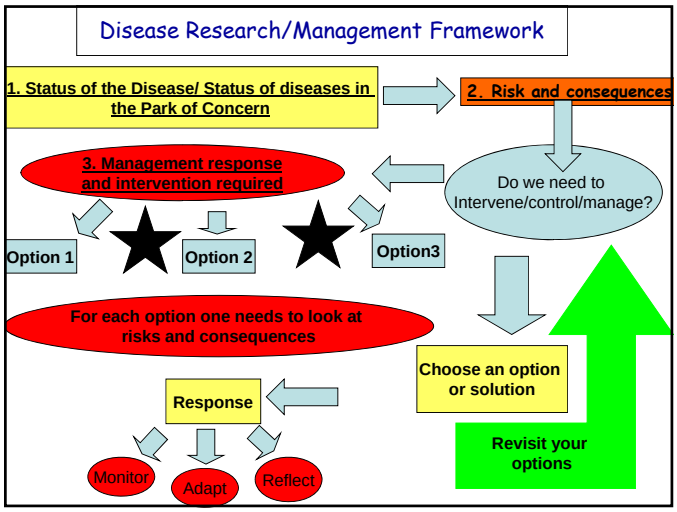
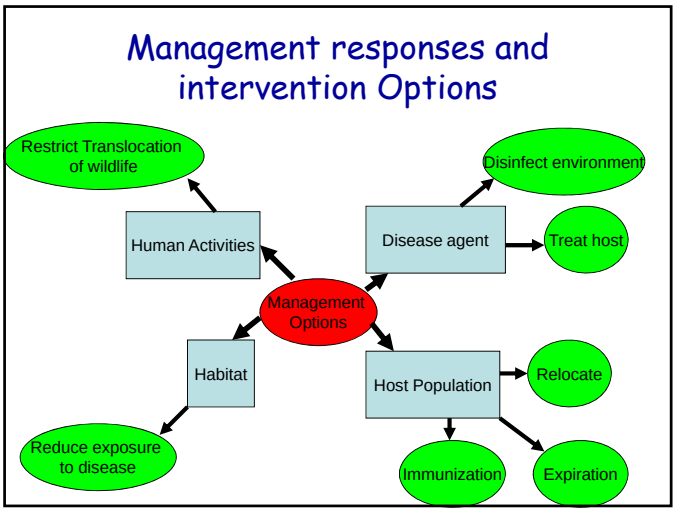
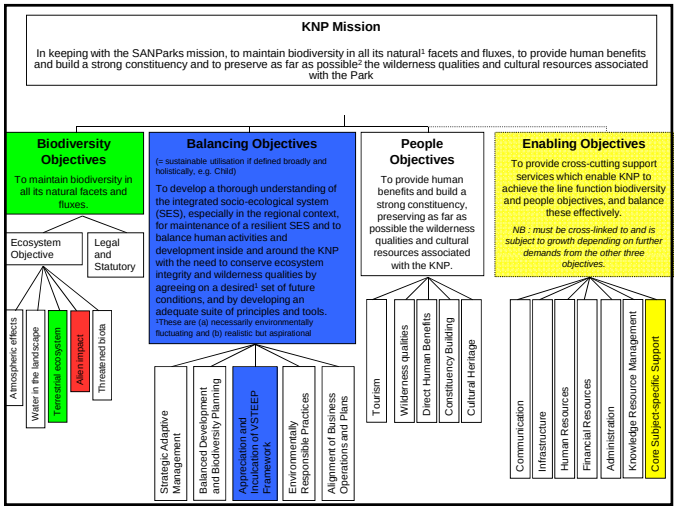
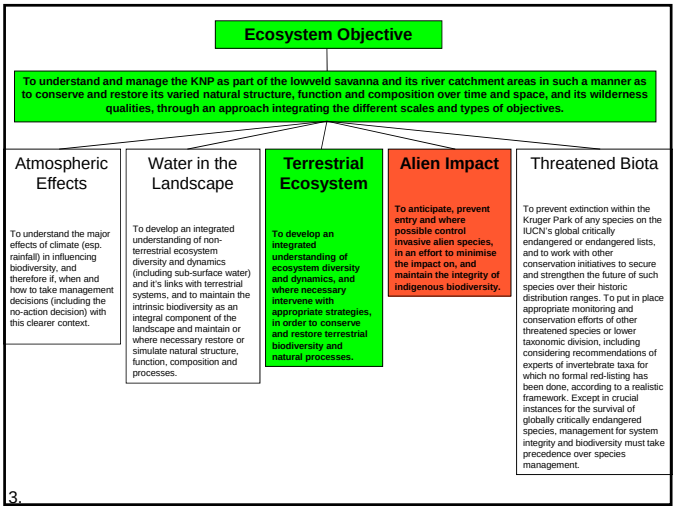

Disease Research/Management Framework
1. Status of the Disease/ Status of diseases in the Park of Concern
2. Risk and consequences
3. Management response and intervention required
Do we need to Intervene/control/manage?
Option 1
Option 2
Option3
For each option one needs to look at risks and consequences
Choose an option or solution
Response
Revisit your options
Monitor
Adapt
Reflect


Management responses and intervention Options
Restrict Translocation of wildlife
Disinfect environment
Human Activities
Disease agent
Treat host
Management Options
Habitat
Host Population
Relocate
Reduce exposure to disease
Immunization
Expiration


KNP Mission
In keeping with the SANParks mission, to maintain biodiversity in all its natural[1] facets and fluxes, to provide human benefits and build a strong constituency and to preserve as far as possible[2] the wilderness qualities and cultural resources associated with the Park
Biodiversity Objectives
To maintain biodiversity in all its natural facets and fluxes.
Ecosystem Objective
Legal and Statutory
Atmospheric effects
Water in the landscape
Terrestrial ecosystem
Alien impact
Threatened biota
Balancing Objectives
(= sustainable utilisation if defined broadly and holistically, e.g. Child)
To develop a thorough understanding of the integrated socio-ecological system (SES), especially in the regional context, for maintenance of a resilient SES and to balance human activities and development inside and around the KNP with the need to conserve ecosystem integrity and wilderness qualities by agreeing on a desired[1] set of future conditions, and by developing an adequate suite of principles and tools.
[1]These are (a) necessarily environmentally fluctuating and (b) realistic but aspirational
Strategic Adaptive Management
Balanced Development and Biodiversity Planning
Appreciation and Implication of VSTEEP Framework
Environmentally Responsible Practices
Alignment of Business Operations and Plans
People Objectives
To provide human benefits and build a strong constituency, preserving as far as possible the wilderness qualities and cultural resources associated with the KNP.
Tourism
Wilderness qualities
Direct Human Benefits
Constituency Building
Cultural Heritage
Enabling Objectives
To provide cross-cutting support services which enable KNP to achieve the line function biodiversity and people objectives, and balance these effectively.
NB : must be cross-linked to and is subject to growth depending on further demands from the other three objectives.
Communication
Infrastructure
Human Resources
Financial Resources
Administration
Knowledge Resource Management
Core Subject-specific Support


Ecosystem Objective
To understand and manage the KNP as part of the lowveld savanna and its river catchment areas in such a manner as to conserve and restore its varied natural structure, function and composition over time and space, and its wilderness qualities, through an approach integrating the different scales and types of objectives.
Atmospheric Effects
To understand the major effects of climate (esp. rainfall) in influencing biodiversity, and therefore if, when and how to take management decisions (including the no-action decision) with this clearer context.
Water in the Landscape
To develop an integrated understanding of non-terrestrial ecosystem diversity and dynamics (including sub-surface water) and it's links with terrestrial systems, and to maintain the intrinsic biodiversity as an integral component of the landscape and maintain or where necessary restore or simulate natural structure, function, composition and processes.
Terrestrial Ecosystem
To develop an integrated understanding of ecosystem diversity and dynamics, and where necessary intervene with appropriate strategies, in order to conserve and restore terrestrial biodiversity and natural processes.
Alien Impact
To anticipate, prevent entry and where possible control invasive alien species, in an effort to minimise the impact on, and maintain the integrity of indigenous biodiversity.
Threatened Biota
To prevent extinction within the Kruger Park of any species on the IUCN's global critically endangered or endangered lists, and to work with other conservation initiatives to secure and strengthen the future of such species over their historic distribution ranges. To put in place appropriate monitoring and conservation efforts of other threatened species or lower taxonomic division, including considering recommendations of experts of invertebrate taxa for which no formal red-listing has been done, according to a realistic framework. Except in crucial instances for the survival of globally critically endangered species, management for system integrity and biodiversity must take precedence over species management.
3.

Balancing Objectives

(= sustainable utilisation if defined broadly and holistically, e.g. Child)

To develop a thorough understanding of the integrated socio-ecological system (SES), especially in the regional context, for maintenance of a resilient SES and to balance human activities and development inside and around the KNP with the need to conserve ecosystem integrity and wilderness qualities by agreeing on a desired[1] set of future conditions, and by developing an adequate suite of principles and tools. [1]These are (a) necessarily environmentally fluctuating and (b) realistic but aspirational

Strategic Adaptive Management Objective

To reach or stay within the desired conditions agreed upon, KNP will adopt a strategic adaptive management approach. The strategic component will keep the longer view in focus, while the adaptive components will strive to ensure continual feedback at various levels in a spirit of continuing learning, fine-tuning and adjustment.

Balanced Development and Biodiversity Planning Objective

To

Appreciation and Inculcation of VSTEEP Framework Objective

To understand the reciprocal effects between those major realities and forces over which we have little, or at this stage only indirect, control, and biodiversity outcomes, and to influence, or adapt to, these where possible.

Environmentally Responsible Practices Objective
(green living ethic and compliance)

To promote environmental best practice within and around the KNP.

Alignment of Business Operations and Plans Objective

To align the KNP's business plans and operations (including staff KPAs) with key biodiversity and people objectives with the major emphasis on maintaining the balance between these.

VSTEEP – values, social, technological, environmental, economic and political

Appreciation and Inculcation of VSTEEP Framework Objective

Veterinary-Human Health- Wildlife Interface (veterinary socio-politics)

as an important and relevant case history, develop an understanding of wildlife/livestock/human interactions in the region, including effects of veterinary control measures, also on land-use patterns.

To research and develop the interface between wildlife, livestock, ecosystem goods and services and human livelihoods (AHEAD concept), using a socio-ecological approach.

Overarching conceptual framework

- To partake in development of interdisciplinary frameworks and models.
- To establish baseline indicators of animal and human disease, livelihoods and socio-economic data relevant to KNP and identified TFCA's.

Animal health, animal diseases and human health

- To conduct epidemiological studies of identified diseases including BTB, F&MD, brucellosis, theileriosis, rabies, anthrax, canine distemper.
- To participate in the investigation and development of alternative animal health management and disease control strategies.
- To participate in the development of SOP's, contingency plans, risk assessments and scenario planning for identified priority diseases.
- To engage in theoretical and fundamental studies, including modeling, to examine the relationship between social structures and spread of disease, and determining disease risk.

Land use, ecosystem goods and services and animal health

- To participate in spatial and temporal relationships between ecosystem processes and disease prevalence.
- To participate in landscape level resource use and impacts by wild and domestic species on ecosystem goods and services.
- To establish the effects of land use scale and pattern on animal health.
- To determine the linkages between animal and human health and access information of disease risk assessment of people and livestock living associated with TFCA's.
- To understand animal husbandry practices, including the role of livestock in household production, community differentiation, collective management and the institutional factors affecting these.

Appreciation and Inculcation of VSTEEP Framework Objective

Veterinary-Human Health- Wildlife Interface (veterinary socio-politics)

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Human livelihoods, animal health and ecosystems goods and services (ecosystem health)

- To access information on scenario planning and participatory exploration of land use options.
- To develop an understanding of trade-offs between alternative land use enterprises.
- To understand the effects of alternative policies on development, adaptability and resilience.

Policy support and capacity building

- To build support for policy development on animal health and linkages between animal and human health and ecosystems
- To participate in exploring consequences of alternative policies using scenarios.
- To build capacity in policy analysis

Communication and outreach

- To establish and support communication between research workers and agencies, including the AHEAD program.
- To ensure effective information flow between scientists and government, implementing and policy making agencies.
- To assist in the production and distribution of research results, synthesis, policy briefs, etc.

SANParks requirements nationwide, with specific reference to provinces and Department of Animal Health outside AHEAD geographic domain

- Interaction with provincial issues and department of animal health animal movement policies.
- Understanding values influencing SANParks activities and effectively use this knowledge of identifying risks associated with the program.

Enabling Objectives

To provide cross-cutting support services which enable KNP to achieve the line function biodiversity and people objectives, and balance these effectively.

NB : must be cross-linked with and is subject to growth depending on further demands from the other three objectives.

Communication Objective

Under development…

Infrastructure Objective

To sustain and develop support infrastructure and services to all biodiversity and people activities through an integrated approach ensuring that environmental best practice, legal compliance, minimum standard in service levels and cost effective management programmes are implemented.

Human Resources Objective

To position KNP to attract, attain and develop quality employees by providing a valued contribution in terms of Human Resources policy and practices and fulfilling a consultative role with the aim of enabling KNP to meet its strategic business objectives.

Financial Resources Objective

To ensure financial discipline and adherence to set policies and procedures throughout the KNP and to deliver an outstanding, professional and client orientated financial service in the KNP within the applicable legal and statutory framework according to acceptable norms and standards.

Administration Objective

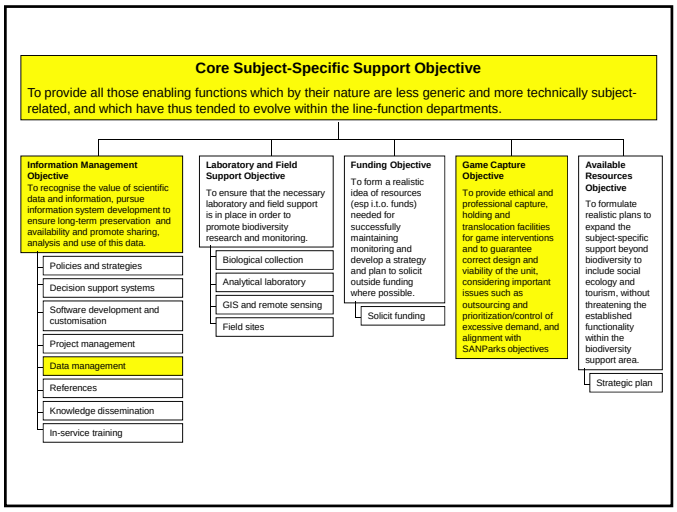
To support all clients within the KNP by providing them with Administration and Protection Services.

Knowledge Resource Management Objective

Under development…

Core Subject-Specific Support Objective

To provide all those enabling functions which by their nature are less generic and more technically subject-related, and which have thus tended to evolve within the line-function departments.


Core Subject-Specific Support Objective
To provide all those enabling functions which by their nature are less generic and more technically subject-related, and which have thus tended to evolve within the line-function departments.
Information Management Objective
To recognise the value of scientific data and information, pursue information system development to ensure long-term preservation and availability and promote sharing, analysis and use of this data.
Policies and strategies
Decision support systems
Software development and customisation
Project management
Data management
References
Knowledge dissemination
In-service training
Laboratory and Field Support Objective
To ensure that the necessary laboratory and field support is in place in order to promote biodiversity research and monitoring.
Biological collection
Analytical laboratory
GIS and remote sensing
Field sites
Funding Objective
To form a realistic idea of resources (esp i.t.o. funds) needed for successfully maintaining monitoring and develop a strategy and plan to solicit outside funding where possible.
Solicit funding
Game Capture Objective
To provide ethical and professional capture, holding and translocation facilities for game interventions and to guarantee correct design and viability of the unit, considering important issues such as outsourcing and prioritization/control of excessive demand, and alignment with SANParks objectives
Available Resources Objective
To formulate realistic plans to expand the subject-specific support beyond biodiversity to include social ecology and tourism, without threatening the established functionality within the biodiversity support area.
Strategic plan

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