mandated to do.



How we implement and integrate our principles and values

- ❖ We aim at the persistent achievement of biodiversity representivity and complementarity to promote resilience and ensure ecosystem integrity.
- ❖ We treat all biodiversity elements (all species, ecosystems, processes, structural components, etc.) with equity.
- ❖ We ensure representivity while accounting for uniqueness;
- ❖ Where human-induced influences warrant it, we may need to interfere to attain our mandate as custodians of biodiversity.

- ❖ We may use a *laissez-faire* approach, but it will be a conscious and informed choice.
- ❖ We strive to maintain a balance, as well as to mitigate potential conflict, in the management of biodiversity and cultural heritage.

One of the most important products of biodiversity planning is the Conservation Development Framework (CDF) which contains information used for zoning and other spatial development targets.



THE CHALLENGES OF COMPLEXITY

Ecosystems are dynamic (ever-changing) and **complex**, meaning that although they usually only have a few main drivers, these interact continually to give different outcomes that are difficult to predict. This complexity means we always have an incomplete knowledge of ecosystem behaviour, and that managing biodiversity is an ongoing challenge.

Adaptive management was designed as a way of dealing with this complexity and uncertainty by using management actions as an opportunity to **learn by doing**. We integrate planning, management and monitoring to systematically test assumptions about ecosystem behaviour in order to adapt and learn. This integration forms the basis of a mutual learning partnership between scientists and managers, and should be implemented from the outset, even if parks have few resources and little knowledge.



WHAT IS STRATEGIC ADAPTIVE MANAGEMENT?

SANParks uses a management tool called “**Strategic Adaptive Management**” to conserve biodiversity in its national parks. This tool was developed in South Africa for conservation and management of natural resources, and is based on sound ecological and management science.

Strategic Adaptive Management is:

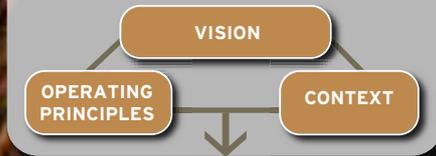
- ❖ **strategic** (acting with foresight and purpose);
- ❖ **adaptive** (learning while we are doing); and
- ❖ **participatory** (engaging and empowering stakeholders).

This management process is **proactive**: We must first agree on where we want to go before we can consider options for getting there. Where we want to go is called the “**desired state**” of the national park. This desired state has social, technical, environmental, economic, and political dimensions. It is achieved over time via a series of objectives. All stakeholders participate in designing a shared vision for a desired state that meets their needs and values within the SANParks mandate.

DEVELOPING A VISION AND DESIRED FUTURE STATE OF A NATIONAL PARK

- ❖ The first step in planning is to develop a shared vision for the desired state of a national park. SANParks and stakeholders must agree on the social, technical, economic, ecological and political context of the system to be managed, and the values and principles that should guide management.
- ❖ The next step is to develop a clear understanding of the vital attributes of the system to be managed and the factors that affect them.
- ❖ Once the vision and objectives are clearly defined and agreed to by all stakeholders, park management has a defensible purpose and clear focus.
- ❖ With the help of relevant experts, the objectives are broken down until they represent priority, achievable and measurable goals for management.
- ❖ Targets (or thresholds of potential concern) describe the boundaries of the desired state that we aim to achieve by our management goals. These targets or thresholds must be set for tourism, biodiversity and cooperation.

THE ADAPTIVE PLANNING PROCESS



The decision making environment



Understanding the system to be managed



Developing objectives for the future



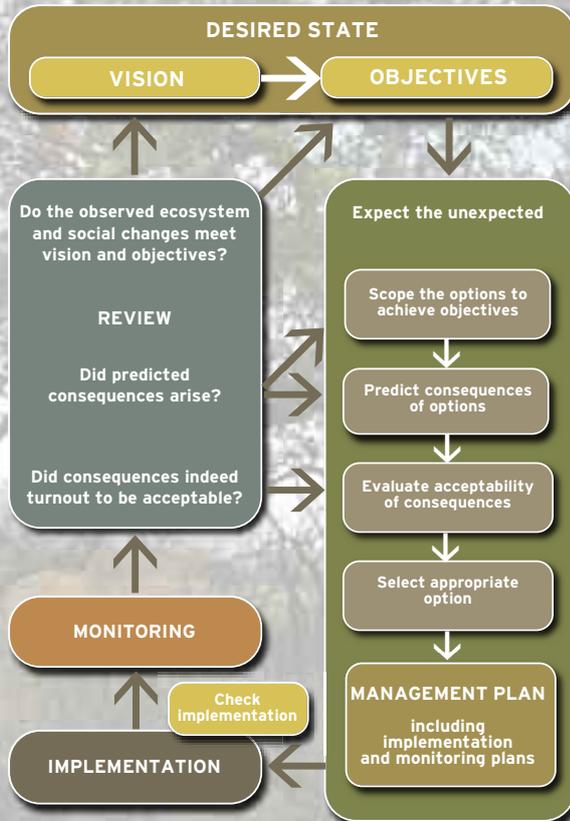
A very particular and important part of SANParks's actions relates to conservation planning. SANParks uses **Systematic**

Conservation Planning (SCP) to address specific issues of protected area management planning within the broader context of the adaptive management process. Although it does do other things, in this context SCP is useful in that it helps us develop a rational viewpoint of the optimum spatial configuration of a national park. It is a vigorous tool that is used within an adaptive management context to develop a specific long term spatial desired state for a park. It helps us identify where a park needs to expand to achieve our national conservation targets for specific biodiversity

features (eg habitat types and special species) as well as the processes which support their long term persistence. It also takes into account issues such as park design and management efficiency.

Similar to the way SCP helps us define the overall spatial desired state for a park, the **Conservation Development Framework (CDF)** is the tool that we use to define and represent the spatial aspects of the desired state of the park. Primarily this desired state identifies the conservation and tourism objectives of specific sections of a park. It identifies which areas we want to keep pristine, and which areas we can allow to be impacted to a greater or lesser extent in order to achieve our secondary objectives such as tourism. The CDF can be seen as the long term representation of the internal spatial desired state of a park, detailing where and to what extent we would want to develop infrastructure, how we want visitors to access and move through a park, where we want specific activities to occur, as well as how the park interacts with its neighbours within the Park Interface Zone.

THE ADAPTIVE DECISION-MAKING PROCESS



Within the SANParks structure, some functions are at corporate level, while others are at park level. Consequently, there are different levels of policy, planning and authorisation.

- ❖ Corporate policies are high-level policies to create consistent actions and decisions across all national parks.
- ❖ Park-specific plans set out the vision and objectives for a desired state for each park.

PARTICIPATORY AND COOPERATIVE MANAGEMENT

One of the objectives of the Protected Areas Act (Act 57 of 2003) is to **“promote participation of local communities in the management of protected areas”**. Stakeholders must have the opportunity to participate meaningfully in the preparation of a management plan for a protected area.

Stakeholders may include local communities, municipalities, government bodies and NGOs, and other interested and affected parties. They must be involved at three main points in the management cycle, namely:

1. defining the desired state;
2. evaluating the acceptability of the predicted consequences of potential management options; and
3. reviewing the outcome of management relative to the vision.

At these points, decision-making may be strongly value-based, and there are often multiple, conflicting, objectives at stake.

According to the principles of strategic adaptive management, stakeholders must participate, and not merely be consulted. A participatory process requires that SANParks managers/staff and other stakeholders undertake these actions together.

It is therefore neither appropriate nor wise for managers or staff to take a pre-prepared document to stakeholders. The stakeholders must be a part of the process to ensure their buy-in and to get their help with foreseeing implications and future possibilities. Although they have a role within, and influence on, decision making, the ultimate responsibility for all decisions lies with SANParks. The law, SANParks values and the park management plan set the boundaries of an acceptable decision.

SANParks participation principles state that all stakeholder participation processes will:

- ❖ Have a clearly stated purpose.
- ❖ Identify the stakeholders who shall participate in the selected process.
- ❖ Define and communicate levels of decision-making and stakeholder involvement.
- ❖ Seek to notify stakeholders of participation processes through appropriate mechanisms.
- ❖ Seek to obtain commitment from all stakeholders to a participatory process based on relevance, integrity, mutual respect, transparency and inclusiveness, in order to seek the best possible solution.



- ✦ Ensure that the process provides the opportunity for input from all stakeholders within reasonable timeframes, emphasising the sharing of information, joint learning and capacity building.
- ✦ Ensure that processes recognise all knowledge, indigenous and ordinary, as well as the diversity of values and opinions that exist between stakeholders.
- ✦ Promote participation by stakeholders through timeous and full disclosure of all relevant and appropriate information.
- ✦ Provide feedback on the outcome of the process to stakeholders and demonstrate how their inputs have been considered in the decision making process.
- ✦ Ensure that methodologies accommodate the context of the issue at hand and the availability of resources (people, time, money) and do not conflict with these guiding principles.
- ✦ Promote effective co-operative governance at a national, provincial and local level.
- ✦ Give particular attention to ensuring participation by marginalised communities, communities with specific concerns, or communities that have contractual rights in a national park.
- ✦ Effect capacity building within SANParks to support these guiding principles for stakeholder participation.
- ✦ Recognise and communicate that the process is iterative (i.e. repeated at regular intervals) because circumstances and values change over time.



SCHEMATIC SUMMARY OF THE STEPS IN ADAPTIVE MANAGEMENT CYCLE

STAKEHOLDER PARTICIPATION

DEFINE THE DESIRED STATE

1. Vision
2. Set objectives

Even if the predicted outcomes were correct, are the objectives and vision being met?

ADAPTIVE PLANNING

OPERATIONALISE

- Targets
- Monitor
- List management options when Thresholds of Potential Concern (TPCs) are exceeded

Were the selected options appropriate?

Were the predicted outcomes correct?

If not, why?

Was the outcome acceptable?

ADAPTIVE MANAGEMENT

ADAPTIVE EVALUATION

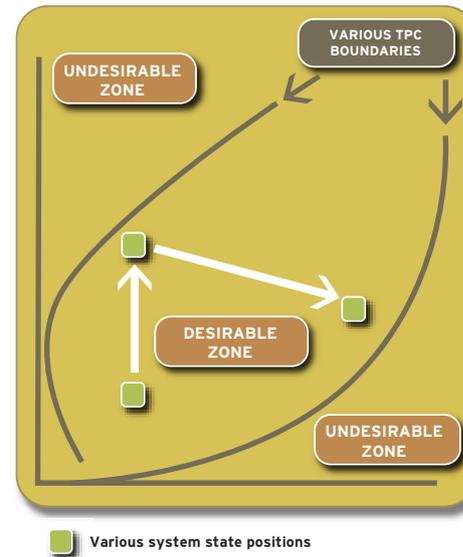
1. Biodiversity outcomes
2. Balanced score card

HOW DO WE KNOW WHEN THE DESIRED STATE IS UNDER THREAT?

To conserve biodiversity we need to manage for patchiness and change. We cannot aim to achieve specific and unchanging ecosystem conditions, but only to encourage natural variation and processes. However, some changes may be undesirable as they form part of a long-term trend moving the ecosystem away from the desired state. Over time this trend may become irreversible.

The desired outcomes of management are therefore expressed as limits of acceptable change, called **“Thresholds of Potential Concern” (TPCs)**. TPCs are upper and lower boundaries of change in selected indicators of ecosystem performance and desired state. Alternatively, if we see a particular system as outside the desired state we may set what are normally called targets to strive towards. These are conceptually no different from thresholds. When the indicator approaches the TPC the future desired state may be in jeopardy. TPCs are therefore warning signals to managers alerting them that management intervention may be required to achieve or maintain the desired state. Modelling, using data gathered from monitoring,

is also used to predict the behaviour of an indicator and thus give early warning that a TPC is likely to be breached. This strategic approach helps ensure that managers react before change goes beyond the desired state, thereby reducing the need for crisis management.

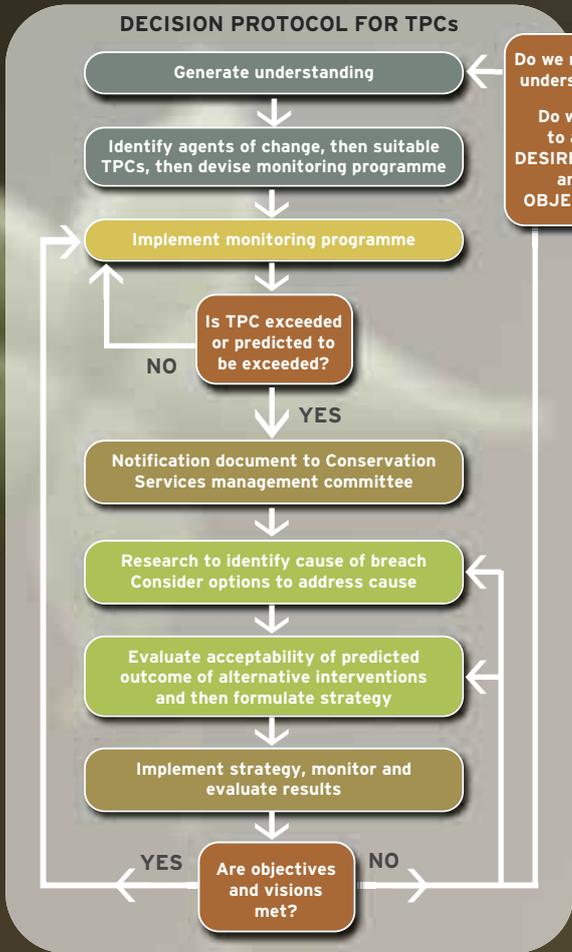




SETTING THRESHOLDS OF POTENTIAL CONCERN (TPCs) AND MONITORING TO SEE IF THEY ARE BREACHED

TPCs are based on the best available knowledge and expert opinion at the time. The management and monitoring process, as well as independent research, will over time enable us to update the knowledge on which TPCs are based.

Monitoring is based on the TPCs because they tell us what indicators to monitor, when and how often. The results of monitoring are interpreted relative to a time frame of expected or desired change. When a TPC is predicted to be in danger of being breached, it prompts managers to investigate the cause, and then to decide on this basis if, and what, management action is needed.



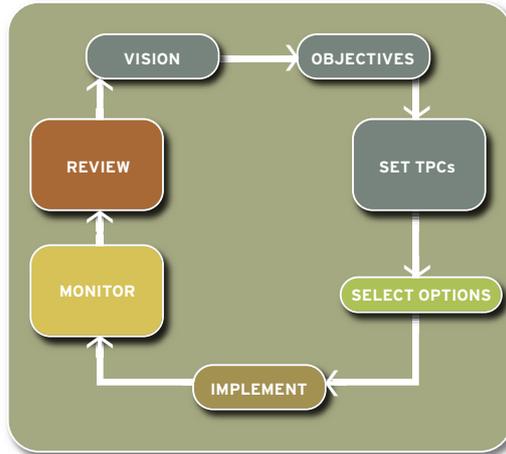
Do we need more understanding?

Do we need to adjust DESIRED STATE and/or OBJECTIVES?



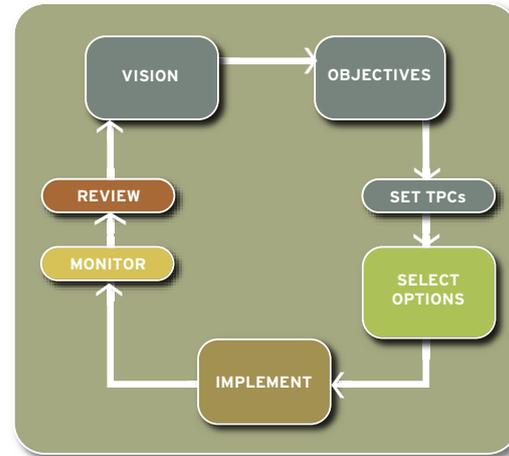
STRATEGIC ADAPTIVE MANAGEMENT FOR PARKS AT DIFFERENT STAGES OF PROGRESS TOWARD THEIR DESIRED STATE

Strategic adaptive management is a generic management cycle that is used for all parks, though different steps in the cycle may form the primary focus for different parks.



STRATEGIC ADAPTIVE MANAGEMENT FOR PARKS DEFENDING THE DESIRED STATE

Focus on monitoring for potential breaches of TPCs and on refining TPCs through research and reflection.



STRATEGIC ADAPTIVE MANAGEMENT FOR PARKS PROGRESSING TOWARDS THE DESIRED STATE

Focus on setting a series of time-stepped interim objectives to progress towards the desired state, and identifying and implementing relevant management interventions. Management actions in such parks are often focused on reaching rehabilitation/restoration targets. Targets are then simply an inverse formulation of thresholds of potential concern: They are thresholds, but seen from the point of view of managing from outside the desired state back into the desired state.

USE OF THE BALANCED SCORE CARD APPROACH

SANParks uses a business strategy alignment tool called the **Balanced Score Card (BSC)**. It represents an integrated operational translation of the biodiversity (and other) targets into measures that reflect the objectives and key performance areas.

In SANParks, the BSC has four focus areas namely:

- ✦ Financial: grow revenue and improve income to cost ratio.
- ✦ Customers and stakeholders: Nature based tourism destination of choice and being the custodian of choice of

protected areas, contribution to local economic development.

- ✦ Learning and growth: How do we enable ourselves to grow and change, meeting ongoing demands?
- ✦ Internal processes: Enhance research and leadership in biodiversity and cultural heritage.

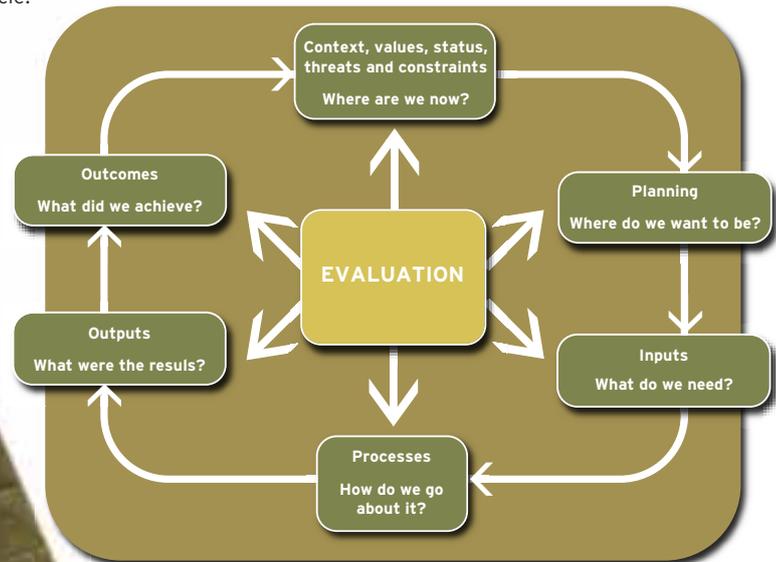
For further assessment of the important objective of biodiversity conservation in parks a specific audit - the **State of Biodiversity Assessment** - is conducted annually. This is a tool to assess whether biodiversity objectives, as set in the management plans, were achieved. It allows feedback and adjustment in line with adaptive management principles.



ADAPTIVE EVALUATION

Once the full adaptive management process has been followed, it remains crucial to reflect on whether the objectives are indeed being achieved. Therefore periodic evaluation of progress is an essential part of the adaptive cycle.

The evaluation has to follow a process that ensures activities and progress are checked against the vision and objectives defined in the planning process. These are important feedback loops that ensure that the adaptive cycle is complete and that knowledge is gained from the process.



SUMMARY OF MANAGEMENT PLANS FOR SOUTH AFRICAN NATIONAL PARKS

**Management Plans for South African National Parks
comprise four sections:**

1. An outline of the desired state of the park and how this was determined;
2. A summary of the management strategies, programmes and projects that are required to move towards achieving the desired state (obviously these strategies, programmes and projects can extend over many years but here we present the management focus until 2010);
3. An outline of the Strategic Adaptive Management methodology and strategies that will ensure that the park undertakes an adaptive approach to management. It focuses park management on those critical strategic issues, their prioritisation, operationalisation and integration, and reflects on achievements to ensure that the longer-term desired state is reached;
4. A high level budget.

A National Park Management Plan must follow the following broad format:

1. Background to and formulation of desired state

- The fundamental decision making environment (vision, context, values and operating principles);
- Vital attributes underpinning the value proposition of the park (determinants and evaluation of attributes);
- Setting the details of the park's desired state (hierarchy of objectives, thresholds of potential concern, conservation targets, conservation development framework).

2. Policies and programmes to achieve the desired state

- Biodiversity and heritage conservation;
- Sustainable tourism;
- Building cooperation;
- Effective park management;
- Corporate support.

3. Adaptive and integrative strategies to sustain the desired state initiative

- Key prioritisation, integration and sequencing issues;
- Steps to operationalisation;
- Key ongoing adaptive management and evaluation interventions.



