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DEPARTMENT OF ENVIRONMENT AFFAIRS AND TOURISM

Notice X of 2007

PROPOSED GUIDELINE REGARDING THE DETERMINATION OF BIOREGIONS AND THE PREPARATION AND PUBLICATION OF BIOREGIONAL PLANS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (Act No. 10 of 2004)

This Guideline entitled "Guideline regarding the Determination of Bioregions and the Preparation and Publication of Bioregional Plans" is hereby published for comment.

Interested parties are requested to submit comments in connection with the proposed Guideline within 30 days from the date of publication of this notice. Comments must be submitted to the Director-General: Department of Environment Affairs and Tourism, Private Bag X447, Pretoria by no later than 05 October 2007.

Department of Environment Affairs and Tourism

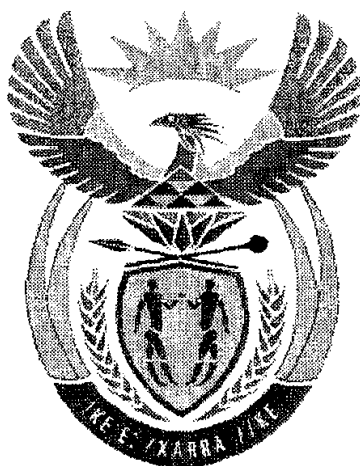
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Closing date: 05 October 2007

***Guideline regarding the Determination of Bioregions and
the Preparation and Publication of Bioregional Plans***

August 2007



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Acronyms, Abbreviations and Glossary

Biodiversity Act (NEM:BA)	The National Environmental Management: Biodiversity Act 10 of 2004;
biodiversity priority areas	The priority areas for conservation identified in the NSBA, 2004;
The Constitution	The Constitution of the Republic of South Africa: Act 108 of 1996;
EIP	Environmental Implementation Programmes developed in terms of section 11 of NEMA;
EMF	Environmental Management Frameworks in terms of the EIA Regulations;
EMP	Environmental Management Programme published in terms of section 15 of NEMA;
EIA regulations	The National Environmental Management Act: Environmental Impact Assessment Regulations promulgated under section 24(5) of NEMA and published in Government Notice 385 in Government Gazette 28753 of 21 April 2006;
DEAT	The National Department of Environmental Affairs and Tourism;
Development Facilitation Act	The Development Facilitation Act 67 of 1995;
GIS	Global Information System;
IOP	Integrated Development Plan developed in terms of the Municipal Systems Act;
The Minister	The Minister of Environmental Affairs and Tourism;
MEe/s	The Member of the Executive Council of a Province who has responsibility for the administration and implementation of legislation relating to the environment and biodiversity;
Municipal Systems Act	The Local Government: Municipal Systems Act 32 of 2000;
NEMA	The National Environmental Management Act 107 of 1998;
NBF	National Biodiversity Framework required in terms of Section 39 of the Biodiversity Act;
NGO	Non governmental organisation;
NSBA	The National Spatial Biodiversity Assessment prepared and updated by SANBI from time to time, the 2004 document was the most recent when this Guideline was developed;

NBSAP	The National Biodiversity Strategy and Action Plan prepared and updated by SANBI from time to time which is a twenty-year strategy for the conservation and sustainable use of South Africa's biodiversity, the 2005 Plan was the most recent when this Guideline was developed;
Protected Areas Act	The National Environmental Management: Protected Areas Act 57 of 2003;
SANBI	The South African National Biodiversity Institute; and
SDFs	Spatial Development Framework prepared as part of a municipality's IDP, in terms of the Municipal Systems Act.

Chapter 1: Determining bioregional boundaries and declaring bioregions

1. Introduction to the provision of the Biodiversity Act regarding bioregions

1.1 Bioregional plans can only be developed in respect of areas that have been declared as bioregions. In general the bioregional plan should be published at the same time as the bioregion is declared.

1.2 The Biodiversity Act provides that the Minister may "*determine a geographic region as a bioregion for the purposes of this Act*" if *certain criteria are met, namely that it "contains whole or several nested ecosystems and is characterised by its landforms, vegetation cover, human culture and history"*.

1.3 There is no restriction on the nature of the boundary for the "geographic region" which the Minister or MEC may determine as a bioregion in terms of the Biodiversity Act. As such, the boundary could be either a natural or ecological boundary or a political, or institutional one. However, section 40 provides that a bioregion may only be prescribed in terms of the legislation if it meets two criteria:

1.3.1 Firstly, "if that region contains whole or nested ecosystems".¹

- An "ecosystem" is defined in the Biodiversity Act as "*a dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit*".
- The definition does not require that only one whole ecosystem be part of a bioregion. It allows several nested ecosystems to be part of the bioregion.

An ecosystem could be a very small unit such as a drop of water, or it could be a whole planet functioning as a unit. Whilst not defined, it makes sense to view "nested ecosystems" as referring to the hierarchical categorisation of ecosystems, in which almost all ecosystems can be subdivided into smaller ecosystems or

¹ This is the language used by the IUCN to define bioregions in the *Rio+5 Special Focus Report - Ecosystems*.

aggregated into larger ecosystems. As such, a region which "contains whole or nested ecosystems" could be a very small area or a large area.

- An institutional boundary such as a municipal boundary or even a provincial one will not often be the "boundary" of an ecosystem or nested ecosystems, but section 40 does not require the bioregion to *follow* the ecosystem "boundaries", but rather to *contain* whole ecosystem/s or nested ecosystems.

1.3.2

The second requirement for a region to be determined as a bioregion in terms of section 40(1) is that it must "[be] *characterised by its landforms, vegetation cover, human culture and history*" (emphasis of current legislation).

- This appears to imply that the landforms must in some way be "characteristic" of the area. This is interpreted to mean that there must be some degree of commonality within the bioregion of the land forms, vegetation cover, human culture and history.
- This requirement appears to mitigate against a very large area, characterised by a large number of different and unrelated land forms or vegetation cover, etc. being proclaimed a bioregion. It seems to indicate that an area characterised by a wide variety of unrelated settlement types, by unconnected biomes or unconnected mountainous and coastal regions, etc. would not meet the second requirement for the declaration of a bioregion.

1.3.3

In conclusion, a bioregion or a geographic region which contains whole or several nested ecosystems could be determined along either ecological or political boundaries. However for a region to be *characterised* by its landforms, vegetation cover, human culture and history, there would need to be a degree of commonality amongst these features, or at least a degree of notability or distinction of such features unique to or descriptive of the region as a whole.

2. The criteria guiding the declaration of bioregions

2.1 Ecological boundaries (such as the boundaries of ecosystems, landforms and vegetation cover) are hardly ever precise. Although they may be drawn as lines on a map, in practice they are transition zones that extend over varying distances. Ecological boundaries often differ substantially depending on whether terrestrial ecological characteristics or aquatic ecological characteristics are used as a basis for defining them. In other words, if aquatic ecological features were used to define bioregions in South Africa, this would result in a dramatically different set of bioregional boundaries than if terrestrial ecological features were used. Similarly, boundaries based on human culture and history are seldom precise. This means that there is no precise way to determine bioregional boundaries.

2.2 The key criterion that should guide the delineation of bioregional boundaries is the **functionality of bioregional plans** – the boundaries should be delineated in a way that makes the plans useful and effective. The main function of bioregional plans is to guide decision-making and management by a range of people and agencies. Hence, it is important that they follow sensible boundaries from the point of view of implementing land and resource management.

2.3 For this reason it makes sense for bioregional boundaries to align with administrative boundaries, such as municipal boundaries. Biophysical features or characteristics (such as vegetation groups or sub-catchments) should be used as a starting point for delimiting bioregions, which must then be matched to the nearest local or district municipal boundaries. In other words, **bioregions must be configured as: district municipalities,² metropolitan municipalities,³ local municipalities,⁴ or groups of local municipalities.** In general, a bioregion should not straddle two district municipalities or two provinces, although there may be cases in which such a delineation makes sense from an ecological point of view. From an

² That is a category B municipality as defined in section 155 of the Constitution and in terms of Chapter 1 of the Local Government: Municipal Structures Act 117 of 1998 ("the Municipal Structures Act").

³ That is a category A municipality as defined in section 155 of the Constitution and in terms of Chapter 1 of the Municipal Structures Act.

⁴ That is a category C municipality as defined in section 155 of the Constitution and in terms of Chapter 1 of the Municipal Structures Act.

administrative perspective a bioregion should preferably be declared for a metropolitan municipality or a district municipality.

2.4 Note that the underlying systematic biodiversity plan(s) on which a bioregional plan must be based, can be done according to whatever ecological boundaries make the most sense from a biodiversity planning point of view, and must take into account the continuity of ecosystems and ecological processes across administrative boundaries. However, the published bioregional plan must be aligned with administrative boundaries.

2.5 Only one bioregion should be declared in respect of each local or metropolitan municipality. This would ensure that there is only one current and published bioregional plan for each local or metropolitan municipality. At a district municipality level, there may be different bioregions within the district but these should clearly demarcate the local municipalities within the district to which they apply, and each relevant local municipality will only fall into one of the relevant bioregions.

3. What areas should be declared bioregions

3.1 A bioregion may be declared and a bioregional plan may be published for any area of South Africa.

3.2 However, priority will be given to areas of the country that fall within or overlap with the broad biodiversity priority areas as identified in the NSBA 2004. These areas, identified through a national-scale systematic biodiversity assessment, are shown in the map below. (A colour version of this map is available from the SANBI website: www.sanbi.org.)

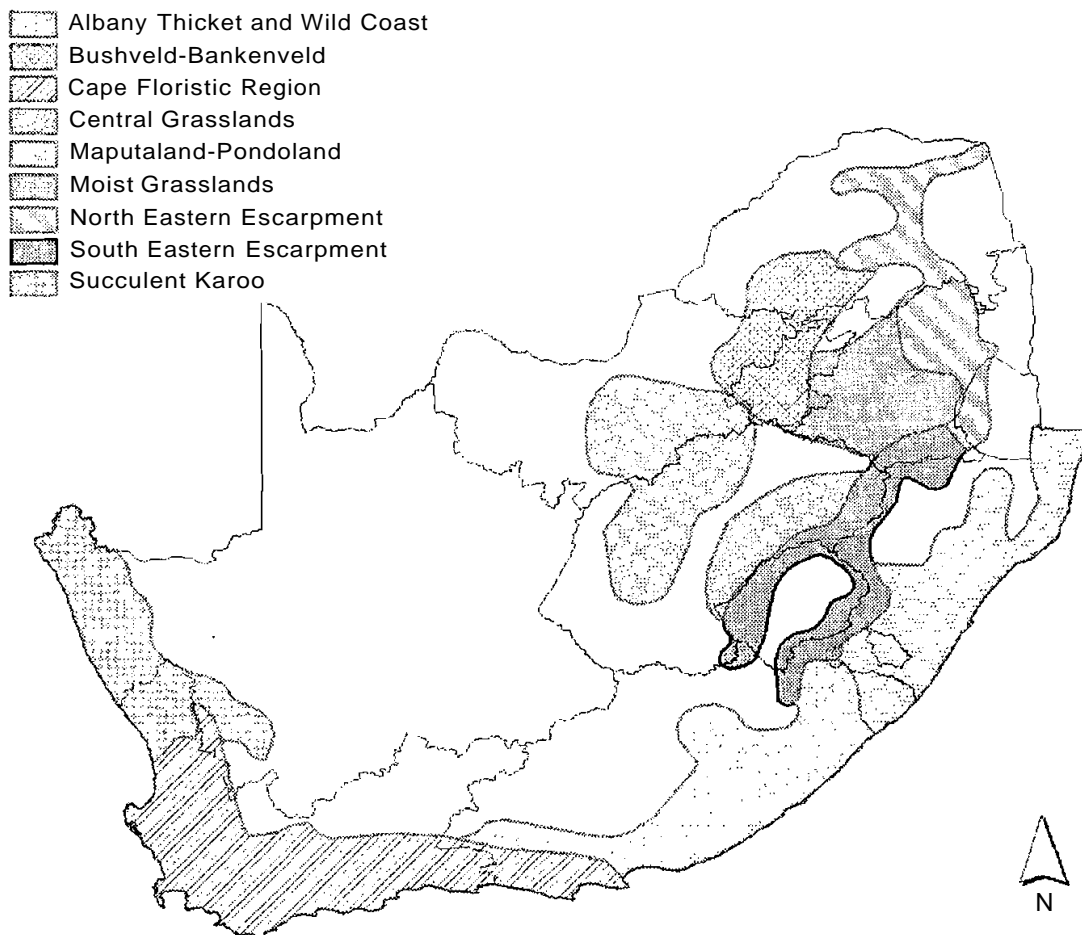


Figure 1: Nine broad priority areas for conservation action in South Africa, as identified in the National Spatial Biodiversity Assessment 2004 ⁵

4. Cross-boundary bioregions

4.1 There is the possibility that a bioregion may span more than one province. The sections dealing with bioregions in the Biodiversity Act do not deal with how the MECs responsible for the provinces within which the bioregion spans, would coordinate a bioregion which spanned two provinces. In other words no transboundary cooperation or consultation mechanisms are established and as such administering a bioregion across more than one province may be difficult. (Sections 47 and 99 of the Biodiversity Act do oblige consultation

⁵ Driver, A, Maze, K, Rouget, M, Lombard, AT, Nel, J, Turpie, JK, Cowling, RM, Desmet, P, Goodman, P, Harris, J, Jonas, Z, Reyers, B, Sink, K & Strauss, T. 2005. National Spatial Biodiversity Assessment 2004: Priorities for Biodiversity Conservation in South Africa. *Strelitzia* 17. Pretoria: South African National Biodiversity Institute.

before a bioregion is determined but this does not deal with the question of who takes the lead in initiating such consultations and how decision-making is to be coordinated.)

4.2 There may be good reason to declare a bioregion over more than one province but if this is done the roles and responsibilities of the respective MEC and provinces would have to be dealt with through an intergovernmental Memorandum of Understanding or through an Implementation Protocol which ;s provided for in the Intergovernmental Framework Relations Act 13 of 2005.

4.3 A proposal regarding the manner in which the above matters will be dealt with should it be proposed that a bioregion be declared over more than one province should be submitted to the Minister with the other submissions discussed in this Guideline.

5. Bioregions and bioregional plans that are impacted on by international boundaries

5.1 In general bioregions and bioregional plans will be aimed at the conservation and management of South Africa's biodiversity. However, it is recognised that ecosystems and geographical features do not always respect international boundaries. As such section 40(5) of the Biodiversity Act (Act 10 of 2004) empowers the Minister to enter into an agreement with a neighbouring country to secure the effective implementation of a bioregional plan.

5.2 If a person involved in drawing up a bioregion and bioregional plan believes that exceptional circumstances pertain to that particular bioregion and bioregional plan which require an agreement with a neighbouring country for the effective implementation of the bioregional plan this should be raised in the submission made to the Minister or the relevant MEC. A full motivation for this should be set out in the submission as well as proposal regarding the nature of the agreement required.

5.3 If the Minister determines that such an agreement is necessary and enters into such an agreement the Minister must submit to Parliament a copy of any such agreement.

Summary of the approach to determining bioregional boundaries and declaring bioregions

- To ensure usefulness of bioregional plans, bioregional boundaries must align with administrative boundaries, such as municipal boundaries.
- Bioregions must be configured as: district municipalities, metropolitan municipalities, local municipalities, or groups of local municipalities.
- In general, bioregions should not straddle districts or provinces.
- Bioregions may never overlap.
- The underlying systematic biodiversity plan(s) on which the bioregional plan is based must take into account the continuity of ecosystems and ecological processes across administrative boundaries, based on best available techniques and methods.
- A bioregion may be declared anywhere in South Africa; however, priority will be given to areas that fall within or overlap with the broad biodiversity priority areas identified in the NSBA 2004.
- If exceptional circumstances require an agreement with a neighbouring country for *effective* implementation of a bioregional plan, this should be raised and motivated in the submission made to the Minister or MEC.

Chapter 2: What is a bioregional plan and how is it related to a systematic biodiversity plan?

1. Introduction

1.1 As is set out above, Section 41 of the Biodiversity Act (Act 10 of 2004) simply provides that a bioregional plan must:

1.1.1 Contain measures for the effective management of biodiversity and the components of biodiversity in the region;

1.1.2 Provide for monitoring of the plan; and

1.1.3 Be consistent with-

- the Biodiversity Act;
- the national environmental management principles set out in Chapter 2 of NEMA;
- the national biodiversity framework ("the NBF"); and
- any relevant international agreements binding on South Africa.

1.2 As such, the Biodiversity Act does not set detailed requirements regarding the form and content of a bioregional plan. For this reason SANSI at the request of the Minister and DEAT have developed this Guideline on the form and content of a bioregional plan in close consultation with relevant stakeholders and experts.

2. Basic elements of a bioregional plan

2.1 A bioregional plan must be a **spatial plan** showing terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecosystem functioning. These areas are referred to as **critical biodiversity areas**, and are those that should remain in their natural state. A bioregional plan must include **guidelines** for avoiding loss or degradation of natural habitat in critical biodiversity areas.

2.2 A bioregional plan must be based on a **systematic biodiversity plan**. This term is discussed further in paragraph 3 below. Systematic biodiversity

planning is a rigorous, data-driven approach for assessing the location, status and importance of a range of biodiversity features. It represents the best available science for identifying spatial biodiversity priority areas.

- 2.3 A bioregional plan must include a map with accompanying land-use guidelines. It must provide information and guidance on:
- 2.3.1 The location of critical biodiversity areas, identified based on best available science; and
- 2.3.2 The land and resource uses which are consistent with the long-term ecological functioning and health of these critical biodiversity areas, and the land and resource uses which should be avoided in these areas.
- 2.4 A bioregional plan may also provide information on other measures for effective management of biodiversity and the components of biodiversity in the region.
- 2.5 The required contents of a bioregional plan are set out in more detail in Chapter 6.

3. What is a systematic biodiversity plan?

- 3.1 A systematic biodiversity plan identifies priority areas for biodiversity conservation based on internationally recognised systematic biodiversity planning principles, methodologies and techniques. ⁶ Systematic biodiversity planning, also known as systematic conservation planning, is widely accepted in South Africa, and because of its basis in sound biodiversity science, has become the standard approach to biodiversity planning in this country.
- 3.2 Systematic biodiversity planning can be done at a range of spatial scales, from global to local. In South Africa, systematic biodiversity plans have been done at the national scale, the biome scale, the provincial scale and the local

⁶ For more background and further references on systematic biodiversity planning see Driver et al 2005 (NSBA) and Driver, A, COWling, RM & Maze, K. 2003. *Planning for liVing Landscapes: Perspectives and Lessons from South Africa*. Washington, DC: Center for Applied Biodiversity Science at Conservation International; Cape Town: Botanical Society of South Africa.

scale.

3.3 Key characteristics of a systematic biodiversity plan are:

3.3.1 The principle of representation. The plan identifies areas needed to conserve a representative sample of all biodiversity pattern.⁷

3.3.2 The principle of persistence. The plan identifies areas needed to maintain ecological and evolutionary processes that allow biodiversity to persist in the long term.

3.3.3 Biodiversity targets. Quantitative targets are set for biodiversity features, indicating how much of each feature is required in order to conserve a representative sample of biodiversity pattern and key ecological processes.

3.3.4 Efficiency and conflict avoidance. The configuration of priority areas identified in the plan is designed to be spatially efficient (i.e. to meet biodiversity targets as efficiently as possible in terms of the amount of land required) and where possible to avoid conflict with other land uses where these are known to exist.

3.4 in addition, a systematic biodiversity plan that forms the basis for a published bioregional plan must:

3.4.1 Be undertaken at a spatial scale meaningful for informing land-use planning and decision-making. The scale should ideally be 1:50 000 or finer.⁸ In some cases it may make sense to publish a bioregional plan at a scale broader than 1:50 000, if no fine-scale biodiversity plan is available for the area.

3.4.2 Include terrestrial and aquatic biodiversity features.

3.4.3 Identify a portfolio of critical biodiversity areas required to meet

⁷ Biodiversity pattern refers to ecosystems, habitats, species and genes.

⁸ The scale of the plan depends on the scale at which various input layers (e.g. vegetation map, land cover) were available. The scale may be mixed, i.e. finer in some parts of the planning domain than others. The scale of the plan is a key determinant of how it can be applied in practice.

biodiversity pattern and ecological process targets. These critical biodiversity areas should include spatially explicit **ecological corridors** that need to be managed to ensure connectivity of natural habitat in the landscape.

- 3.4.4 Use the most up-to-date, accurate, fine-scale GIS input layers available, paying particular attention to the accuracy and scale of the **vegetation map and transformation layer**. Input layers, particularly for biodiversity features, should conform to accepted guidelines or standards where these exist (for example, guidelines for vegetation mapping, standards for GIS metadata).
- 3.4.5 Use appropriate, scientifically sound, up-to-date methodology and techniques, including software and analyses, for identifying critical biodiversity areas.
- 3.4.6 Include a technical report that sets out in detail the technical aspects of how the systematic biodiversity plan was undertaken, and its limitations.

Summary of basic elements of a bioregional plan and its relationship to a systematic biodiversity plan

A bioregional plan must include a **map with accompanying land-use guidelines**.

The map must show **critical biodiversity areas**. These are terrestrial and aquatic features which are critical for conserving biodiversity and maintaining ecosystem functioning, and which should thus remain in their natural state.

- A bioregional plan must be **based on a systematic biodiversity plan**.

Key characteristics of a systematic biodiversity plan are: the principle of representation, the principle of persistence, setting of quantitative biodiversity targets, and efficiency and conflict avoidance in the spatial configuration of priority areas identified.

A systematic biodiversity plan that forms the basis for a published bioregional plan must be undertaken at a **meaningful spatial scale** for informing land-use planning and decision-making; include terrestrial and aquatic features; identify a portfolio of **critical biodiversity areas** required to meet biodiversity targets, including explicit ecological corridors; use appropriate, **scientifically sound data and methods**; and include a

technical report that sets out in detail how the plan was undertaken and its limitations.

Chapter 3: Who will use a published bioregional plan and how will the boundaries of the bioregion and the bioregional plan be accessed

1. Introduction

1.1 Published bioregional plans are intended to form a part of the every day planning and development activities of a wide range of state entities and non state persons and entities. For this reason they must be easily accessible.

1.2 A bioregional plan is intended to **guide land-use planning, environmental assessments and authorisations, and natural resource management**, by the range of sectors whose policies and decisions impact on biodiversity, so that biodiversity priorities and sustainable management of natural resources are taken into account by all of these sectors.

1.3 The users of a bioregional plan include those who are **compelled** by the Biodiversity Act to have regard for the bioregional plan and **other intended users** for whom the bioregional plan will be a useful planning and developmental tool.

2. Mandatory users of bioregional plans are: 9

2.1 **Local and district municipalities**, which must align critical biodiversity areas and the contents of the bioregional plan generally into the their IDPs and by implication into their SDFs. In addition a municipality must incorporate into the IDP and SDF those provisions of bioregional plan that specifically apply to it; and demonstrate in its IDP and SDF how the bioregional plan may be implemented by that municipality (this is required in section 48);

2.2 An **organ of state** that must prepare an **environmental implementation plan** ("EIP") or **environmental management plan** ("EMP") in terms of Chapter 3 of NEMA (this is required in section 48);

2.3 **Environmental decision-makers** who are required by section 2 of NEMA to apply the NEMA section 2 principles in their decision-making. Such decision-

9 Section 48 of the Biodiversity Act.

makers are required to consider amongst other things sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems which require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure. Critical biodiversity areas identified in a bioregional plan should be considered to be such areas, and should therefore be considered by decision-makers in the course of the decision making process. This would mean that bioregional plans should be considered by, amongst others:

- 2.3.1 Competent authorities before issuing **environmental authorisations** in terms of section 24 of **NEMA**;
- 2.3.2 **National Department of Agriculture**, which should take bioregions(s), bioregional plan(s) and identified critical biodiversity areas into account in their authorisations (e.g, for ploughing virgin land, and for subdivision of agricultural land);
- 2.3.3 **Provincial Departments of Agriculture**, which should take bioregions, bioregional plans and identified critical biodiversity areas into account in their comments on applications;
- 2.3.4 **Department of Water Affairs and Forestry**, which should take bioregion(s), bioregional plan(s) and identified critical biodiversity areas into account in their decision-making, for example in granting water licences;
- 2.3.5 **Catchment Management Agencies**, which should integrate the relevant bioregion(s), bioregional plan(s) and identified critical biodiversity areas in their decision-making about water allocations;
- 2.3.6 **Department of Minerals and Energy**, which should take bioregion(s), bioregional plan(s) and identified critical biodiversity areas into account in their authorisations for prospecting and mining; and
- 2.3.7 **Local and district municipalities**, which, should take account of bioregion(s), bioregional plan(s) and identified critical biodiversity

areas in issuing planning authorisations.

3. Recommended users of bioregional plans include the following:

3.1 Government departments and agencies whose decisions and actions impact on biodiversity and the natural environment, but whose core business and expertise is not biodiversity conservation. These include:

3.1.1 Local and district municipalities, which, in addition to integrating critical biodiversity areas in the relevant bioregional plan into their IDPs and SDFs, should also integrate critical biodiversity areas and other relevant guidelines and recommendations from the bioregional plan into Environmental Management Frameworks ("EMFs") developed in terms of Chapter 8 of the EIA Regulations,¹⁰ and zoning schemes;

3.1.2 National and Provincial environment departments, which should take the provisions of bioregional plans into account in the development of provincial supplements to the NEMA EIA regulations (such as maps of sensitive areas) in terms of section 24A and in developing EMFs and National and Provincial Guidelines in terms of the Chapter 8 EIA regulations;

3.1.3 National Department of Agriculture, which should take bioregional plans into account in their planning processes and in the programmes which they develop;

3.1.4 Provincial Departments of Agriculture, which should take bioregional plans into account in their comments on applications, in planning and scheduling their LandCare activities, and in any other planning activities (such as farm planning and Area-Wide Planning);

3.1.5 Department of Water Affairs and Forestry, which should take bioregional plans into account in planning on water matters and in identifying priority areas for expansion of forestry;

¹⁰ The National Environmental Management Act: Environmental Impact Assessment Regulations promulgated under section 24(5) of NEMA and published in Government Notice 385 in *Government Gazette* 28753 of 21 April 2006.

- 3.1.6 Catchment Management Agencies, which should integrate the relevant bioregional plan(s) in their Catchment Management Strategies and their planning about water allocations;
- 3.1.7 Department of Land Affairs, which should take bioregional plans into account in planning and implementing land reform programmes, and in the development of policy, legislation or guidelines for land-use planning and management;
- 3.1.8 The Department of Housing, which should *avoid* critical biodiversity areas in identifying suitable sites for new housing developments;
- 3.1.9 The Department of Public Works, which should take bioregional plans into account in identifying appropriate locations and routes for roads and other infrastructure; and
- 3.1.10 Other organs of state preparing Guidelines in terms of section 74 of the EIA regulations regarding environmentally sensitive areas, environmental impacts or activities in respect of activities for which the organ of state is the competent authority.
- 3.2 Working for Water, Working for Wetlands, LandCare, CoastCare, and other non-governmental programmes that deal with maintaining and restoring natural resources, which should take bioregional plans into account in planning and scheduling their activities, prioritising critical biodiversity areas where possible;
- 3.3 Environmental and planning consultants undertaking Strategic Environmental Assessments, Environmental Impact Assessments, or the development of an IOP, SOF or EMF for a municipality.
- 3.4 Conservation agencies and conservation NGOs (i.e. organisations whose core business is biodiversity conservation). These organisations should use bioregional plans to guide their comments on planning tools such as SOFs and on development applications.

3.5 **Private landowners** - individuals and companies – who want more information about the biodiversity value of their landholdings and who wish to make a contribution to conserving the nation's natural heritage by ensuring that the use of their land is compatible with biodiversity conservation and/or by securing priority sites in stewardship contracts. ¹¹

4. Accessing a published bioregional plan

4.1 **Government Gazette**

4.1.1 Each bioregion and bioregional plan must be published in the Provincial or National *Government Gazette* and so a search of the *Government Gazettes* will reveal whether a bioregion and bioregional plan is in place and whether it has been amended.

4.1.2 As bioregional plans are detailed documents consisting of a number of maps and similar documents, it will not be possible to publish the whole bioregional plan in the *Government Gazette*. The *Government Gazette* will refer to a plan number and SANSI will maintain a hard copy and electronic register of all plans referred to in the *Government Gazettes* from time to time.

4.1.3 The *Government Gazette* is the official source of information regarding bioregional plans. If there is any discrepancy between the information in the *Government Gazette* and any other information published by SANSI or any other person regarding a bioregional plan the information in the *Government Gazette* should be relied upon.

4.2 **SANBI office and web site**

4.2.1 In an effort to encourage the use of bioregional plans and to allow for easy reference to these plans SANSI will manage a database of all published and updated bioregional plans.

¹¹ Not all provinces have stewardship programmes. In those provinces that do have a stewardship programme led by the provincial conservation authority, landowners whose property includes areas of significant biodiversity value can sign a stewardship contract with the provincial conservation authority. This contract gives the relevant property or portion thereof formal protected area status in terms of the Protected Areas Act, with an accompanying rates exclusion in terms of the Local Government: Municipal Property Rates Act 6 of 2004.

4.2.2 These will be freely available in electronic form to the public via the BGIS website (<http://bgis.sanbLorg>).

4.2.3 Contact details for obtaining CDs or hard copies of bioregional plans will be available on the BGIS website. CDs will be supplied for a nominal fee to cover administrative costs for all bioregional plans. Hard copies of bioregional plans will be provided at SANBI's discretion.

4.3 **Municipalities**

4.3.1 SANBI and/or the relevant provincial authority will work with all municipalities in areas in respect of which a bioregion has been declared to ensure that details of the bioregion and a copy of the bioregional plan can be accessed from the relevant municipal website as well as in hard copy from the municipal offices.

4.3.2 Once again all users are reminded that the Biodiversity Act (NEM:BA) (Act 10 of 2004) requires that bioregional plans be reviewed every five years and although SANBI and/or the relevant provincial authority will endeavour to ensure that the municipalities *have* up-to-date versions of the *relevant* bioregional plan, the *Government Gazette* should be consulted in case of doubt.

4.3.3 SANBI, in collaboration with the relevant provincial authority, will also *endeavour* to support municipalities to ensure that when the IOP (and SDF) for the municipality is updated, the necessary coordination and alignment with the bioregional plan as is required in section 48 of the Biodiversity Act (NEM:BA) (Act 10 of 2004), is achieved.

Summary of users of a bioregional plan and access to bioregional plans

Mandatory users of bioregional plans are:

- **Local and district municipalities**, which must align critical biodiversity areas and the contents of the bioregional plan generally into their IDPs and SDFs.
- An **organ of state** that must prepare an **environmental implementation plan** ("EIP") or **environmental management plan** ("EMP") in terms of Chapter 3 of NEMA;
- **Environmental decision-makers** who are required by section 2 of NEMA to apply the NEMA section 2 principles in their decision-making.

Recommended users of bioregional plans are:

- Government department and authorities including:
 - Local and district municipalities;
 - National and Provincial environment departments;
 - National Department of Agriculture;
 - Provincial Departments of Agriculture;
 - Department of Water Affairs and Forestry;
 - Catchment Management Agencies;
 - Department of Land Affairs;
 - The Department of Housing;
 - The Department of Public Works; and
 - Organs of state preparing Guidelines in terms of section 74 of the EIA regulations;
- Non-governmental programmes such as Working for Water, Working for Wetlands, LandCare, CoastCare;
- Environmental and planning consultants;
- Conservation agencies and conservation NGOs; and
- Private landowners.

Access to published bioregional plans

- Each bioregion and bioregional plan must be published in the provincial or national Government Gazette, which is the official source of information regarding bioregional plans.
- In addition, SANBI will maintain a register of bioregional plans, in which each bioregional plan will have a unique number. This number will be referred to in the Government Gazette.

Bioregional plans will be freely available in electronic form on SANBI's BGIS website (<http://Ubgis.sanbLorgl>). Contact details for obtaining CDs and hard copies of bioregional plans will also be available on the BGIS website.

- SANBI, in collaboration with the relevant provincial authority, will endeavour to provide support to municipalities to ensure that their IOPs and SDFs are aligned with relevant bioregional plans as required in section 48 of the Biodiversity Act and the latest version of the bioregional plan is available from the municipality.

Chapter 4: Alignment and coordination of bioregional plans with other relevant plans and planning processes

1. Introduction

- 1.1 The Biodiversity Act (Act 10 of 2004) requires that before a bioregional plan is published it is "coordinated" and "aligned" with eXisting plans such as the municipal IOP. Once the plan has been published all future planning by the municipality and other relevant government departments must take the contents of the bioregional plan into account.
- 1.2 There are a number of conservation tools, planning processes, plans and frameworks provided for in the Biodiversity Act such the NSF, listings of threatened ecosystems, etc. which should be coordinated with the bioregional planning processes.
- 1.3 The coordination and alignment of bioregional plans is assisted by the consultative processes which the Ministe" and the MEC must carry out before declaring a bioregion, publishing a bioregional plan or concurring with either.
- 1.4 These issues are discussed in turn below. This Chapter gives guidance on the manner in which coordination and alignment of bioregions and bioregional plans should be carried out.

2. Alignment specifically required of the bioregional plan in terms of the Biodiversity Act

- 2.1 Section 48 of the Biodiversity Act (NEM:BA) (Act 10 of 2004) provides for the coordination and alignment of bioregional plans. It deals with coordination in two different circumstances. In the first instance before a plan has been published and in the second instance after the plan has been pubhshed. In the preparation of a bioregional plan the coordination requirements before publication are obviously of primary importance, however, for those preparing a plan it is obviously also important to understand the consequences of the plan once it has been published. We discuss the provisions of the Biodiversity Act before and after publication below.
- 2.2 It is important at this point to clarify the difference between an IOP and SDF, and EMPs on the one hand, and a bioregional plan on the other. IOPs and

SOFs are multi-sectoral planning tools that integrate input from many sectors. A bioregional plan is *not* in itself a multi-sectoral plan, but rather the biodiversity sector's input into various multi-sectoral planning and authorisation processes.

2.3 Critical biodiversity areas identified in a bioregional plan must be fed into multi-sectoral planning processes, such as those provided for by IOPs and SOFs, and should be used to inform environmental assessment and land-use decision-making.

2.4 **Before publication of the bioregional plan**

2.4.1 Section 48(1) provides that the NBF, a bioregional plan and a biodiversity management plan prepared in terms of Chapter 3 of the Biodiversity Act may not be in conflict with:

any EIP or EMP prepared in terms of Chapter 3 of NEMA;

any IOP adopted by municipalities in terms of the Municipal Systems Act;

any spatial development frameworks in terms of legislation regulating land use management, land development and spatial planning administered by the Cabinet member responsible for land affairs; and

- any other plans prepared in terms of national or provincial legislation that are affected including EMFs developed in terms of the EIA regulations.

2.4.2 This provision obviously requires *extensive* research and consultation in the preparatory stages of a bioregional plan to ensure that the *above* requirements are met.

2.4.3 All proposals for publication of bioregional plans must be accompanied by *evidence* that the provisions of all relevant EIPs, EMPs, IOP, spatial development frameworks and other plans *have* been

considered and that the proposed bioregional plan does not conflict with them. To assist in this process we describe below the essential elements of the abovementioned plans.

Environmental implementation or environmental management plans

2.4.4 Sections 11 to 13 of NEMA deal with EIPs and EMPs. ¹²

2.4.5 Every national department listed in Schedule 1 of NEMA which is considered to exercise functions which may affect the environment and every province must prepare an EIP every four years. ¹³

2.4.6 In addition, every national department listed in Schedule 2 which is considered to exercise functions involving the management of the environment must prepare an EMP every four years. ¹⁴

2.4.7 The purpose of EIPs and EMPs is to:

co-ordinate and harmonise the environmental policies, plans, programmes and decisions of the various national departments that exercise functions that may affect the environment or are entrusted with powers and duties aimed at the achievement, promotion, and protection of a sustainable environment, and of provincial and local spheres of government, in order to:

- o minimise the duplication of procedures and functions; and
 - o promote consistency in the exercise of functions that may affect the environment;
- give effect to the principle of co-operative government in Chapter 3 of the Constitution;

secure the protection of the environment across the country as a whole;

¹² The relevant authority co-coordinating these plans is the Chief Directorate of Environmental Impact Management and can be contacted at (012) 3103230.

¹³ Section 11(1) of NEMA.

¹⁴ Section 11(2) of NEMA.

- prevent unreasonable actions by provinces in respect of the environment that are prejudicial to the economic or health interests of other provinces or the country as a whole; and

enable the Minister to monitor the achievement, promotion, and protection of a sustainable environment. ¹⁵

2.4.8

Every environmental implementation plan must contain:

- a description of policies, plans and programmes that may significantly affect the *environment*;
- a description of the manner in which the *relevant* national department or province will ensure that the policies, plans and programmes referred to in paragraph (a) comply with the principles set out in section 2 as well as any national norms and standards as envisaged under section 146(2)(b)(i) of the Constitution and set out by the Minister, or by any other Minister, which *have* as their objective the achievement, promotion, and protection of the *environment*;
- a description of the manner in which the *relevant* national department or province will ensure that its functions are exercised so as to ensure compliance with *relevant* legislative provisions, including the principles set out in section 2, and any national norms and standards envisaged under section 146(2)(b)(i) of the Constitution and set out by the Minister, or by any other Minister, which *have* as their objective the achievement, promotion, and protection of the *environment*; and
- recommendations for the promotion of the objectives and plans for the implementation of the procedures and regulations referred to in Chapter 5 of NEMA. ¹⁶

Integrated development plans

¹⁵ Section 12 of NEMA.

¹⁶ Section 13 of NEMA.

2.4.9 Municipalities are the primary authorities in respect of land development and planning. Municipalities are required, in terms of the Municipal Systems Act, to prepare IOPs for their areas of jurisdiction.

2.4.10 The Municipal Systems Act specifically provides for integrated development planning and each municipal council is required to adopt an IOP for its municipality after the start of its elected term.¹⁷ As such IOPs are effectively prepared *every five* years. The IOP is the principal strategic planning instrument which guides and informs all planning and development, and all decisions with regard to planning, management and development, in the municipality. It also binds the municipality in the exercise of its executive authority and binds all other persons to the extent that those parts of the IOP that impose duties or affect the rights of such persons *have* been passed as a by-law.¹⁸ An IOP is required amongst other things to:¹⁹

- link, integrate and coordinate plans and take into account proposals for the development of the relevant municipality;
- align the resources and capacity of the municipality with the implementation of the IOP;
- form the policy framework on which annual municipal budgets should be based; and
- be compatible with national and provincial development plans and the planning requirements incumbent on municipalities.

2.4.11 One of the core components of an IOP is a SOF, which must also include basic guidelines for a land use management system for the

¹⁷ Municipal councils are elected for a period of *five* years in terms of section 24 of the Municipal Structures Act. The current municipal councils for each of the metropolitan, local and district councils in the Republic were required to have adopted an IOP by 31 March 2002, as prescribed in Government Notice R 459, *Government Gazette* 22328 of 25 May 2001 and thereafter within a year following the 2005 elections.

¹⁸ Section 35(1) of the Municipal Systems Act.

¹⁹ Section 25(1) of the Municipal Systems Act.

municipality.²⁰

2.4.12

The detailed requirements as to what such a SDF is required to reflect are contained in the Local Government: Municipal Planning and Performance Management Regulations²¹ published in terms of section 120 of the Municipal Systems Act. The Planning Regulations provide that the SDF must

- give effect to the principles contained in section 1 of the Development Facilitation Act, including encouraging environmentally sustainable land development practices and processes, and promoting sustained protection of the environment;
- set out objectives reflecting the desired spatial form of the municipality;

contain strategies and policies regarding the manner in which to achieve the desired spatial form, indicating the desired patterns of land use, addressing the spatial reconstruction of the municipality and providing strategic guidance in respect of the location and nature of development within the municipality;

- set out basic guidelines for a land use management system in the municipality;
- set out a capital investment framework for the municipality's development programmes;
- contain a strategic assessment of the environmental impact of the SDF;²²
- identify programmes and projects for the development of land within the municipality;

²⁰ Section 26(e) of the Municipal Systems Act.

²¹ Published under *Government Notice R 796, Government Gazette 22605* of 24 August 2001.

²² Once a bioregional plan has been drawn up this would obviously greatly assist a municipality in this assessment.

- be aligned with the SOFs reflected in the IOPs of neighbouring municipalities; and
- provide a visual representation of the desired spatial form of the municipality, indicating areas where public and private land development and infrastructure development should take place, desired or undesired utilisation of space in a particular area, the urban edge, areas where strategic intervention is required and areas where priority spending is required.

2.4.13 The SOF prevails *over* a plan in terms of the Physical Planning Act, 125 of 1991²³ which includes: a national development plan, regional development plan, regional structure plan and urban structure plan. Guide plans prepared in terms of the Physical Planning Act, 1967 may also be deemed to be plans in terms of the 1991 Act, the SOF would *have precedence over* such a plan as well.

Any national spatial development frameworks in terms of legislation regulating land use management

2.4.14 At present there are no such national spatial development frameworks which are not over ridden by the *relevant* IOP and local SDFs produced pursuant to the IOP preparation process.

2.4.15 The proposed Land Use Management Bill, 2001, would *provide* for such spatial development frameworks but after six years, has yet to progress significantly. It sets out a framework for the uniform regulation of land use management across the Republic, by rationalising the plans and schemes which must be prepared in each of the provinces and creating a uniform system for the consideration of applications to develop land. The Act is intended to repeal the Physical Planning Act, 1991, the remnants of the Physical Planning Act, 1967 and the Development Facilitation Act but is still in draft form.²⁴

²³ Section 35(2) of the Municipal Systems Act.

²⁴ Section 97 of the draft Land Use Management Bill.

- 2.4.16 The 2001 Land Use Management Bill sets out a number of Directive Principles which will bind all organs of state in all spheres of government ²⁵ in the passing of all provincial and local legislation and subordinate national legislation regulating spatial planning, land use management and land development, in the implementation of such legislation, in the adoption and implementation of provincial and municipal IDPs and generally in guiding their decisions and processes relating to spatial planning, land use management and land development processes. The general principle is that all spatial planning, land use management and land development must be sustainable, equal, efficient, integrated and based on fair governance."
- 2.4.17 If similar legislation is adopted spatial development frameworks which are enacted in terms of it should be consulted in the development of a bioregional plan.

OtherpJans

- 2.4.18 EMFs are published in terms of the EIA regulations which are published in terms of NEMA. Although they aren't called "plans" they are spatial in nature and are legally enforceable.
- 2.4.19 EMFs comprise information and maps which specify the attributes of the environment in particular geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes. ²⁷
- 2.4.20 Bioregional plans should not conflict with EMFs.
- 2.4.21 At present there are no other legally enforceable plans which are of relevance. Provinces may have provincial systematic biodiversity conservation plans which would form the basis of the development of bioregional plans but these are not in themselves legally enforceable.

²⁵ Section 10 of the draft Land Use Management Bill.

²⁶ Section 4 of the draft Land Use Management Bill.

²⁷ Regulation 69 of the EIA regulations read with section 24(3) of NEMA.

2.5 **After publication of the bioregion and bioregional plan**

2.5.1 After publication of a bioregional plan the plan becomes an entrenched part of the planning process and also to some extent form part of the land development approval process. We have discussed those who should refer to a bioregional plan in detail in Chapter 5. The discussion below should be read together with the discussion in Chapter 5 of the mandatory and recommended users of bioregional plans.

Mandatory use of a published bioregional plan

2.5.2 Section 48(2) of the Biodiversity Act provides that an organ of state that must prepare an EIP or EMP in terms of Chapter 3 of NEMA, and a municipality that must adopt an IDP in terms of the Municipal Systems Act must:

- align its plan with (...) any applicable bioregional plan;

incorporate into that plan those provisions of (...) a bioregional plan that specifically apply to it; and

demonstrate in its plan how (...) any applicable bioregional plan may be implemented by that organ of state or municipality.

2.5.3 In ensuring that IDPs (and SDFs) align with bioregional plans the following points are important:

IOPs identify priority projects for socio-economic development within a municipality. Where possible, these should include projects that contribute directly to the conservation, sustainable use and/or rehabilitation of biodiversity in critical biodiversity areas and/or critical ecosystem service areas.

The map of critical biodiversity areas and accompanying guidelines should be meaningfully incorporated into the SDFs of the local and

district municipalities it covers. The integrated map of planning zones or categories in the SDF should reflect the critical biodiversity areas in an appropriately restrictive planning zone or spatial category.

- 2.5.4 Pursuant to section 2 of NEMA the map and guidelines forming part of a bioregional plan should be referred to in all EIAs and should be consulted in the decision-making process for all land-use and environmental authorisations.

Recommended use of a published bioregional plan

- 2.5.5 EMFs

- As we set out above EMFs contain information and maps which specify the attributes of the environment in particular geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes. ²⁸

The map of critical biodiversity areas and accompanying guidelines in a published bioregional plan should be meaningfully incorporated in any EMFs *developed* for the area, as well as in any provincial maps developed to supplement the NEMA EIA regulations.

- 2.5.6 State of the Environment Reports

Biodiversity indicators identified in a bioregional plan must be incorporated into State of Environment Reports.

2.6 **The Role of SANBI in coordination and alignment**

SANBI has an important role in assisting with the process of aligning and coordinating bioregional plans with other plans.

- 2.6.1 In terms of section 48(3) of the Biodiversity Act SANBI may assist the Minister and others involved in the preparation of the NSF, a bioregional plan or a biodiversity management plan to ensure that the

²⁸ Regulation 69 of the EIA regulations read with section 24(3) of NEMA

plan is not in conflict with existing IOPs or other relevant plans; and

- 2.6.2 In addition, SANBI is specifically empowered in section 48(3) of the Biodiversity Act to make recommendations to organs of states or municipalities where a bioregional plan has been published to align their plans (such as their IOP or environmental implementation plan) with the bioregional plan.

2.7 **Conclusion regarding the mandatory coordination and alignment processes required of the Biodiversity Act**

- 2.7.1 Before publishing a bioregional plan the MEG or Minister must ensure that in the development process of the bioregional plan all relevant plans have been considered and the relevant municipality(ies) have been consulted to ensure that the bioregional plan does not conflict with the relevant existing plans.

- 2.7.2 Once a bioregional plan has been published, the relevant municipality(ies) and other plan developers must align their IOP(s), EMP(s) SDF(s), etc. with the bioregional plan.

- 2.7.3 The most important plan which those developing a bioregional plan must align and coordinate With, is the **IOP** and the SOF that forms part of the IOP. These are developed by municipalities and revised every five years or following municipal elections. Because organisational and staffing arrangements differ substantially from municipality to municipality, it is not possible to provide a blueprint for the form that municipal consultation should take. Before publishing a bioregional plan, the Minister or MEG needs to assess whether appropriate and sufficient consultation has taken place with the municipality concerned.

- 2.7.4 Two main scenarios are possible in relation to ensuring that a bioregional plan is not in conflict with IOPs and SOFs:

Scenario 1: A bioregional plan is prepared in a municipality in which:

- o there is an approved **IOP** and SOF;

a but a revision of the IDP and SOF is not yet underway.

Scenario 2: A bioregional plan is prepared in a municipality in which:

- a there is an approved IDP and SDF,
- a and a revision of the IOP and/or SDF is underway.

2.7.5

In Scenario 1:

The municipality must be consulted on the development of the bioregional plan before it is published. This may involve negotiated changes to the draft bioregional plan.

- The information about critical biodiversity areas provided by the bioregional plan is unlikely to have been available in a useful format during the development of the existing IDP and SDF. It is thus highly unlikely that the existing IOP and SDF will include the critical biodiversity areas reflected in the bioregional plan.
- Given that the information about critical biodiversity areas was not available when the IOP and SOF were developed, this non-inclusion of critical biodiversity areas in the IDP and SDF need not be seen as a conflict, as long as the municipality has been closely consulted on the bioregional plan.

2.7.6

In Scenario 2:

The municipality must be consulted on the development of the bioregional plan before it is published. This may involve negotiated changes to the draft bioregional plan.

Critical biodiversity areas identified in the bioregional plan must be meaningfully incorporated into the revised SDF.

- The IDP should identify projects that contribute directly to the conservation, sustainable use and/or rehabilitation of biodiversity in critical biodiversity areas and/or critical ecosystem service areas.

3. Conflict resolution

- 3.1 Any conflict arising out of the implementation of the Biodiversity Act must be resolved in terms of the provisions of NEMA.²⁹
- 3.2 Chapter 4 of NEMA deals with "*fair decision making and conflict resolution*" in respect of environmental decisions.
- 3.3 Provision is made for the referral of conflicts between decision makers (such as MECs, Municipal Councils and other national Ministers) regarding the protection of the environment to conciliation or arbitration.³⁰
- 3.4 NEMA also provides for the appointment of commissions by the Minister to assist a Municipal Councilor MEC or another national Minister in the evaluation of a matter relating to the protection of the environment by obtaining such information, whether documentary or oral, as is relevant to the evaluation.³¹
- 3.5 Any person may request a referral to conciliation but the decision maker is not obliged to agree to the request.³² In terms of section 22 of NEMA the decision whether or not to refer a dispute or disagreement to conciliation or arbitration in terms of NEMA must be made taking into account the desirability of resolving differences and disagreements speedily and cheaply; the desirability of giving indigent persons access to conflict resolution measures in the interest of the protection of the environment; the desirability of improving the quality of decision-making by giving interested and affected persons the opportunity to bring relevant information to the decision-making process; any representations made by persons interested in the matter; and such other considerations relating to the public interest as may be relevant.
- 3.6 Where the decision maker believes conciliation inappropriate or conciliation has failed, the decision maker is simply required to take the decision.³³

²⁹ Section 6(2) of the Biodiversity Act.

³⁰ Sections 17 and 1B of NEMA.

³¹ Section 20 of NEMA.

³² Section 17(2) of NEMA.

³³ Section 17(1)(f) of NEMA.

3.7 As such, the provisions of NEMA and the Biodiversity Act are not of significant assistance in resolving conflicts between the provisions of an existing plan such as an IDP and a proposed bioregional plan and negotiation and discussion are the best route to deal with such conflicts as may arise.

4. How bioregional plans relate to other tools in the Biodiversity Act

4.1 Bioregional plans are one of several legal tools introduced by the Biodiversity Act to facilitate the conservation and sustainable use of biodiversity. Others include:

4.1.1 The NBF;

4.1.2 Listing of threatened or protected ecosystems;

4.1,3 Listing of threatened or protected species; and

4.1.4 Biodiversity management plans for species or ecosystems.

4.2 Each of these tools is described briefly below, including its relationship to bioregional plans.

4.3 **National Biodiversity Framework**

4.3.1 The NBF, required in terms of Section 39 of the Biodiversity Act, is intended to provide for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, NGOs, the private sector, local communities, other stakeholders and the public.

4.3.2 The NBF is based on the National Biodiversity Strategy and Action Plan ("NBSAP"), finalised in May 2005 after a two-year development process. The NBSAP is a comprehensive twenty-year strategy for the conservation and sustainable use of South Africa's biodiversity. It identifies five Strategic Objectives ("SOs") for achieving the overall goal of conserving and managing terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to the people of South

Africa, now and in the future:

- 501: An enabling policy and legislative framework integrates biodiversity management objectives into the economy
- 502: Enhanced institutional effectiveness and efficiency ensures good governance in the biodiversity sector
- 503: Integrated terrestrial and aquatic management minimizes the impacts of threatening processes on biodiversity, enhances ecosystem services and improves social and economic security
- 504: Human development and well-being is enhanced through sustainable use of biological resources and equitable sharing of the benefits
- 505: A network of conservation areas conserves a representative sample of biodiversity and maintains key ecological processes across the landscape and seascape

4.3.3 For each of these five SOs, the NBF highlights priority actions for the next five years, with lead agents and targets. The NBF highlights 28 priority actions altogether.

4.3.4 One of the eight priority actions under SO 3 is to publish bioregional plans in terms of the Biodiversity Act. The target for 2012 is that at least seven bioregional plans have been published and are being used routinely to inform land-use planning and decision-making.

4.3.5 Bioregional plans are seen in the NBF as a key mechanism for achieving integrated management of terrestrial and freshwater ecosystems throughout the landscape, especially in geographic biodiversity priority areas that fall outside the protected area network.

4.4 Listing of threatened or protected ecosystems

4.4.1 Chapter 4 of the Biodiversity Act provides for listing of critically endangered, endangered, vulnerable or protected ecosystems. DEAT, with assistance from SANBI and provincial conservation authorities, has developed criteria for identifying ecosystems that should be listed and is in the process of identifying and mapping such ecosystems. An

initial list of ecosystems is likely to be published during 2007.

4.4.2 Ecosystems can be defined at varying spatial scales. Listed ecosystems will be identified and mapped at as fine a scale as possible, and will be limited to local-scale biodiversity features rather than landscape-scale features. In contrast, critical biodiversity areas identified in a bioregional plan will include both landscape-scale features and local-scale features (see Chapter 8). Threatened or protected ecosystems will thus make up a sub-set of critical biodiversity areas in a bioregional plan.

4.4.3 Ecosystems that have been listed must be identified as critical biodiversity areas in a bioregional plan. A bioregional plan may also identify further threatened or protected ecosystems, currently unlisted, that could be considered for future listing.

4.5 **Listing of threatened or protected species**

4.5.1 Chapter 4 of the Biodiversity Act provides for listing of critically endangered, endangered, vulnerable or protected species. Only species threatened by a narrow set of specified activities will be listed in terms of the Biodiversity Act. The IUCN Red Lists of threatened species, of which several have been published in South Africa, include species threatened by a much wider range of factors,

4.5.2 A bioregional plan may highlight the occurrence of threatened or protected species in the bioregion concerned, whether the species are Red Listed or listed in terms of the Biodiversity Act. The habitat of a listed species may be identified in a bioregional plan as a critical biodiversity area. A bioregional plan may highlight the occurrence of other species of special concern ³⁴ in addition to listed species.

4.5.3 Allied to the *above*, bioregional plans must take into account the Threatened or Protected Species Regulations developed in terms of the Biodiversity Act which will enter into force on 1 June 2007.

³⁴ Species of special concern can include threatened species, endemic species, rare species and useful species.

4.6 **Biodiversity Management Plans**

4.6.1 Chapter 3 of the Biodiversity Act provides for publishing biodiversity management plans for ecosystems, indigenous species or migratory species. Anyone may submit a draft biodiversity management plan to the Minister for approval. Norms and standards for biodiversity management plans for both species and ecosystems will be developed by DEAT.

4.6.2 A bioregional plan may recommend the development of biodiversity management plans for ecosystems identified as critical biodiversity areas in the plan, or for species of special concern identified in the plan.

4.7 **Other**

Bioregional plans must also consider other legal instruments developed in terms of the Biodiversity Act, such as, the Access and Benefit Sharing Regulations and Regulations Relating to Alien Species and Listed Invasive Species which are under development.

Summary of conflict and alignment of bioregional plans with other relevant plans and planning processes

Before publication of a bioregional plan

- Before publishing a bioregional plan the MEC or This Minister must ensure that the bioregional plan does not conflict with all relevant plans.
These include IDP(s) (and the related SDF) EIP(s), EMP (s), relevant EMF(s) and other plans developed in terms of national or provincial legislation.
- There should be consultation with relevant stakeholders in these plans to ensure that the bioregional plan does not conflict with the relevant existing plans.
- No blueprint can be provided for the nature of the consultation that must take place and full information on the consultation undertaken and the outcome of the consultation must be provided to the Minister or MEC.

After publication of a bioregional plan

The discussion in this Chapter must be read with Chapter 3 which sets out the mandatory and recommended users of bioregional plans

Once a bioregional plan has been published, the relevant municipality(ies), government departments and other plan developers must align their IDP(s) (and related SDF), EIP(s) and EMPs, etc. with the bioregional plan.

- In addition, Environmental decision-makers who are required by section 2 of NEMA to apply the NEMA section 2 principles in their decision-making should consider a published bioregional plan.

Bioregional plans should also relate to other tools in the Biodiversity Act including:

- The NBF;
Listing of threatened or protected ecosystems;
Listing of threatened or protected species; and
- Biodiversity management plans for species or ecosystems. (A bioregional plan may recommend the development of such plans).

Chapter 5: The consultative process required before declaring a bioregion or publishing a bioregional plan

1. It is important to note that although the Minister may act on his or her own initiative to declare a bioregion or publish a bioregional plan where the Minister does so it must be **after** consulting the MEC in the relevant province.
2. Comprehensive general consultative requirements are also set out in section 47 of the Biodiversity Act.
3. In terms of this section before the Minister may adopt or approve a bioregional plan or any amendment to such a plan, the Minister must follow a consultative process in accordance with sections 99 and 100.
4. In addition, before the MEC may adopt or approve a bioregional plan or any amendment to such a plan, the MEC must follow a consultative process in accordance with sections 99 and 100.
5. In this Guideline it is proposed that upon requesting the Minister's concurrence with a bioregional plan, the MEC should also request the Minister to conduct the consultative and public participation processes required by sections 99 and 100 jointly with the MEC to ensure an efficient process.
6. Section 99 is a general section that applies to a wide range of decisions taken in terms of the Biodiversity Act. It provides that where required (as is the case with section 47) the Minister (and also the MEC in the case of section 47) must follow "an appropriate consultative process in the circumstances". However this appropriate process must include:
 - 6.1 Consultation with all Cabinet members whose areas of responsibility may be affected by the exercise of the power;
 - 6.2 Consultation with the MEC for Environmental Affairs of each province that may be affected by the exercise of the power; and
 - 6.3 public participation process in accordance with section 100.

7. Section 100 provides that the Minister (and the MEC in the case of section 47) must give notice of the proposed exercise of the power:
 - 7.1 In the *Gazette*; and
 - 7.2 In at least one newspaper distributed nationally, or if the exercise of the power may affect only a specific area, in at least one newspaper distributed in that area,
8. The notice must invite members of the public to submit to the Minister (or MEC), within 30 days of publication of the notice in the *Gazette*, written representations on, or objections to, the proposed exercise of the power; and contain sufficient information to enable members of the public to submit meaningful representations or objections.
9. In addition, the Minister is empowered "in appropriate circumstances" to allow any interested person or community to present oral representations or objections to the Minister or a person designated by the Minister.
10. The Minister must give due consideration to all representations or objections received or presented before exercising the power.

Summary of consultation required by the Biodiversity Act

To approve a bioregional plan or an amendment to a bioregional plan, the Minister or MEC must follow a consultative process in terms of sections 47,99 and 100 of the Biodiversity Act.

This includes:

- Consultation with all Cabinet members whose areas of responsibility may be affected by the publishing and implementation of a bioregional plan.
 - Consultation with the relevant MEC of each province that may be affected.
- A notice in the *Government Gazette* and at least one newspaper, inviting members of the public to submit comments or objections within 30 days.
- Due consideration to all representations or objections received.

Chapter 6: Contents of a bioregional plan

1. Overview of contents

A published bioregional plan must include the following sections, each of which is discussed in more detail below:

- 1.1 Part A: Introduction and objectives, including details of the bioregion boundary
- 1.2 Part B: Biodiversity profile of the region, highlighting its biodiversity significance, and descriptions of the biodiversity features shown on the map
- 1.3 Part C: Map of critical biodiversity areas, based on a systematic biodiversity plan
- 1.4 Part D: Guidelines for land-use planning and decision-making, linked to the critical biodiversity areas on the map
- 1.5 Part E: Other measures for effective management of biodiversity in the area, where necessary
- 1.6 Part F: Instructions for how the plan must be monitored, reviewed and updated, and how its implementation must be assessed
- 1.7 Part G: GIS files for the map of critical biodiversity areas and any other maps included in the bioregional plan.

Parts A to F form a single bioregional plan report which must be submitted to the MEC or Minister, along with other required documents (see Chapter 7).

2. Detailed discussion of each part of the contents of the bioregional plan

- 2.1 Part A. Introduction and objectives, including identification of the boundary of the bioregion

The introduction to the plan must:

- 2.1.1 Explain the purpose and objectives of the plan, i.e. to enable the incorporation of biodiversity considerations in land-use planning and decision-making, in order to avoid loss and degradation of the natural habitat in critical biodiversity areas.

- 2.1.2 Highlight the obligations of all organs of state to take biodiversity considerations into account in terms of NEMA.
- 2.1.3 Explain who the intended users of the plan are.
- 2.1.4 Emphasise that the plan is the official reference for biodiversity priorities to be taken into account in land-use planning and decision-making by all sectors.
- 2.1.5 Give a brief description of what the plan can and cannot do, including any highlights about the strengths and weaknesses of this particular plan.
- 2.1.6 State the area of the bioregion which it covers i.e. which district, metropolitan and/or local municipalities it covers (see Chapter 1 above for the approach to follow to determine the boundary of a bioregion).
- 2.1.7 State whether it replaces any previous published bioregional plan(s) for any of the municipalities it covers.
- 2.1.8 State on which systematic biodiversity plan(s) it is based, including when and by whom the systematic biodiversity plan was undertaken, with relevant contact details.
- 2.1.9 Give full references for the technical reports that describe the methodology and techniques used in the relevant systematic biodiversity plan(s).
- 2.1.10 Explain how the plan is consistent with NEMA principles, the Biodiversity Act, the NBF and relevant international agreements.
- 2.1.11 Explain how the plan supports the principles of integrated development planning and sustainable development, and how it does not conflict with IOPs and SOFs in the region concerned or other relevant plans such as EIPs and EMPs.

2.2 **Part B: Biodiversity profile and descriptions**

2.2.1 This section of the plan must begin with a brief overview of the regional, national and global significance of biodiversity in the bioregion. It must:

deal with the most important biodiversity characteristics only, and be brief (for example, the top ten highlights in at most one page);

refer people to more detailed sources if these are available.

2.2.2 In addition, this section of the plan must include descriptions of:

- All categories shown on the map legend (see Part C below), particularly the protected areas and the critical biodiversity areas;
- Any additional biodiversity features shown on the map, for example as part of the context information (see Part C below).

2.2.3 The plan may also include descriptions of the following biodiversity characteristics or features:

- Vegetation types or groups in the area;

Important aquatic features in the area;

- Any individual features on the map(s) that are of such significance for land-use planning and decision-making that users' attention should be drawn to them (for example, a specific ecological corridor, specific key sites, a pristine estuary, a major wetland system);

Any additional biodiversity features that are not displayed on the map(s) but are nevertheless significant for guiding land-use planning and decision-making, for example, species of special concern that occur in the area.

- 2.2.4 The descriptions should be simple, so that they can be understood by a layperson not familiar with biodiversity or ecology. The descriptions should aim to:
- capture some of the rich knowledge of the area's biodiversity held by experts and make it accessible and meaningful to the users of a bioregional plan;
 - explain what the categories on the map consist of or what the individual features are;
- explain briefly why each category or individual feature is important, preferably from the point of view of human well-being.
- 2.2.5 This section must highlight the major land-use and resource-use pressures in the critical biodiversity areas. These can be listed as bullet points - there is no need for great detail.
- 2.2.6 This section may highlight specific areas or sites where there are unresolved conflicts between biodiversity priorities and other competing land uses or resource uses (for example, conflict between specific areas of coastal habitat and coastal development pressures).
- 2.3 Part C: Map of critical biodiversity areas, based on a systematic biodiversity plan
- 2.3.1 The plan must include a map of critical biodiversity areas. All critical biodiversity areas should be represented on a single map (there may be unusual instances in which this is not possible). The identification of critical biodiversity areas must be based on a "systematic biodiversity plan", described further in Chapter 2. These critical biodiversity areas need to be maintained in a natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. Maintaining an area in a natural state can include biodiversity-compatible land uses and resource uses.
- 2.3.2 In addition to the map of critical biodiversity areas, the plan may

include a **map of critical ecosystem service areas**, Critical ecosystem service areas are areas that are not essential for meeting biodiversity targets but which nevertheless play an important role in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas.

2.3.3 Additional maps that provide background information, such as a vegetation map and maps of other biodiversity features, may be included in the plan.

2.3.4 What categories and features should the map(s) show?

Based on such a systematic biodiversity plan, a map that clearly identifies the following four major categories must be developed:

Protected areas

- o Areas that have been proclaimed in terms of the Protected Areas Act and are included in the national protected areas register (these include privately owned contract nature reserves);
- o Special protected forest areas declared in terms of the National Forest Act;³⁵
- o Areas that are in the process of being proclaimed if there is high certainty that the proclamation will occur.

Note: Areas under voluntary conservation agreements for which there is no long-term security, such as conservancies, must *not* be shown as protected areas, but may be shown as context information (see below).

- **Critical biodiversity areas.** This category may include several sub-categories, such as:

³⁵ Act 84 of 1998

- o irreplaceable sites
- o important sites
- o terrestrial ecological corridors
- o aquatic ecological corridors
- o special habitats
- o critical wetlands
- o critical estuaries
- o critical sub-catchments
- o critically endangered ecosystems *
- o endangered ecosystems *

Note that this is not an exhaustive list of possible sub-categories of critical biodiversity areas.

* These terms must be reserved for ecosystems whose status has been assessed using the criteria developed for identifying threatened ecosystems in terms of the Biodiversity Act. The ecosystems need not be formally listed when the plan is drawn up, but must be identified using the criteria developed for listing of ecosystems in terms of the Biodiversity Act.

Other natural areas. These areas are still subject to the usual authorisation procedures, e.g. EIAs, and still require a site visit to ensure the absence of important biodiversity features before any environmental authorisation in terms of NEMA is given.

Areas where no natural habitat remains. These areas include cultivated areas, afforested areas, mined areas, urban areas, and areas under coastal development.

If there is a separate map showing critical ecosystem service areas, it could also include a number of sub-categories, such as:

- o Primary water production areas
- o Groundwater recharge zones
- o All wetlands
- o All estuaries

- In addition, the map of critical biodiversity areas and the map of critical ecosystem service areas (if included) may include **context information**, for example:
 - o Features included for orientation, such as towns, roads, administrative boundaries, and cadastral boundaries (recommended)
 - o Labels for rivers and protected areas (recommended)
 - o Areas under voluntary conservation agreements with no long-term security, such as conservancies
 - o Other significant natural sites or features, such as Natural Heritage sites or natural sites that are of cultural significance, if spatial information is available for these
 - o Degraded areas of natural habitat, if these have been identified

Additional features, such as vegetation types, may be shown in accompanying background maps.

2.3.5 What colours should be used?

The following approach should be applied to the use of colour:

Protected areas should be shown in dark green.

- Areas where no natural habitat remains should be shown in white or pale grey.

Other biodiversity features should, where possible, be shown in colours that reflect any existing general norms for mapping (such as showing rivers and wetlands in shades of blue), or that are linked to their colour(s) in nature. This makes visual interpretation of the map(s) easier.

In general, garish, unnatural colours or shades should be avoided in favour of colours or shades that are found in nature.

2.3.6 How to deal with overlapping systematic biodiversity plans in the area for which the bioregional plan is being prepared

- In some cases systematic biodiversity plans do not align with administrative boundaries. This can result in overlapping systematic biodiversity plans, which identify different biodiversity priorities for the same region. If more than one systematic biodiversity plan has been undertaken for a particular area, a published bioregional plan for that area must integrate information from all available systematic biodiversity plans, as long as they are current and meet the other criteria listed *above* (e.g. with respect to scale)." SANSI will advise on the most appropriate methods and techniques for integrating overlapping systematic biodiversity plans.
- The trend in South Africa is increasingly for the planning domains of systematic biodiversity plans to align with administrative boundaries, which is technically feasible without compromising the integrity of the plan from an ecological point of *view*. The problem of overlapping systematic biodiversity plans is thus not a growing one.

2.4 Part D. Guidelines for land-use planning and decision-making

2.4.1 For each category shown on the map of critical biodiversity areas and the map of critical ecosystem service areas (if applicable), the plan must provide guidelines for land-use planning and decision-making. These guidelines are considered measures for the effective management of biodiversity and the components of biodiversity in the region, as required in Section 41 (a) of the Biodiversity Act.

2.4.2 A matrix approach is suggested," as illustrated in the table below:

³⁶ For example, the Little Karoo in the Western Gape is characterised by a combination of fynbos, succulent karoo, and thicket *vegetation*, and thus formed part of the G.A.P.E., SKEP and STEP planning domains. The CAPE plan identified fynbos priority areas, the SKEP plan identified succulent karoo priority areas, and the STEP plan identified thicket priority areas. A published bioregional plan for the Little Karoo would need to integrate priority areas for fynbos, succulent karoo and thicket into a single set of critical biodiversity areas. (The spatial scale of the GAPE and SKEP plans is *too* broad to provide the basis for published bioregional plans, so this is simply a hypothetical example.)

³⁷ Rapid advances are being made in the development of land-use planning and decision-making guidelines linked to biodiversity priority areas identified in a systematic biodiversity plan. The

Table 1: Illustrative matrix of compatible and incompatible land uses

	Categories of biodiversity significance			
	Protected areas	Critical biodiversity areas	Other natural areas	No natural habitat remaining
Land-use category 1 (greatest impact on biodiversity)	x	x	x	✓
Land-use category 2	x	x	x	✓
Land-use category 3	x	x	?	✓
Land-use category 4	x	?	✓	✓
Land-use category 5	?	✓	✓	✓
Land-use category 6 (lowest impact on biodiversity)	✓	✓	✓	✓

2.4.3 The number of land-use categories and their names will vary depending on both the ecology and the nature of land use in the area concerned. The plan must include a description of each land-use category, giving examples of the kinds of land uses it includes.

2.4.4 The focus of the guidelines should be on guiding development to avoid or minimise biodiversity impacts, especially in critical biodiversity areas. The degree of biodiversity impact of a particular land use is context specific. However, in general, land uses that result in irreversible loss of natural habitat (such as cultivation, afforestation, urban development, mining) have the highest impact on biodiversity, and land uses that allow for natural habitat to remain intact (such as appropriately managed grazing by either livestock or game,

developers of bioregional plans are welcome to consult SANSI for advice on improvements on this matrix approach, which are likely to emerge.

sustainable harvesting of natural products from the wild), have the lowest impact on biodiversity.

2.4.5 In addition, the plan may give specific recommendations for particular sites that are indicated on the map, for example, management guidelines for an aquatic ecological corridor that requires urgent restoration, or for municipal commonage that has been identified as a critical biodiversity area.

2.4.6 Note that guidelines for land-use planning and decision-making need to be specific to the ecological context. For example, guidelines for critical biodiversity areas in the fynbos biome are likely to differ from guidelines for critical biodiversity areas in the grassland biome. While there may be some similarities across different ecological contexts, it is not possible to develop generic land-use planning and decision-making guidelines for critical biodiversity areas across the country.

2.5 Part E. Other measures for effective management of biodiversity in the bioregion

2.5.1 In addition to guidelines for land-use planning and decision-making, the plan may identify other measures required to manage biodiversity effectively, for example:

Recommendations for clearing of invasive aliens in particular critical biodiversity areas, if appropriate;

- Recommendations about which ecosystems and species need biodiversity management plans;
- Five-year targets for expansion of protected areas (ideally these should align directly with targets in the relevant provincial protected area expansion plan, as long as it too was based on a systematic biodiversity plan);

Recommendations for the spatial focus of LandCare, CoastCare, Working for Water, Working for Wetlands and other relevant programmes;

Identification of areas that are priorities for rehabilitation and restoration.

2.5.2 The map(s) may be used for identifying opportunities for sustainable development and livelihoods linked to biodiversity conservation, such as ecotourism, natural resource harvesting, payment for ecosystem services, and poverty relief through the expanded public works programme.

2.6 **Part F. How the plan must be monitored, reviewed and amended**

2.6.1 This section must identify a **lead implementing agency** that will be responsible for overseeing implementation and review of the plan, including:

its application in land-use planning and decision-making;

revision and amendment of the underlying systematic biodiversity plan at least every five years;

- an update of the published bioregional plan at least every five years.

2.6.2 This lead implementing agency is likely to be the relevant provincial conservation authority or environmental affairs department.

2.6.3 This section must also identify **indicators** that can be used to determine whether the objectives of the plan are being met.

2.6.4 Recommended indicators include the following:

How much natural habitat has been lost in critical biodiversity areas (numbers of hectares and proportion);

- Present ecological state and management class of aquatic critical biodiversity areas, and change in these if applicable;
- Change in the extent to which critical biodiversity areas are formally protected (change in numbers of hectares and change in proportion);

Number of biodiversity management plans published for specific ecosystems and/or species within the area, if such biodiversity management plans were recommended in the bioregional plan.

2.6.5 SANBI is developing a National Biodiversity Monitoring and Reporting Framework. This framework will give further guidance on indicators for monitoring the implementation of bioregional plans. Indicators used in bioregional plans must feed into relevant headline indicators in the National Biodiversity Monitoring and Reporting Framework.

2.6.6 Indicators identified in bioregional plans can be incorporated into State of Environment Reports and Environmental Management and/or Implementation Plans.

2.7 **Part G. GIS data**

2.7.1 The map(s) published as part of the plan must be made available in shapefile format to all users on a CD accompanying the plan. The GIS layers and accompanying metadata must be compiled in accordance with the standards set by SANBI's Biodiversity GIS Unit (BGIS). These standards are available at <http://Ubgis.sanbi.org>.

3. What the bioregional plan must *not* include

3.1 A published bioregional plan must not include:

3.1.1 A detailed description of the **methodology and techniques** used in the systematic biodiversity plan on which the bioregional plan is based (these must be available in the technical report for the systematic

biodiversity plan, the full reference for which must be given in the introduction to the bioregional plan (Part A));

3.1.2

An action plan for biodiversity conservation and management in the area. Such an action plan may have been developed during the systematic biodiversity planning process, and can be a key tool for achieving effective management of biodiversity in the area. However, an action plan is a working plan that is likely to require adaptation and review on a much more frequent basis than every five years, and is thus not appropriate for publishing as a legal document.

Summary of the contents of a bioregional plan

A bioregional plan must include:

- An introduction, including purpose and objectives of the plan and determination of the boundary
- Biodiversity profile, highlighting the regional, national and global significance of biodiversity in the bioregion
- Map of critical biodiversity areas
 - o Based on a systematic biodiversity assessment
 - o Using most accurate, up-to-date data available and appropriate assessment techniques
 - o Including terrestrial and aquatic features
 - o Identifying explicit ecological corridors
 - o At an appropriate scale for informing land-use planning and decision-making

Map of critical biodiversity areas must show four main categories

- o Existing protected areas
- o Critical biodiversity areas, for example ecological corridors, special habitats, critical wetlands, critical sub-catchments, threatened ecosystems
- o Other natural habitat
- o Areas where no natural habitat remains

Descriptions of the critical biodiversity areas

Guidelines for land-use planning and decision-making, linked to the critical biodiversity areas

- Instructions about how the plan must be monitored, reviewed and amended, including identification of a lead implementing agency and indicators
- GIS data and metadata, compiled according to BGIS standards

In addition, a bioregional plan may include:

- A map of critical ecosystem service areas
- Guidelines for land-use planning and decision-making linked to the critical ecosystem service areas
- Other measures for effective management of biodiversity in the bioregion

Chapter 7: The process to be followed to develop a bioregional plan for a proposed bioregion and the submission to the Minister or MEC

1. Who should propose a bioregion and develop a bioregional plan?

1.1 In general, the provincial conservation authority or environment affairs department ("the relevant provincial authority")³⁸ will initiate the process of declaring a bioregion, co-ordinate the development of the bioregional plan, and submit the final draft plan to the MEC to be published once the MEC has obtained the concurrence of the Minister.

1.2 However, if another organisation or agency (such as an NGO or a municipality) wishes to develop a bioregion and bioregional plan, this can be done but there should be close collaboration with the relevant provincial authority.

1.3 If a bioregion falls within a province or covers one province, the bioregional plan should in general be submitted to the relevant MEC rather than the Minister. The MEC will publish the plan with the concurrence of the Minister.

1.4 If a bioregion straddles two provinces, then both provincial authorities must be involved, and both MECs must jointly submit the bioregional plan to the Minister.

1.5 Before submitting the plan to the MEC or Minister, the relevant provincial authority or other relevant party must take appropriate steps to ensure that the

³⁸ Different provinces *have* different arrangements for carrying out their conservation function. KZN and the Western Cape *have* provincial conservation agencies that have a mandate to work throughout the province, not just in protected areas. Free State, Gauteng, Limpopo and the Northern Cape *have* the conservation function integrated in the provincial environment affairs department. The Eastern Cape, Mpumalanga and North West Province *have* provincial parks agencies or parks boards that *have* a mandate to work only in protected areas, with the provincial environment affairs department carrying out the conservation function in the rest of the province. Provincial parks agencies or boards do not always fall under the provincial environment affairs department but can fall under economic affairs or tourism. This means that in some cases there are two MECs concerned with conservation issues in a province. In such cases, the respective roles of the provincial parks agency or board and the provincial environment affairs department in relation to the development of a bioregional plan needs to be determined on a case by case basis. It must however be borne in mind that the Biodiversity Act gives the MEC "for environmental affairs" in the province the responsibility for publishing bioregional plans and undertaking the other functions outlined in the Biodiversity Act.

bioregional plan is not in conflict with the IOP(s) and other relevant plans (as discussed in Chapter 4). These steps must include appropriate consultation with all affected municipalities. ³⁹

2. Step-by-step guide

Step 1. Alert the Minister or relevant MEC of the intention to develop a bioregion and a bioregional plan

In general it is preferable for the bioregional plan to be published at the same time as the bioregion is declared.

A letter should be addressed to the Minister or the relevant MEC of the intention to develop a bioregional plan for a bioregion. If no response is received from the Minister or MEC within 30 days, assume that the development of such a plan will be of assistance to the Minister or MEC for the purposes of section 40(4) of the Biodiversity Act.

Step 2. Prepare a draft bioregion and bioregional plan based on a systematic biodiversity plan

On the basis of the systematic biodiversity plan (see Chapter 2), develop a draft bioregional plan according to content guidelines in Chapter 6 above, with advice from SANBI if necessary. The relevant provincial authority must be involved in this process.

In addition, relevant stakeholders must be involved in this process. The relevant provincial authority must identify these stakeholders and the extent to which they should be involved.

Step 3. Coordination and alignment of the draft plan

Consider all relevant EIPs or EMPs prepared in terms of Chapter 3 of NEMA; any IOP or SOF adopted by an affected municipality; any spatial development frameworks in

³⁹ As is discussed in Chapter 6, because organisational and staffing arrangements differ substantially from municipality to municipality, it is not possible to provide a blueprint for the form that this municipal consultation should take. Before publishing a bioregional plan, the Minister or MEC needs to assess whether appropriate and sufficient consultation has taken place with the municipalities concerned.

terms of legislation regulating land-use management, land development and spatial planning administered by the Cabinet member responsible for land affairs; and any other plans prepared in terms of national or provincial legislation that are affected, such as any EMF. The results of this consideration and any consultative processes undertaken should be set out in detail in a Process and Consultation Report that is submitted with the bioregional plan, which explicitly addresses the requirement that the bioregional plan is not in conflict with any of the above plans or frameworks.

Step 4. Submit the draft bioregion and bioregional plan to SANSI for review

Submit the draft bioregion and bioregional plan for review by the Sioregional Plan Review Panel established and chaired by SANSI.^{4D} SANSI will endeavour to respond within three months. The Review Panel will compile a brief report on its assessment of the technical merits of the bioregional plan, which should be submitted to the MEC or Minister along with the final draft of the bioregional plan. SANSI will provide a unique number for the bioregional plan.

The Review Panel may require changes to be made to the draft plan in order for it to meet the technical requirements set out in this Guideline. In such a case the draft plan must be re-submitted to SANSI after the changes required by the Review Panel have been made. At least two members of the initial Review Panel will then reconsider the amended draft plan and update the Review Panel's report.

Step 5. Finalise the draft bioregion and bioregional plan

Based on feedback from SANSI and, if necessary, further discussion about the bioregion and plan within the bioregion or province, finalise the draft bioregional plan.

Step 6. Submit the proposed bioregion and bioregional plan to the MEC or Minister

A draft of the government notice declaring the bioregion and the plan should be submitted for the Minister or MEC's consideration. In respect of the bioregion the

^{4D} The Bioregional Plan Review Panel will be composed on an *ad hoc* basis by SANBI and will consist of between three and seven experts in the field of biodiversity planning. The main function of the Bioregional Plan Review Panel will be to consider the technical merits of any proposed bioregional plan and to consider whether the proposed bioregional plan conforms to the requirements set out in this Guideline.

draft notice should set out details of the municipal areas which the bioregion covers, including a map of the boundary, and if necessary provide coordinates or such other detailed information required for the bioregion to be clearly identified.

In respect of the bioregional plan a reference to the unique number of the bioregional plan provided by SANBI must be published. The complete plan will be accessible through this unique number at the registry of published plans maintained by SANBI and available on the BGIS website (<http://bgis.sanbi.org>).

The following must be submitted to the Minister or MEC:

A draft of the government notice to be published in the *Government Gazette*, including a map of the bioregion boundary and a reference to the unique number of the bioregional plan provided by SANBI;

A hard copy of the full bioregional plan (the report containing Parts A to F);

- An A3 size (minimum) colour hard copy of the map of critical biodiversity areas;
- A CD with the GIS files for the map(s) included in the bioregional plan;
- A Process and Consultation report showing how the bioregional plan is not in conflict with IOPs, SDFs and other relevant plans in the area and the consultation undertaken regarding the bioregional plan; and

The letter from the Bioregional Plan Review Panel confirming that the technical aspects of the bioregional plan conform to this Guideline.

Summary of the process of developing a bioregional plan and submitting it to the
Minister or MEC

- In general, the provincial conservation authority or environment affairs department will initiate the process of declaring a bioregion, co-ordinate the development of the bioregional plan, and submit the final draft plan to the Minister or MEC to be published.
- If the bioregion falls within a single province, it should be submitted to the MEC rather than the Minister.
- Before submitting the plan to the MEC or Minister, the provincial conservation authority and/or environment affairs department or other relevant party must take appropriate steps to ensure that the bioregional plan is not in conflict with the IDP(s), SDF(s) and other relevant plans. These steps must include appropriate consultation with all affected municipalities.

Step-by-step guide

- Step 1: Alert the Minister or relevant MEC of the intention to develop a bioregion and a bioregional plan.
- Step 2: Prepare a draft bioregion and bioregional plan based on a systematic biodiversity plan.
- Step 3: Consider all relevant IOPs, SDFs, EIPs, EMPs and other relevant plans including any EMF, and draw up a report to be submitted with the bioregional plan, which explicitly addresses the requirement that the bioregional plan is not in conflict with any of the above plans or frameworks.

Step 4: Submit the draft bioregion and bioregional plan to SANBI for review by the Bioregional Plan Review Panel, which will provide a written assessment of the technical merits of the bioregional plan.

Step 5: Finalise the draft bioregion and bioregional plan.

Step 6: Submit the proposed bioregion and bioregional plan to the MEC or Minister.

The following must be submitted to the MEC or Minister:

A draft of the government notice to be published in the *Government Gazette*, including a map of the bioregion boundary and a reference to the unique number of the bioregional plan provided by SANBI.

- An A3 size (minimum) colour hard copy of the map of critical biodiversity areas;
A CD with the GIS files for the map(s) included in the bioregional plan;
- A Process and Consultation report showing how the bioregional plan is not in conflict with IDPs, SDFs and other relevant plans in the area and the consultation undertaken regarding the bioregional plan; and
- The letter from the Bioregional Plan Review Panel confirming that the technical aspects of the bioregional plan conform to this Guideline.

Chapter 8: The procedure to be followed by the Minister and MEC following submission and publication of the bioregional plan

1. Introduction

The procedures to be followed by the MEC and the Minister are different. The MEG may not act without the concurrence of the Minister. The Minister is responsible for consultation and conducting the prescribed public participation procedures before giving his or her concurrence to a plan proposed by an MEG or when conducting a publication process of their own initiative. The MEG also has his or her own responsibility for consultation and public participation.

2. Procedure to be followed by MEG

Step 1. Consider the proposed bioregion and plan to determine whether it conforms to this Guideline

The MEC before considering a proposed bioregion and plan should determine whether the plan has been assessed by the Bioregional Plan Review Panel and determine whether it conforms to this Guideline. If necessary the MEG should consult SANSI before considering the bioregion or plan further

Step 2. MEC to refer the bioregion and plan to the Minister for concurrence

The MEG may only declare a bioregion or publish a plan with the concurrence of the Minister. The Minister is required to conduct a consultative and public participation process prior to concurring with any bioregion or plan. The MEG should request the Minister to conduct any such process jointly with the MEG as the MEG is also required by section 47 of the Biodiversity Act to conduct such a process before adopting a bioregional plan.

Step 3: MEC to publish bioregion and plan

Once the Minister has conducted the consultative procedures required and concurred with the bioregion and plan the MEC may, if he or she considers the consultative and public participation process conducted by the Minister to have met the requirements

of sections 99 and 100, publish the details of the bioregion and the bioregional plan in the *Provincial Gazette*.

Prior to publishing the bioregional plan the MEG should send SANBI a copy of the final plan to be published for SANBI to update their records and confirm that the unique number for the plan in the SANBI registry is the same as the reference number to be published.

The publication of the bioregion should set out details of the municipal areas which it covers including a map of the boundary, and if necessary provide coordinates or such other detailed information required for the bioregion to be clearly identified..

Step 4. Monitor implementation of the plan

The lead implementing agency identified in the bioregional plan, usually the relevant provincial authority, must monitor implementation of the plan according to arrangements laid out in Part F of the plan.

Step 5. Review and amending the plan after five years

The provincial conservation authority must coordinate the process of reviewing and amending the plan after five years, with support from SANSI. They must also submit an implementation progress report and amended plan to the MEG.

The MEG must obtain the Minister's concurrence to any amendments which he or she wishes to make to the plan. The Minister must follow the consultation and public participation processes required by sections 99 and 100 of the Biodiversity Act before agreeing to the amended plan. The MEC should request the Minister to conduct any such process jointly with the MEG as the MEG is also required by section 47 of the Biodiversity Act to conduct such a process before adopting a bioregional plan.

Once the MEG has the Minister's concurrence reference to an amended plan may be published in the *Government Gazette*.

Prior to publishing the amended bioregional plan the MEC should send SANSI a copy of the final amended plan to be published and request SANSI to provide a unique

number for the amended plan in the SANBI registry to be included in the notice of publication.

3. Procedure to be followed by the Minister

Step 1. Consider the plan and whether it conforms to this Guideline

The Minister should consult SANBI before considering a bioregion or plan to determine whether the bioregion or plan has been assessed by the Bioregional Plan Review Panel and conforms to this Guideline.

Step 2. Conduct consultation and public participation process

The Minister must consult with the persons listed in section 99 and conduct the public participation process required by section 100 of the Act. The Biodiversity Act requires a 30-day comment period during which anyone may submit written comments on the proposed bioregional plan. In addition, the Minister may allow for oral representations and objections to be presented.

In addition, the Minister must ensure that he or she consults with the MEC for Environmental Affairs in the relevant province. (Section 40(2)).

Step 3. Amend the bioregion and plan based on public comments

The Minister must review and consider all comments received and amend the plan as appropriate. In cases where comments received relate to or impact on scientific or ecological aspects of the bioregional plan, the Minister may request SANBI's advice on appropriate amendments to the plan.

Step 4. Ensure the coordination and alignment of the amended bioregion or plan

The amended plan must be considered to ensure that it does not conflict with any EIPs or EMPs prepared in terms of Chapter 3 of NEMA; any IDP adopted by an affected municipality; any spatial development frameworks in terms of legislation regulating land-use management, land development and spatial planning administered by the Cabinet member responsible for land affairs; and any other plans

prepared in terms of national or provincial legislation that are affected including EMFs. The Minister may wish to consult SANSI regarding this step.

Step 5: Give concurrence or declare a bioregion and publish the bioregional plan

Once the Minister has conducted the consultative procedures and other procedures required the Minister may give his or her concurrence to a plan proposed by an MEG or publish the details of the bioregion and the bioregional plan in the *Government Gazette*.

Prior to publishing the bioregional plan the Minister should send SANSI a copy of the final plan to be published for SANSI, to update their records and confirm that the unique number for the plan in the SANSI registry is the same as the reference number to be published.

The publication of the bioregion should set out details of the municipal areas which it covers including a map of the boundary, and if necessary provide coordinates or such other detailed information required for the bioregion to be clearly identified.

Step 6. Monitor implementation of the plan

The lead implementing agency identified in the bioregional plan, usually the relevant provincial authority, must monitor implementation of the plan according to arrangements laid out in Section F of the plan.

Step 7. Review and amending the plan after five years

The relevant provincial authority must coordinate the process of reviewing and amending the plan after five years, with support from SANSI. They must also submit an implementation progress report and amended plan to the Minister.

The Minister will consider the report and determines whether publication of a revised plan (and bioregional boundaries) is necessary.

If the Minister wishes to amend the bioregional plan, the Minister must consult with the persons listed in section 99 and conduct the public participation process required by section 100 of the Act. The Biodiversity Act requires a 3D-day comment period during which anyone may submit written comments on the amended bioregional plan. In addition, the Minister may allow for oral representations and objections to be presented.

The Minister must review and consider all comments received and amend the plan as appropriate.

The amended plan must be published in the *Government Gazette*.

Prior to publishing the amended bioregional plan, the Minister should send SANSI a copy of the final amended plan to be published and request SANBI to provide a unique reference number for the plan in the SANSI registry to be included in the notice of publication.

Chapter 9: SANBI's role with respect to bioregions and bioregional plans

1. In terms of Chapter 2 of the Biodiversity Act SANBI must, on the Minister's request, assist him or her with the identification of bioregions and contents of any bioregional plan and other aspects of bioregional planning.
2. SANSI has an important role in assisting with the process of aligning and coordinating bioregional plans with other plans.
 - 2.1 In terms of section 48(3) SANBI may assist the Minister, and others involved in the preparation of the NSF, a bioregional plan or a biodiversity management plan bring the plan into alignment with exiting IOPs; and
 - 2.2 In addition, SANSI is specifically empowered in section 48(3) of the Biodiversity Act to make recommendations to organs of state or municipalities where a bioregional plan has been published to align their plans (such as their IDP or environmental implementation plan) with the bioregional plan.
3. The Minister has requested SANSI to assist provinces, bioregional programmes and others with *delimiting bioregions and publishing bioregional plans*.
4. In addition to this general assistance SANSI is in a position to provide the following specific support to the bioregional planning process:
 - 4.1 Maintain a registry of all declared bioregions and published bioregional plans, assign a registry number to all bioregional plans prior to publication in the National or Provincial *Government Gazette*.
 - 4.2 Establishing and coordinating the activities of the Bioregional Plan Review Panel referred to in this Guideline.
 - 4.3 Technical support and advice on the systematic biodiversity plans on which bioregional plans are based.
 - 4.4 Technical support and advice to provincial conservation agencies, provincial environment affairs departments, municipalities, consultants, and any other organisations and individuals involved in the development and submission of

bioregional plans.

- 4.5 Reviewing draft bioregional plans before they are submitted to the MEC or Minister.
- 4.6 Advising the MEC or Minister on whether submitted bioregional plans are consistent with the approach set out in this Guideline.
- 4.7 Acting as a clearing house for bioregional plans and maintaining a registry of bioregional plans, thereby ensuring that there is not more than one current published plan for any area.
- 4.8 Making all published bioregional plans available to the public via the SGIS website or on CD (<http://Ubgis.sanbLorg>).
- 4.9 Liaising with affected municipalities regarding making the bioregional plan available on the municipality website and in the municipal offices, and assisting with alignment of the municipality's IDP and SDF with the bioregional plan.
- 4.10 Advising the MEC or Minister on the five-yearly review of published bioregional plans.
- 4.11 Providing opportunities for those involved in developing and publishing bioregional plans to share lessons and experiences.
- 4.12 Referring users of bioregional plans to appropriate sources of support in the interpretation and application of a particular bioregional plan.

Useful contacts in SANBI

SANSI Pretoria: 012 843 5000

SANSI Kirstenbosch: 021 7998800

BGIS: 021 7998871; bgishelp@sanbLorg

Advice and support on systematic biodiversity planning:

Biodiversity Planning Unit, biodiversityplanning@sanbLorg

Advice and support on publishing bioregional plans:

Bioregional **Policy** & Monitoring Unit, bioregionalplans@sanbLorg
