DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

AND

THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

BIODIVERSITY TOOLKIT

In the Western Cape we have excellent resources to assist the state and public with discharging their duty of care towards the province's extraordinary biodiversity.

This information package contains an 'essential biodiversity toolkit' that should be treated as a standard reference when contemplating any changes of land use or development applications in the province.

The toolkit addresses three major facets of biodiversity in planning, EIA and decision-making, namely:

- The identification of priority areas for conservation action by means of systematic conservation (or biodiversity) planning;
- Providing land-use practitioners, managers and decision-makers with interpreted maps that indicate areas of high biodiversity importance, and guidelines on how to apply these maps and reports to project planning; and
- Recording authority requirements with respect to minimum standards of biodiversity reporting in the context of EIAs and development planning in the Western Cape.

The relevance of each of these resources is summarised below.

This toolkit is based on materials that have either been developed by the state, or are recommended as best practice guidelines by the Department of Environmental Affairs and Development Planning, the South African National Biodiversity Institute and CapeNature.

WHAT'S SO IMPORTANT ABOUT BIODIVERSITY?

'Biodiversity' is a crucial factor in development planning and decision-making in the Western Cape.

There are good reasons for this:

- In global terms, the biodiversity of the Western Cape is unique. Aspects of it are also highly threatened;
- Human wellbeing in the province is in many ways directly dependent on the health of our indigenous biodiversity and its ability to generate life-supporting goods and services: e.g. water, security against the impacts of climate change, commercially-valued plant and animal species; and
- The conservation and sustainable use of biodiversity, for the benefit of current and future generations, is a fundamental democratic right in the South African Constitution. It is also an internationally recognised principle of sustainable development.

It is recognised that the immense biodiversity value of the Western Cape can complicate project planning and decision-making in an economic and institutional environment where social development and economic growth are core priorities

This information pack has been designed to introduce a basic set of conceptual and technical tools that:

- Explain what 'biodiversity' is, and why it has such high value in the Western Cape;
- Give an overview of the main legal and policy aspects of biodiversity that need to be taken into account in project planning in the Western Cape; and
- Can help you to identify the potential biodiversity implications of a proposed plan or project before initiating a formal application for a change in land use, development right or agricultural, environmental, mining or water authorisation.

1. *Planning for Living Landscapes – Perspectives and Lessons from South Africa*

Planning for Living Landscapes **is essential background reading for anyone involved in the land-use and development sectors in the Western Cape.**

Besides explaining the goals that guide systematic conservation planning, and its underlying method, *Planning for Living Landscapes* shows how this theory has translated into increasingly useful planning products and contextual informants for sustainable development in the Western Cape.

Key things to look out for include the understanding that 'biodiversity' must always be approached in terms of two inseparable concepts: *pattern* and *process*, where:

- 'Pattern' covers the composition and structure of biodiversity. It refers to a snapshot' of different categories of biodiversity (e.g. species, habitats, communities or ecosystems) that have been mapped or otherwise identified in a particular place, at a specific time.

- 'Process' refers to the ecological and evolutionary processes that maintain the variety and distribution of biodiversity and allow it to persist over time.

Systematic conservation planning sets out to conserve a representative sample of biodiversity pattern as well as the ecological and evolutionary processes by which this pattern is under-pinned. It answers the crucial questions about how much needs to be conserved, and where, by prioritising conservation actions in terms of quantitative *biodiversity targets*. A biodiversity target can typically be expressed as the extent of an area that needs to be specially managed for biodiversity (e.g. percentage of a vegetation type) or the number of occurrences of a species.

It is not far-fetched to say that systematic conservation planning has drastically redefined our approach to biodiversity conservation in South Africa.

By understanding systematic conservation planning, you will realise why biodiversity outside our protected areas has become such an important factor for sustainable development in the Western Cape.

WHAT IS 'BIODIVERSITY'?

'Biodiversity' (shorthand for 'biological diversity') is literally life on earth.

It is an updated version of reducing nature to 'fauna and flora' (animals and plants) – terminology that fails to reflect the complexity, dynamism and variability of living organisms and, crucially, the processes by which they are maintained and reproduced.

Biodiversity, in contrast, is a broad term which takes in the full sweep of living organisms and their environments – from

- The level of genes, species and populations; to
- Habitats and communities; and
- Entire ecosystems such as the coastline, rivers and fynbos vegetation of the Western Cape.

Biodiversity: Asking the right questions

In order to ensure that our use of land does not lead to irreversible loss of biodiversity, we need to recognise this complexity so that development planning is informed by the right questions and information.

If we focus on only one component of biodiversity, such as species, we risk losing sight of the bigger ecological picture which can be fatal to the survival of the species about which we are so rightfully concerned. The 'bigger ecological picture' can include:

- The quality, viability and extent of habitat within which those species occur;
- How isolated the species and habitats are;
- The ability of species to feed, find a mate or migrate; or whether
- Critical ecological 'drivers' such as fire, insect pollination or seasonal flooding are intact and present.

2. *The Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape & SANBI Biodiversity GIS DVD*

One of the most important achievements of systematic conservation planning is its emphasis on the end-user or implementer of biodiversity plans and reports. In other words, you.

As *Planning for Living Landscapes* shows, stakeholder consultation and implementation of the end result is as important as the science and technical expertise that goes into drafting these maps of biodiversity conservation priorities. This toolkit contains two crucial resources biodiversity mainstreaming in the Western Cape:

- The ***Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape***; and
- An interactive ***DVD*** produced by the ***Biodiversity-GIS Unit of the South African National Biodiversity Institute*** (SANBI).[1]

It is strongly recommended that the Fynbos Forum guidelines and the Biodiversity GIS DVD be used together. The purpose of each of these resources is explained below.

The ***Fynbos Forum ecosystem guidelines*** have three main functions:

- They give step-by-step guidance on how to use systematic conservation plans and related products when screening proposed projects or plans for their potential biodiversity implications. The six steps of pre-application biodiversity assessment are explained on pages 16-21 of the guidelines.

- The Fynbos Forum ecosystem guidelines complement systematic conservation plans by spelling out the ecological and management implications of development in the major ecosystems of the Western Cape. So doing, the Fynbos Forum ecosystem guideline allow a user to translate the contextual significance of mapped biodiversity features into information that can inform actual project planning and impact assessment.

- The guidelines include basic terms of reference (ToR) for the consideration of biodiversity in environmental assessment. These ToR are endorsed by CapeNature.

THE 'NEW' CONSERVATION AGENDA

There are two truths about biodiversity conservation that are probably not that well known but which have direct relevance to the conservation fraternity, development interests, the broad public and the state.

The first is that nature reserves and national parks are unfortunately not necessarily that good at conserving biodiversity. One of the main reasons for this is that protected areas were usually established in places where land was cheap and had little economic benefit for sectors such as agriculture, mining or forestry. As a result, certain ecosystems (such as mountain fynbos) are mostly very well protected while others enjoy hardly any protection at all. Examples include our main rivers and lowland fynbos, renosterveld and strandveld.

Secondly, habitat loss on land in private ownership is the greatest threat to the conservation and sustainable use of biodiversity. This means that our least protected vegetation and freshwater ecosystems are most vulnerable to land-use pressures such as urban and agricultural expansion, infrastructure development, and prospecting and mining.

So, in order to conserve our globally unique natural wealth, and to secure its contribution to human wellbeing, conservation objectives need to be 'mainstreamed' into development planning wherever it may lead to further loss biodiversity and ecological functioning.

Further to this, we should always be on the lookout for opportunities to integrate biodiversity into our plans and, so doing, ensure that development actually contributes to the goals of biodiversity conservation.

[1] http://bgis.sanbi.org or BGISHelp@sanbi.org

The ***SANBI B-GIS DVD*** includes the following biodiversity-related information applicable to the Western Cape:

- The National Spatial Biodiversity Assessment (which records the conservation status of ecosystems: Critically Endangered, Endangered, Vulnerable or Least Threatened);
- GIS biodiversity data for each municipality in the Western Cape; and
- Project information on all the major conservation plans that apply to the Western Cape.

It is strongly recommended that you familiarise yourself with "Planning for Living Landscapes" and the Fynbos Forum ecosystem guidelines before using the SANBI B-GIS DVD.

BIODIVERSITY AND THE LAW

It must be noted that all spatial planning and development applications in the Western Cape that may lead to ecological degradation and loss of biodiversity must demonstrate, where relevant, consistency with applicable legislation and official policy.

This includes but is not limited to:

- Section 24 of the ***Constitution*** Act 108 of 1996 (i.e. the environmental right);
- The ***National Environmental Management Act*** 107 of 1998 (particularly sections 2 – the National Environmental Management Principles – and 28, the Duty of Care);
- The goals and objectives of the ***National Biodiversity Strategy and Action Plan***; and
- The ***Western Cape Provincial Spatial Development Framework***.

Environmental – and, therefore, biodiversity – considerations need to be taken into account by, among others, the following application procedures:

- In terms of ***forward*** or ***indicative planning***, amendments to
  - structure plans
  - spatial development frameworks
  - the urban edge
- In terms of ***control planning*** –
  - amendments to regional structure (guide) plans
  - changes in use rights
  - sub-divisions
  - zoning scheme amendments.
- ***Applications*** for:
  - environmental authorisations
  - permits for the cultivation of virgin soil and other aspects relating to the conservation of agricultural resources
  - water use licences
  - heritage permissions
  - prospecting permits and mining rights, etc

3. *CapeNature's commenting role in EIA and development applications & the DEA&DP "Guideline for involving biodiversity specialists in EIA processes"*

CapeNature and the Department of Environmental Affairs and Development Planning have clear requirements with regard to the consideration of biodiversity in development planning and EIA procedures, namely:

- ***CapeNature's commenting role in EIA and development applications***; and
- ***Guideline for involving biodiversity specialists in EIA processes.***

Among others, ***CapeNature*** states that it will not support activities that may have a negative impact on various stipulated habitats and their ecological functioning. These include:

- Rivers, wetlands, groundwater-dependent communities and estuaries;
- Viable and/or connected Critically Endangered or Endangered ecosystems; and
- Any area that has been identified as important for biodiversity conservation by a systematic conservation plan.

A biodiversity assessment may have to be undertaken under these circumstances. CapeNature requires, as a minimum, that the Fynbos Forum ecosystem guidelines and DEADP biodiversity EIA guidelines be consulted.

The ***DEADP guideline*** addresses the role of biodiversity specialists in EIA procedures, considers triggers and thresholds relating to biodiversity assessment, and gives advice on how to communicate specialist findings.