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DEPARTMENT OF ENVIRONMENTAL AFFAIRS

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NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004
(ACT NO. 10 OF 2004)

NORMS AND STANDARDS FOR BIODIVERSITY MANAGEMENT PLANS FOR ECOSYSTEMS

I, Bomo Edith Edna Molewa, Minister of Water and Environmental Affairs, hereby publish Norms and Standards for Biodiversity Management Plans for Ecosystems in terms of section 9(1) read with section 43(1)(a) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), set out in the Schedule hereto.

BOMO EDITH EDNA MOLEWA
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

SCHEDULE

Norms and Standards
for Biodiversity Management Plans for Ecosystems

Contents

Acronyms

BMA	Biodiversity Management Agreement
BMP	Biodiversity Management Plan
BMP-E	Biodiversity Management Plan for Ecosystems
BMP-S	Biodiversity Management Plan for Species
CBA	Critical Biodiversity Area
CMA	Catchment Management Agency
CMS	Catchment Management Strategy
CR	Critically endangered
DEA	Department of Environmental Affairs
DWA	Department of Water Affairs
EMF	Environmental Management Framework
EN	Endangered
ESA	Ecological Support Area
FEPA	Freshwater Ecosystem Priority Area
IDP	Integrated Development Plan
NFEPA	National Freshwater Ecosystem Priority Areas project
NGO	Non-government organisation
NPAES	National Protected Area Expansion Strategy
PES	Present Ecological State
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework
TOPS	Threatened or protected species
VU	Vulnerable

1. Introduction

Key points from this chapter:

- The Biodiversity Act provides for the development and publication of Biodiversity Management Plans for species (BMP-S) or ecosystems (BMP-E).
- Norms and standards for BMP-S were published in March 2009.
- The norms and standards for BMP-Es are designed for terrestrial and freshwater ecosystems. They may also be used for marine ecosystems.
- A BMP-E may include one or more Biodiversity Management Agreements (BMAs) regarding the implementation of the BMP-E or aspects of it.
- A biodiversity stewardship BMP-E refers to a BMP-E that is developed as part of a biodiversity stewardship programme, usually with the intention of entering into one or more BMAs with the landowner(s) concerned.

The National Environmental Management: Biodiversity Act (Act 10 of 2004) (hereafter referred to as the Biodiversity Act) provides for Biodiversity Management Plans (BMPs) to be published by the Minister of Environmental Affairs (hereafter referred to as the Minister).[1] In terms of Section 43 of the Biodiversity Act, a BMP can be developed for an ecosystem, an indigenous species, or a migratory species. See the Appendix for the text of those sections of the Biodiversity Act that relate to BMPs.

1.1 Purpose of these Norms and Standards

The Biodiversity Act gives broad requirements for BMPs but is not specific about the content of a BMP or the process of developing a BMP. Because the characteristics of a BMP for a species (BMP-S) are likely to differ from those of a BMP for an ecosystem (BMP-E), different norms and standards are required for BMP-S and BMP-E. Norms and standards for BMP-S were published in March 2009,[2] to provide a national approach and minimum standards for the development of BMP-S.

The purpose of these norms and standards for BMP-Es is to guide the development of BMP-Es, providing a consistent approach across the country, while being sufficiently flexible to accommodate the variability of ecosystems and their management requirements.

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[1] It is anticipated that the Biodiversity Act will be amended to allow for the Minister <u>or MEC</u> to publish a BMP and to enter into a BMA. If such amendments are made, all references in these norms and standards to "the Minister" should be read as "the Minister or MEC".
[2] Norms and Standards for Biodiversity Management Plans for Species, Regulation 214, Gazette no. 31968, 2 March 2009.

1.2 Which to use: BMP-E or BMP-S?

A BMP-S should be used when the primary focus of the BMP is on a particular species, albeit in its ecosystem context.[3] A BMP-E should be used when the primary focus of the BMP is on an ecosystem, including its associated species.

1.3 Can BMP-Es be developed in terrestrial and aquatic environments?

The norms and standards for BMP-Es have been designed for **terrestrial and freshwater ecosystems**.[4] They are not intended to be used for **estuarine ecosystems**, for which Estuary Management Plans may be developed in terms of the Integrated Coastal Management Act (Act 24 of 2008).[5] Although these norms and standards were not designed specifically for **marine ecosystems**, they may be suitable for some marine ecosystems, and may be used for marine ecosystems. In future a separate set of norms and standards for BMP-E for marine ecosystems may be developed. In the interim, *these norms and standards may be used for marine ecosystems for which they are suitable*. A BMP-E for any ecosystem should always take into account the linkages between terrestrial, freshwater, estuarine and marine ecosystems.

1.4 Biodiversity Management Agreements

The Biodiversity Act also allows the Minister to enter into a Biodiversity Management Agreement (BMA) regarding the implementation of a BMP or an aspect of a BMP.[6] A BMA may form part of a BMP-E and may be entered into at the same time as the BMP-E is published. *A BMA can be entered into only for an ecosystem or part of an ecosystem for which there is a BMP.*

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[3] A BMP-S is not necessarily an appropriate management tool for all species of special concern. It is most appropriate for: species for which co-ordination of many actions by multiple role players is required to ensure long-term persistence; species which contribute to livelihoods for local communities; species which are nationally or internationally traded (including heavily traded medicinal plants and horticultural species); or species in which the private sector has a direct interest. See Chapter 4 of Raimondo, D, Von Staden, L, Foden, W, Victor, JE, Helme, NA, Turner, RC, Kamundi, DA & Manyama, PA. (eds) 2009. Red List of South African Plants. *Strelitzia* 25. South African National Biodiversity Institute, Pretoria.

[4] Freshwater ecosystems refer to all inland water bodies whether fresh or saline, including rivers, lakes, wetlands, and sub-surface waters. In some cases "freshwater ecosystems" are taken to include estuaries, but for the purposes of these norms and standards estuaries are not included in the definition of freshwater ecosystems.

[5] The National Estuarine Management Protocol was published by the Minister on 10 May 2013 (Gazette no. 36432). Its purpose includes guiding the development of Estuary Management Plans for individual estuaries.

[6] As noted in footnote 1, it is anticipated that the Biodiversity Act will be amended to allow for the Minister or MEC to publish a BMP and to enter into a BMA. If such amendments are made, all references in these norms and standards to "the Minister", whether in relation to BMPs or BMAs, should be read as "the Minister or MEC".

1.5 Biodiversity stewardship BMP-Es

Biodiversity stewardship programmes have been established in several provinces.[7] Biodiversity stewardship involves entering into contracts with landowners,[8] in which the landowner agrees to conserve his/her property or portions thereof in return for specialised assistance from the conservation authority and in some cases fiscal incentives.[9]

The biodiversity stewardship model has three tiers: formal protected areas, biodiversity agreements, and informal conservation areas. Agreements in the first tier, consisting of Nature Reserves and Protected Environments, are declared by the relevant MEC in terms of the National Environmental Management: Protected Areas Act (Act 57 of 2003) (hereafter referred to as the Protected Areas Act). Agreements in the second tier, biodiversity agreements, can be entered into in terms of contract law. However, the option exists for biodiversity agreements to take the form of Biodiversity Management Agreements (BMAs) in terms of Section 44 of the Biodiversity Act.[10]

A BMA can be entered into only for an ecosystem or part of an ecosystem for which there is a BMP. This means that for a biodiversity stewardship programme to make use of BMAs, BMP-Es need to be developed for the properties, groups of properties or portions of properties concerned.

In short, BMP-Es may be developed as part of biodiversity stewardship programmes and may provide the basis for BMAs that are entered into as part of biodiversity stewardship programmes. In these norms and standards, a "**biodiversity stewardship BMP-E**" refers to a BMP-E that is developed as part of a biodiversity stewardship programme, usually with the intention of entering into one or more BMAs with the landowner(s) concerned.

1.6 Structure of these norms and standards

This document is structured as follows:

- Chapter 2 sets out the purpose and principles that must guide the development of BMP-Es;
- Chapter 3 sets out the criteria that must guide the selection of ecosystems for BMP-Es;

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[7] In most cases, biodiversity stewardship programmes are managed by the relevant provincial conservation authority. In a few cases biodiversity stewardship programmes are managed by municipalities or NGOs; however, in such cases there is close collaboration with the relevant provincial conservation authority.

[8] Landowners may be private or communal, and may include trusts or corporations.

[9] For more information on biodiversity stewardship see: DEA. 2009. Biodiversity Stewardship Guideline Document. November 2009.

[10] An advantage for a landowner of entering into a BMA in terms of the Biodiversity Act, rather than just a biodiversity agreement in terms of contract law, is that fiscal incentives in terms of the Revenue Laws Amendment Act (Act 60 of 2008), which came into effect in the 2009/2010 tax year, apply to BMAs.

- Chapter 4 discusses how ecosystems must be delineated for the purpose of BMP-Es;
- Chapter 5 discusses who should initiate, develop, implement and monitor a BMP-E;
- Chapter 6 outlines the required content of a BMP-E;
- Chapter 7 outlines the required process for developing a BMP-E;
- Chapter 8 discusses the relationship between BMP-Es and other tools for biodiversity conservation;
- Chapter 9 summarises the roles of the Department of Environment Affairs (DEA), the South African National Biodiversity Institute (SANBI), Provincial Conservation Authorities and the Minister in relation to BMP-Es.

2. Purpose and principles of BMP-Es

Key points from this chapter:

- The purpose of a BMP-E is to ensure long-term survival of the ecosystem concerned in nature, i.e. in a natural, near-natural or at least ecologically functional state.
- BMP-Es are intended to be a flexible tool that can be used in a range of circumstances.
- The following principles guide the development of BMP-Es: the need for clear biodiversity objectives; integrated management of terrestrial and aquatic ecosystems; adaptive management; use of best available science; keeping it simple; no recipe; appropriate stakeholder engagement and enhanced collaboration; voluntary participation.

2.1 Purpose of BMP-Es

According to Section 45 of the Biodiversity Act, the purpose of a BMP-E is to ensure the long-term survival in nature of the ecosystem to which the BMP-E relates. This means that the ecosystem must be maintained in, or restored to, a natural, near-natural or at least ecologically functional state. A BMP-E achieves this by mobilising the interest and action of landowners,[11] resource users and other key stakeholders.

BMP-Es are not needed for all ecosystems; the focus must be on ecosystems of special concern, and only on those ecosystems of special concern in which management interventions by landowners, resource users and other key stakeholders can impact positively on the ecological condition of the ecosystem in question (e.g. improving and/or maintaining it). See Chapter 3 for more detail on the criteria for identifying ecosystems for BMP-Es.

The intention is for BMP-Es to be a flexible tool that can be applied in a range of circumstances, from an individual landowner or group of landowners who want to improve and formalise the management of an ecosystem on their property,[12] through to a group of stakeholders who want to co-ordinate their actions in a local area or sub-catchment (see Chapter 4 for more on the scale at which ecosystems for BMP-E should be delineated). In all cases the relevant provincial conservation authority must be involved in the development of a BMP-E.

In most cases BMP-Es will be developed for ecosystems that fall outside the protected area network. However, there may be cases in which a BMP-E is useful for an ecosystem of special concern that occurs inside a protected area. In such cases it is likely that the conservation authority concerned would be the lead implementer of the BMP-E. If an

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[11] Landowners may be private or communal. A BMP-E may be developed for private, communal or state land.
[12] This would usually be as part of a biodiversity stewardship programme.

ecosystem for which a BMP-E is developed falls within a protected area, the relationship of the BMP-E to the relevant protected area management plan must be made clear in the BMP-E.

The purpose of BMP-Es is <u>not</u> to exclude people from access to land and resources or to prevent sustainable use of biodiversity and natural resources. However, there may be cases in which restricting access to certain areas or restricting harvesting is required. In such cases this would be implemented as part of an agreed management plan with support from relevant stakeholders.

2.2 Principles for BMP-Es

The following principles should guide the development of BMP-Es:

- **Clear biodiversity objectives**
  The purpose of a BMP-E is management for long-term survival of the ecosystem concerned in nature. In most cases this requires managing and maintaining the ecosystem in a natural, near-natural or at least ecologically functional state. In some cases it may also involve restoring or rehabilitating the ecosystem to such a state. A BMP-E must have one or more clear, long-term biodiversity objectives that support the achievement of this purpose. A biodiversity objective may include contributing to the restoration, management or maintenance of ecological infrastructure (i.e. intact ecosystems that deliver valuable services to people).

- **Integrated management of terrestrial and aquatic ecosystems**
  BMP-Es should address both terrestrial and aquatic aspects related to the management of the ecosystems concerned, i.e. they should preferably not have a narrow focus on only the terrestrial or only the aquatic. For example, the primary focus of a BMP-E may be a terrestrial ecosystem, but the objectives and management actions should take into account the links between that ecosystem and relevant river, wetland, estuarine and marine ecosystems. Similarly, if the primary focus of a BMP-E is an aquatic ecosystem such as a river or wetland, the BMP-E will need to take land-based influences and processes in the relevant catchment into account.

- **Adaptive management**
  Ecosystems are complex and it is not always possible to predict how they will respond to management interventions. BMP-Es should set clear goals and objectives and allow for regular review of the effectiveness of management actions so that these can be adapted as appropriate.

- **Use of best available science**

  A BMP-E should be based on the best available science. This is particularly relevant to: the identification of ecosystems that need BMP-Es (see Chapter 3); the management objectives and action plan identified (which should be based on sound science and should respond to the biodiversity objective(s) of the BMP-E – see Chapter 6); and the process of developing a BMP-E (which should involve scientists with on the ground knowledge of the ecosystem – see Chapter7). Best available science should be taken to include all relevant available resources, such as guidelines, handbooks and implementation manuals, provided these are credible and appropriate.

- **Keep it simple**

  A BMP-E is intended to be a simple management tool that can be easily understood and used by the implementer(s) and that is cost effective. Those developing a BMP-E should avoid making it highly complicated.

- **No recipe**

  Every BMP-E will be different. While it is possible to provide guidelines relating to the content and process of developing a BMP-E, there is no standard recipe that can be applied to the management objectives and action plan needed. For this reason it is vital to involve ecologists who know the ecosystem concerned in the development of a BMP-E.

- **Stakeholder engagement and enhanced collaboration**

  Involvement of relevant stakeholders is fundamental to the process of developing and implementing a BMP-E. A central objective of many BMP-Es is likely to be enhanced collaboration among relevant stakeholders, which should be reflected both in the process of developing the BMP-E and in its content.[13]

- **Voluntary participation**

  A BMP-E is a voluntary undertaking, based on the voluntary participation of relevant stakeholders. There is no obligation to develop a BMP-E for any ecosystem.

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[13] In the case of a single-landowner BMP-E, the stakeholders may be limited to the landowner and the relevant conservation authority.

3. What criteria should guide the selection of ecosystems for BMP-E?

Key points from this chapter:

- Two filters are used to select ecosystems for BMP-Es, both of which must be applied:
    - Ecosystems of special concern (which include listed ecosystems and other ecosystems of special concern such as Critical Biodiversity Areas and Freshwater Ecosystem Priority Areas),
    - Ecosystems for which management interventions (often collaborative) can impact positively on their ecological condition and for which a BMP-E is thus likely to be suitable and effective.

According to Section 43 of the Biodiversity Act, a BMP-E may be developed for:

- an ecosystem which has been listed in terms of Section 52 of the Act, or
- an ecosystem which has not been listed "but which does warrant special conservation attention".

Each of these categories is discussed below.

3.1 Listed ecosystems

Section 52 of the Biodiversity Act provides for the listing of threatened or protected ecosystems. Threatened ecosystems can be listed as critically endangered (CR), endangered (EN) or vulnerable (VU). The first list of threatened terrestrial ecosystems was published in the Government Gazette by the Minister in December 2011.[14] Threatened river, wetland, estuarine and marine ecosystems have not yet been listed, and no protected ecosystems have yet been listed. In cases where no list has yet been published by the Minister, the ecosystem threat status assessment in the National Biodiversity Assessment (NBA) (NBA 2011[15] or subsequent revisions) can be used to identify threatened ecosystems. The list of threatened terrestrial ecosystems and the NBA are available on SANBI's Biodiversity Advisor website at http://biodiversityadvisor.sanbi.org.

A BMP-E can be developed for a listed ecosystem or for a portion of a listed ecosystem (see Chapter 4 for more on the delineation of ecosystems for BMP-Es).

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[14] Department of Environmental Affairs. 2011. National Environmental Management: Biodiversity Act, 2004: National list of ecosystems that are threatened and in need of protection. Government Gazette Number 34809, Notice 1002, 9 December 2011.

[15] Driver et al. 2012. *National Biodiversity Assessment 2011: An assessment of South Africa's biodiversity and ecosystems. Synthesis Report*. SANBI and DEA, Pretoria.

3.2 Other ecosystems of special concern

In addition to listed ecosystems, there are several other sets of ecosystems that warrant special conservation attention. These include:

- Threatened ecosystems identified in the NBA, as discussed in Section 3.1 above,
- Ecosystems identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in a bioregional plan, biodiversity sector plan or provincial spatial biodiversity plan,[16]
- Ecosystems identified as Freshwater Ecosystem Priority Areas (FEPAs) by the National Freshwater Ecosystem Priority Areas project (NFEPA),[17]
- Ecosystems identified as high water yield areas or groundwater recharge areas, for example by NFEPA or subsequent analyses,
- Ecosystems identified as fish sanctuaries[18] or free-flowing rivers by NFEPA,
- Ecosystems that form part of the focus areas for protected area expansion identified in the National Protected Area Expansion Strategy (NPAES 2008[19] or subsequent revisions) or that have been identified as priorities in a provincial protected area expansion strategy,
- Ecosystems in buffers or corridors linked to protected areas,
- Ecosystems that play an important role as ecological infrastructure, supporting the provision of ecosystem services,
- Ecosystems likely to be important for ecosystem-based adaptation to climate change.

In these norms and standards the term "**ecosystems of special concern**" is used to refer to ecosystems listed in terms of the Biodiversity Act plus ecosystems in the bulleted list above.

A BMP-E can be developed for an ecosystem of special concern or for a portion of an ecosystem of special concern (see Chapter 4 for more on the delineation of ecosystems for BMP-Es).

Ecosystems of special concern provide the **first filter** for identifying ecosystems that may require a BMP-E. However, *not all ecosystems of special concern require a BMP-E or are suitable for a BMP-E*. An additional **second filter** must thus be applied to determine if a

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[16] Some older provincial spatial biodiversity plans use terminology other than CBAs and ESAs for the priority areas identified. These priority areas should also be considered ecosystems of special concern.

[17] Nel et al, 2011. *Atlas of Freshwater Ecosystem Priority Areas in South Africa*. WRC Report No. TT 500/11. Water Research Commission, Pretoria.

[18] Fish sanctuaries are sub-quaternary catchments that are important for protecting threatened indigenous freshwater fish species. For some fish sanctuaries, a BMP-S might be more appropriate than a BMP-E. This should be assessed on a case by case basis.

[19] Government of South Africa. 2010. *National Protected Area Expansion Strategy 2008: Priorities for expanding the protected area network for ecological sustainability and climate change adaptation*. Government of South Africa, Pretoria

BMP-E is likely to be suitable for a particular ecosystem of special concern. A BMP-E is most likely to be suitable for those ecosystems of special concern for which:

- there is a realistic prospect of influencing the way that land, water or other natural resources are used or managed,
- actions that will enhance or maintain the ecological condition of the ecosystem are or could be within the sphere of control of those individuals and/or organisations who will be implementing the BMP-E,
- collaborative action or active co-ordination is required between stakeholders at the local scale to restore, manage or maintain ecological integrity (exceptions to this are BMP-Es that involve only a single landowner – such cases may not require collaborative action or co-ordination between multiple stakeholders).

See Chapter 7 for a checklist of questions that can be used to determine whether a BMP-E is feasible and appropriate for a particular ecosystem.

3.3 Should a BMP-E be developed for a severely degraded ecosystem?

In general it is more cost effective to manage and maintain ecosystems that are still in good ecological condition (natural or near-natural) than to rehabilitate or restore ecosystems that are in fair or poor ecological condition (moderately or severely degraded). Many BMP-Es are thus likely to focus on managing and maintaining ecosystems in good ecological condition. However, there are cases in which rehabilitation or restoration of a degraded ecosystem is appropriate and necessary, and a BMP-E may be a useful tool in such cases.

Rehabilitation or restoration may be warranted in the following cases:
- If the ecosystem plays or could play an important role as ecological infrastructure, i.e. producing or delivering valuable ecosystem services to people,
- If the ecosystem plays or could play an important role in ecosystem-based adaptation to climate change,
- If the ecosystem is critically endangered and its biodiversity target can no longer be met[20] (with the proviso that even in such cases it is usually more strategic and cost effective to secure remaining examples or portions of the ecosystem that are in good ecological condition than to restore those that are in poor ecological condition).

Rehabilitating or restoring a moderately degraded ecosystem (i.e. an ecosystem in fair ecological condition) is in general easier than if the ecosystem is severely degraded (i.e. in poor ecological condition), and a BMP-E is thus more likely to be feasible and appropriate in

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[20] The biodiversity target is the minimum proportion of an ecosystem type that must be in good ecological condition in order to represent the majority of species associated with that ecosystem type. It is usually approximately 20% of the original (pre-development) extent of the ecosystem type. See the NBA 2011 for further explanation.

a moderately degraded ecosystem than a severely degraded ecosystem. However, this does not rule out the possibility of a BMP-E for a severely degraded ecosystem. A freshwater ecosystem is considered severely degraded if its present ecological state (PES) category falls below a C.[21] A terrestrial ecosystem is considered severely degraded if it would be unable to recover to a natural, near-natural or functional state following the removal of the cause of the degradation (e.g. invasive alien plants, over-grazing), even after long time periods. Natural habitat in a terrestrial ecosystem is considered irreversibly lost if it has been replaced with, for example, crops, forestry plantations, urban or industrial development, or mines.

Also see Chapter 4 on delineation of ecosystems for BMP-E.

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[21] The Department of Water Affairs has a system of present ecological state (PES) categories to describe the ecological condition of rivers, wetlands and estuaries. The categories are as follows: **A**: Unmodified, natural; **B**: Largely natural with few modifications. A small change in natural habitats and biota may have taken place but the ecosystem functions are essentially unchanged; **C**: Moderately modified. A loss and change of natural habitat and biota have occurred but the basic ecosystem functions are still predominantly unchanged; **D**: Largely modified. A large loss of natural habitat, biota and basic ecosystem functions have occurred; **E**: Seriously modified. The loss of natural habitat, biota and basic ecosystem functions are extensive; **F**: Critically modified. Modifications have reached a critical level and the system has been modified completely with an almost complete loss of natural habitat and biota. In the worst instances the basic ecosystem functions have been destroyed and the changes are irreversible. In these norms and standards, "good ecological condition" means the equivalent of an A or B PES category; "fair ecological condition" means the equivalent of a C; and "poor ecological condition" means the equivalent of a D, E or F.

4. How should ecosystems be delineated for BMP-E?

Key points from this chapter:
- Ecosystem boundaries are often inherently fuzzy, and there is no single correct delineation for most ecosystems.
- Delineation of an ecosystem for a BMP-E must take into account where the management actions for that ecosystem need to take place and the intended spatial extent of influence of these actions.
- Ecosystems for BMP-Es are likely to be delineated at the local scale rather than the landscape scale.

Section 1 of the Biodiversity Act defines an ecosystem as a dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit. Ecosystems are seldom easy to delineate, as ecosystem boundaries are often inherently fuzzy, and ecosystems can be defined at almost any spatial scale from the small local scale (e.g. a forest patch, an individual wetland) to the large landscape scale (e.g. a primary catchment, the Savanna biome). There is no single correct delineation for most ecosystems. Nevertheless, for practical purposes, the development and implementation of a BMP-E requires that the ecosystem concerned be clearly delineated and mapped.

The delineation of an ecosystem for a BMP-E must take into account where the management actions for that ecosystem need to take place as well as the intended spatial extent of the influence of those actions.[22] For example, if the focus of the BMP-E is on a particular wetland, but management actions need to take place in a sub-catchment upstream of the wetland, then the ecosystem may be delineated to include both the wetland and the upstream sub-catchment. If the focus of the BMP-E is on a remaining cluster of natural fragments in a threatened vegetation type, the ecosystem may be delineated as the cluster of fragments and their immediate matrix rather than as the original extent of the whole vegetation type.

The delineation of an ecosystem for a BMP-E is likely to be at the local scale rather than the landscape scale, partly because of the requirement that the number of essential stakeholders whose actions need to be co-ordinated by the BMP-E must be manageable (see Chapter 7 discussion on feasibility check).

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[22] In some cases management actions may need to take place further afield, outside the delineated ecosystem, for instance to influence fire regimes or to control pesticide spray.

An ecosystem for which a BMP-E is developed may be delineated as, for example:

- A single threatened ecosystem (usually with the focus on remaining intact areas or reaches within the ecosystem type concerned),
- A portion of a threatened ecosystem (usually an intact area or reach within the ecosystem type concerned),
- A group of threatened ecosystems (usually with the focus on remaining intact areas or reaches within the ecosystem types concerned),
- A single CBA, ESA or FEPA, fish sanctuary or free-flowing river,
- A group or cluster of CBAs, ESAs, FEPAs or fish sanctuaries,
- A feature within a CBA, ESA, FEPA or focus area for protected area expansion, such as a particular wetland, river reach, tributary, or patch of threatened vegetation,
- A high water yield area, consisting of one or more sub-quaternary catchments or portions of sub-quaternary catchments,
- A property, a group of properties or a portion of a property, especially in the case of a biodiversity stewardship BMP-E.

If the objective of the BMP-E is primarily to manage and maintain the ecosystem concerned in good ecological condition, rather than to restore or rehabilitate the ecosystem, the delineation of the ecosystem is likely to focus on remaining natural or near-natural areas or reaches. The delineation of the ecosystem may include degraded areas if the required management actions need to take place in degraded areas surrounding or adjacent to the remaining natural or near-natural part(s) of the ecosystem. Large areas which are severely degraded or where natural habitat has been irreversibly lost, and which are not the focus of management actions in the BMP-E, will generally be excluded from the delineation of the ecosystem.

If the objective of the BMP-E is primarily to rehabilitate or restore the ecosystem concerned, the delineation of the ecosystem is likely to focus on degraded areas and may include few or no natural or near-natural areas.

Also see discussion in Chapter 3, including definitions of severe degradation and irreversible loss.

5. Who should initiate, develop, implement and monitor a BMP-E?

Key points from this chapter:
- The initiator, developer and implementer of a BMP-E need not be the same person, group of people or organisation.
- The relevant provincial conservation authority must always be involved in the development of a BMP-E.
- A lead implementer of the BMP-E must be identified. This is the person, organisation or organ of state to whom the Minister will assign responsibility for implementing the BMP-E. The lead implementer need not have initiated or developed the BMP-E but must have been involved in the process.
- Monitoring of the BMP-E must be undertaken by an organisation or individual(s) agreed on by the parties involved in developing the BMP-E, for example a conservation authority, an NGO, landowners, land users or volunteers.

5.1 Who initiates and develops a BMP-E?

According to Section 43 of the Biodiversity Act, any person, organisation or organ of state desiring to contribute to biodiversity management may submit a draft BMP to the Minister.

Those most likely to initiate the development of a BMP-E are:

- Landowners (individual or groups; private, communal or state),
- Land users / communities,
- NGOs,
- Conservation authorities,
- Water user associations (irrigation boards),
- Interest groups (such as friends groups).

Other possible initiators of a BMP-E are:

- Other organs of state which manage or oversee land and water resources (e.g. municipalities, national departments),
- Catchment Management Agencies (CMAs)[23] (although they are more likely to use tools linked to the National Water Act).

The relevant provincial conservation authority must always be involved in the process of developing a BMP-E, whether or not it initiates the BMP-E. In the case of a biodiversity stewardship BMP-E, the provincial conservation authority will in almost all cases play a

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[23] In Water Management Areas in which Catchment Management Agencies have not yet been established, regional offices of the Department of Water Affairs play a broadly equivalent role.

central role in developing the BMP-E. In other cases the provincial conservation authority must at the very least be consulted throughout the process. In cases where a BMP-E straddles provincial boundaries, both or all relevant provincial conservation authorities must be involved.

The development of the BMP-E may be undertaken by the landowner(s), land users, NGO, conservation authority or other organ of state who initiated the BMP-E, or the initiator of the BMP-E may procure a specialist consultant or other organisation to develop the BMP-E. In such cases the initiator of the BMP-E must develop clear terms of reference for the development of the BMP-E, including the requirement to adhere to these norms and standards. The developer of a BMP-E need not be the implementer of the BMP-E; however, in such cases the developer and the implementer of the BMP-E must work in close collaboration during the development phase (see Chapter 7).

In the case of a BMP-E involving many stakeholders, the developer of the BMP-E must have good facilitation skills as well as an understanding of the ecosystem concerned.

5.2 Who implements a BMP-E?

The implementers of a BMP-E must be set out in the BMP-E (see Chapter 6). If there is more than one implementer, a lead implementer must be identified. This is especially important as Section 43(2) of the Biodiversity Act requires that, before approving a draft BMP for publication, the Minister must identify a suitable person, organisation or organ of state which is willing to be responsible for the implementation of the BMP. In terms of Section 43(3) the Minister must also determine the manner of implementation of the BMP and assign responsibility for its implementation to the person, organisation or organ of state identified in terms of Section 43(2). In terms of Section 44, the Minister may enter into a BMA with this person, organisation or organ of state.

The implementers of a BMP-E are likely to be one or more of the following:

- Landowner(s),
- Land users,
- Volunteers,
- NGOs (e.g. in a facilitating role),
- Conservation authorities (who could have a direct implementing role in some of the management interventions).

If the BMP-E is to be implemented by only one individual or one organisation then that individual, group or organisation is automatically considered the lead implementer. If more than one organisation or a group of individuals is involved in implementing a BMP-E, the

BMP-E must specify which person or organisation is the lead implementer. If the BMP-E includes a BMA, the BMA is likely to be entered into with the lead implementer.[24]

5.3 Who monitors and evaluates the implementation of a BMP-E?

Monitoring of a BMP-E must provide the basis for evaluating whether the agreed management actions are being carried out and whether the management objectives are being achieved, and should provide the basis for evaluating whether the biodiversity objectives are being achieved (see further discussion in Chapter 6). As part of the process of developing a BMP-E, a monitoring agency must be identified. The monitoring agency for a BMP-E is likely to be one of the following:

- A conservation authority,
- An NGO,
- Landowners, land users or volunteers

The relevant provincial conservation authority may be well-placed to play the role of the monitoring agency. However, the monitoring agency could be anyone else agreed on by the parties involved in the development of the BMP-E, provided that the person or organisation identified agrees to take on the monitoring task. For freshwater ecosystems, the DWA and/or CMAs may have an important role to play. Note that SANBI's role does not include monitoring the implementation of individual BMP-Es.

The BMP-E must specify the agreement between the implementers and the monitoring agency on reporting requirements and periods. Monitoring must take place at least once a year, but may take place more frequently. A brief monitoring report must be drawn up at least annually, so that these reports can be made available to the Minister as part of the process of reviewing the BMP-E every five years as required in Section 46 of the Biodiversity Act.

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[24] There may be circumstances in which the Minister enters into a BMA with someone other than the lead implementer, for example if more than one implementer has been identified in the BMP-E and the BMP-E includes more than one BMA.

6. What should the content of a BMP-E include?

Key points from this chapter:

- A BMP-E consists of three parts: a summary, the main body of the BMP-E, and additional working documents.
- The summary of the BMP-E is published by notice in the Gazette, and may include one or more BMAs published together with the BMP-E.
- The main body of the BMP-E is available electronically and must include the following sections:
  A. Introduction, including the long-term biodiversity objective(s)
  B. Management objectives and high-level action plan
  C. Activities that should be avoided
  D. Resources required, including a high-level budget as well as non-financial resources required
  E. Monitoring arrangements
  F. Useful contacts
  G. BMP-E at a glance
  Appendices
  GIS file of the ecosystem, as delineated according to the guidelines in Chapter 4
- Additional working documents available to the implementer(s) of the BMP-E must include a detailed annual operational plan and annual budget, and may include an information pack.

The content of a BMP-E consists of three parts:

- A summary that is published by notice in the Gazette,
- The main body of the BMP-E that is available electronically and is reviewed every five years,
- Additional working documents for implementers of the BMP-E which provide additional detail and are reviewed annually.

A BMP-E must be developed for a minimum time period of five years. A BMP-E may be developed for a five-year period only, or for an initial five-year period with the explicit intention to review and re-publish the BMP-E at the end of the first five years, or for a longer time period (e.g. ten or fifteen years) subject to review every five years.

6.1 Summary of the BMP-E

The summary of the BMP-E that is published by notice in the Gazette must include:

- The long-term biodiversity objective of the BMP-E,
- A simple black and white map of the ecosystem,
- A short description of the ecosystem,
- The lead implementer and any other implementers of the BMP-E,

- The "BMP at a glance" section from the main body of the BMP-E,
- A reference to where the main body of the BMP-E can be accessed electronically.

The summary may also include one or more BMAs, published together with the notice containing the BMP-E.

6.2 Main body of the BMP-E

The main body of the BMP-E must include the sections outlined below. Only information that is likely to stay the same for five years, until the BMP-E is reviewed, should be included in the main body of the BMP-E. Information that may change from year to year or before the BMP-E is reviewed should be included in the additional working documents.

A. Introduction
- A map and description of the ecosystem.
- The biodiversity significance of the ecosystem[25], including reference to relevant systematic biodiversity plans, biodiversity sector plans or bioregional plans.
- Why a BMP-E is warranted for this ecosystem (including a summary of threatening processes facing the ecosystem).
- The long-term biodiversity objective(s) of the BMP-E.[26] If possible, indicators should be provided for these biodiversity objectives.[27]

B. Management objectives and high-level action plan
- Five-year management objectives.[28] These must relate to the long-term biodiversity objective(s), and must include indicators for assessing whether the management objectives are being met.
- Lead implementer, and other implementers if applicable. The lead implementer's relevant expertise should be briefly set out, so that the Minister is able to assess whether it is reasonable to assign responsibility for implementation of the plan to the lead implementer.
- Management actions required to meet five-year management objectives (these could include, for example, stocking rates, off-take rates, clearing of invasive species, fire

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[25] "Biodiversity significance" should be understood broadly, and may include the significance of the ecosystem from an ecological infrastructure, ecosystem services or ecosystem-based adaptation perspective.

[26] These could relate to biodiversity, ecological infrastructure, ecosystem services and/or ecosystem-based adaptation to climate change.

[27] In some cases it may not be possible to develop indicators to monitor the achievement of the biodiversity objective(s) directly, or, if indicators can be developed the timeframes of the BMP-E may not be long enough to evaluate whether the long-term biodiversity objective(s) are being achieved. In such cases the indicators for the management objectives act as proxies for the long-term biodiversity objective.

[28] If the BMP-E timeframe is longer than five years (e.g. ten or fifteen years), management objectives must be given for the subsequent five-year periods as well, with the understanding that they will be reviewed after five years.

regimes). The ecological rationale for the management actions must be provided, and each management action must have one or more indicators that can be used to assess whether it has been carried out.[29] The focus of the management actions may be on the intact areas of the ecosystem, and may include rehabilitating or restoring degraded areas, and influencing activities in degraded or non-natural areas in order to manage their impacts on the rest of the ecosystem, or a combination of these. Management actions should be high-level (unlikely to need revision for five years), with detailed year-by-year activities in a separate annual operational plan which is included in the additional working documents rather than in the main body of the BMP-E.

- Who is responsible for which management actions.
- Who is responsible for updating the annual operational plan.
- Summary of all the stakeholders directly involved or affected.

C. Activities that should be avoided

- The BMP-E should set out activities (e.g. land and resource uses) which are not compatible with maintaining the ecosystem in a natural or near-natural state and meeting the long-term biodiversity objective(s) and which should be avoided by all stakeholders. These may apply only to part(s) of the ecosystem.

D. Resources required

- A high-level budget for implementation of the BMP-E, and an indication of funding sources.[30]
- Any essential non-financial resources that will be drawn on to implement the BMP-E, for example expertise or extension services located in provincial conservation authorities, CMAs or other organs of state.

E. Monitoring arrangements and responsibilities

- Who is responsible for monitoring, with agreed reporting requirements and periods. It is suggested that a brief monitoring report be drawn up at least annually, so that these reports can be made available to the Minister as part of the five-year review process. There is no need to submit reports annually to the Minister.

F. Useful contacts

- Contact details for the lead implementer, other implementers if applicable, the relevant provincial conservation authority, other key stakeholders, and other key resource people.

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[29] Indicators for the management actions need not address the ecosystem or its condition directly. They may simply be indicators of whether the agreed management actions have been undertaken by the responsible party.
[30] In some cases the implementation of a BMP-E may involve realignment of existing budgets and mobilisation of resources of private landowners or volunteers, and may thus not require large amounts of newly sourced funding.

G. BMP-E at a glance

- A brief overview, for example in a one-page table, of the high-level management actions with broad timeframes, implementers and indicators for each action.
- This section is useful for the Minister, who is obliged to "determine the manner of implementation of the plan" when the BMP-E is published, and must be included in the gazetted summary of the BMP-E.

Appendices

- Documentation on stakeholder engagement during the development of the BMP-E.
- An indication that the developers of the BMP-E have satisfied themselves that it is consistent with or takes into consideration other relevant plans as required in terms of Section 45(c) and (d) of the Biodiversity Act, with some explanation (this need not be in-depth).
- A list of other legal requirements for the implementation of the BMP-E, if relevant (for example permits required in terms of provincial legislation, fire protection agencies, certificates of adequate enclosure, TOPS permits, National Water Act permitting requirements (e.g. for modification of beds and banks for rehabilitation).

GIS file with metadata giving the delineation of the ecosystem, compiled according to the data standards available on SANBI's Biodiversity GIS website (http://bgis.sanbi.org).

6.3 Additional working documents

The BMP-E must include additional working documents that can be reviewed and changed more frequently than every five years, and that need not be made available to anyone other than the implementer(s). These include:

- **Annual operational plan** (compulsory) with detailed management actions, timeframes, and those responsible. This must be revised annually by the lead implementer, with input from other essential stakeholders, taking into account the need for adaptive management.
- **Annual budget** (compulsory), giving more detail than the high-level budget in Section D of the main body of the BMP-E. This may be revised annually by the lead implementer if necessary.
- **Information pack for implementers** (optional), for example with additional information resources gathered during the development of the BMP-E or any other supporting documents that may be useful for the implementer(s).

7. What process must be followed in developing a BMP-E?

Key points in this chapter:

- The process of developing, publishing and implementing a BMP-E follows eight phases: feasibility check; preparation phase; development phase; review of the draft plan; submission to the Minister, approval and publication; implementation; monitoring and evaluation; five-year review.
- Three sets of stakeholders are relevant to the development of BMP-E: essential stakeholders, a broader set of stakeholders, and veto stakeholders. Depending on the number of stakeholders involved, some of the phases may be simple and quick.
- Steps in each phase are outlined. The feasibility check is of crucial importance and may reveal that a BMP-E is not an appropriate tool for the management of the ecosystem concerned.
- Some of the steps differ depending on whether the BMP-E is part of a biodiversity stewardship programme or not. For example, biodiversity stewardship BMP-Es must be reviewed by the relevant provincial conservation authority, whereas BMP-Es that are not part of biodiversity stewardship programmes must be reviewed by SANBI.

The process of developing and implementing a BMP-E is divided into the following phases, each of which is outlined below:

- Phase 1: Feasibility check
- Phase 2: Preparation phase
- Phase 3: Development phase
- Phase 4: Review of draft plan
- Phase 5: Submission to the Minister, approval and publication
- Phase 6: Implementation
- Phase 7: Monitoring and evaluation
- Phase 8: Five-year review

Each of these phases is compulsory. The steps outlined within each phase are a guide, with room for flexibility where this does not compromise the purpose, principles or intent of BMP-Es.

There are three sets of stakeholders relevant to the development of a BMP-E:

- Essential stakeholders, i.e. stakeholders without whose participation the management objectives of the BMP-E cannot be achieved,
- A broader set of stakeholders who may have an interest in the BMP-E and may be able to contribute but whose participation is not essential for achieving the management objectives of the BMP-E,
- Veto stakeholders, i.e. stakeholders who have the power to disrupt or prevent the implementation of the BMP-E.

Note: In the case of a BMP-E that involves only a single landowner, relevant stakeholders may be limited to just the landowner and the relevant provincial conservation authority.

Phase 1: Feasibility check

The purpose of this phase is to determine the feasibility and appropriateness of a BMP-E for the ecosystem concerned. Given that substantial resources are likely to be involved in the development of a BMP-E it is important not to go ahead if the feasibility check indicates that a BMP-E is not an appropriate tool, if it is not possible to identify a champion to lead the development of the BMP-E, if there are too many essential stakeholders for co-ordinated implementation of the BMP-E to be possible, if the BMP-E will have a direct negative impact on the livelihoods of communities who have no recourse to alternatives, or if resources are not available or cannot be secured for the development and implementation of the BMP-E.

Steps in the feasibility check include:

- Identify the ecosystem based on the criteria set out in Chapter 3. This will include consulting existing spatial biodiversity plans (e.g. provincial spatial biodiversity plans, biodiversity sector plans, bioregional plans) that provide context for the identification and delineation of the ecosystem.
- Identify threatening processes and pressures relevant to the ecosystem.
- Delineate the ecosystem based on the guidelines given in Chapter 4.
- Identify essential stakeholders and their roles, including who the implementer(s) of the BMP-E could be. Identify potential veto stakeholders.
- Develop an initial draft long-term biodiversity objective(s) and five-year management objectives for the ecosystem.
- Decide whether finer scale spatial biodiversity planning is required in order to develop a BMP-E for the ecosystem. If so, this can be expensive and time-consuming.
- Decide whether a BMP-E is the most appropriate tool to use:
  - o Can management actions change the situation and impact positively on the ecological condition of the ecosystem?
  - o High-level assessment of resources required to achieve the management objectives, including an assessment of whether private resources for implementation can be mobilised in the process of developing the BMP-E. Stakeholder engagement can be expensive – it is important not to be naïve about the costs involved.
  - o Is a stronger form of management intervention (e.g. the declaration of a protected area in terms of the Protected Areas Act) available/realistic/suitable?
  - o Is there willingness on the part of essential stakeholders, especially potential implementers, to develop and implement a BMP-E?

- How many essential stakeholders are there? Is this a manageable number for the development of a BMP-E? If there are too many essential stakeholders, the implementation of the BMP-E may become extremely difficult to co-ordinate. The delineation of the ecosystem may need to be re-assessed and narrowed.
- Identify a champion to lead the development of the BMP-E. This could be different from the person/organisation that initiated the development of the BMP-E, and need not be one of the intended implementers. The services of a consultant may be procured to develop the BMP-E, in which case clear terms of reference must be developed by the initiator, as discussed in Section 5.1.

Note: In the case of a biodiversity stewardship BMP-E, especially if it involves only a single landowner, many of the steps in the feasibility check are likely to be straightforward and quick. In the case of a BMP-E involving many stakeholders, the feasibility check is likely to take longer and may be more challenging.

Phase 2: Preparation phase

The purpose of this phase is to prepare for the development of the BMP-E. The information collected in the preparation phase may also be useful for the implementer(s) of the BMP-E and may be included in the optional information pack for implementers (see Chapter 6).

Steps in the preparation phase include:

- Compile *background information* that will provide the rationale for the management objectives and management actions to be identified in the BMP-E.

  Background information must include:
  - Biodiversity features associated with the ecosystem (e.g. terrestrial and aquatic ecosystem types, species of special concern),[31]
  - Ecological processes associated with the persistence of the ecosystem,
  - Current condition of the ecosystem, preferably using quantitative measures (for example PES categories for freshwater ecosystems),
  - Historical condition of the ecosystem if available,
  - Threatening processes or pressures impacting on the ecosystem,
  - Map of the ecosystem with key place names and other features in the vicinity such as roads, protected areas etc,
  - Review of key information sources that provide useful context for the BMP-E, including any spatial biodiversity plans.

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[31] The biodiversity features may be based on available desktop information but should preferably be ground-truthed during this phase.

Background information may also include:

- o Socio-economic opportunities or issues in the area,
- o Past management history of the ecosystem,
- o Review of relevant literature, guidelines, handbooks or other resources relevant to the management of the ecosystem,
- o Review of legislation and regulations relevant to the management of the ecosystem,
- o Any other relevant information.

- Make use of the background information to compile a *brief motivation* for the development of the BMP-E for this ecosystem. This brief motivation will be useful in the stakeholder engagement process, and will form part of the introductory section (Section A) of the BMP-E.

Note: The compilation of background information need <u>not</u> be a comprehensive exercise. A guide for how much information is required is the amount necessary to develop a brief motivation for the BMP-E and to support the implementer(s) in carrying out the management actions to be identified in the BMP-E.

Phase 3: Development phase

The purpose of this phase is to develop the draft BMP-E (see Chapter 6 for the content that the BMP-E must cover), to engage stakeholders, to identify a lead implementer, and to ensure agreement among essential stakeholders on the objectives and action plan. A central issue in the development phase is ensuring that the biodiversity objective(s) and management objectives are coherent and achievable, and that the management actions support the achievement of the management objectives. The development phase should be guided by principles of ecosystem management (see box below) as well as the principles for BMP-Es (see Chapter 2).

In all cases the relevant provincial conservation authority must be involved in the development of the BMP-E, as early as possible in the process and preferably throughout the whole process. In cases where a BMP-E straddles provincial boundaries, both or all relevant provincial conservation authorities must be involved.

In the case of a biodiversity stewardship BMP-E, the systems and processes already in place in the biodiversity stewardship programme concerned should be used to develop the BMP-E, as long as they are consistent with the purpose, principles and intent of BMP-Es. In instances where they are not consistent, the steps outlined below should be used instead.

In the case of a BMP-E that does not form part of a biodiversity stewardship programme, the steps outlined below should be followed to develop the BMP-E. *These steps are presented as a linear process but in practice they are likely to be iterative.* As noted in Chapter 5, in the case of a BMP-E involving many stakeholders the developer of the BMP-E needs good facilitation skills as well as an understanding of the ecosystem concerned.

For a BMP-E that is not part of a biodiversity stewardship programme, steps in the development phase include:

- Develop a short problem statement and define the draft biodiversity objective(s). As noted in Chapter 6 the biodiversity objective(s) of a BMP-E are long-term objective(s) that could relate to biodiversity, ecological infrastructure, ecosystem services and/or ecosystem-based adaptation to climate change.
- Define draft five-year management objectives for the BMP-E, that support achievement of the long-term biodiversity objective(s). Decide on the timeframe of the BMP-E, which may be longer than five years. If the timeframe is longer than five years (e.g. ten or fifteen years), management objectives must be developed for the subsequent five-year periods as well, with the understanding that they will be reviewed after five years.
- Undertake comprehensive identification of stakeholders, including essential stakeholders, broader stakeholders and veto stakeholders. Identify relevant ecological experts with on-the-ground knowledge of the ecosystem concerned and identify relevant conservation authorities and officials – the involvement of these stakeholders in the development of the BMP-E is essential.
- Hold one or more workshops with stakeholders (including ecological experts and representatives of conservation authorities) to:
  o Refine the biodiversity objective(s) and management objectives,
  o Develop high-level and detailed management actions needed to achieve the management objectives,
  o Develop a budget for the BMP-E and determine the source of any funds required over and above contributions from the existing budgets of implementers,
  o Determine any additional non-financial resources required to implement the BMP-E and how access to these will be ensured,
  o Develop a monitoring plan for each high-level management action and for the management objectives, including indicators.
- Get agreement among essential stakeholders on implementing roles and responsibilities, including identification of the lead implementer and other implementers if applicable. It is important to involve all implementers in this process, and to ensure that the individuals involved have sufficient seniority in their respective organisations to authorise the necessary commitments related to actions and budgets.
- Compile the first draft of the BMP-E, including a summary of the BMP-E, sections A to G of the main body of the BMP-E as outlined in Chapter 6, and a GIS file of the ecosystem.

- Circulate the first draft BMP-E to all essential stakeholders for comment, including the relevant provincial conservation authority, providing a reasonable period for receipt of comments. The draft BMP-E may also be circulated to broader stakeholders and veto stakeholders for comment, and may be made electronically available to the public for comment, but this is not essential. Address the comments received to produce a second draft.

- Optional step: Get an independent expert to review the draft BMP-E, for example an ecologist who has on-the-ground knowledge of the area. The review should give particular attention to whether the management actions support the management objectives and biodiversity objective(s). If an expert review is undertaken, the expert should provide a letter to that effect to accompany the submission of the draft BMP-E to SANBI for review (see Phase 4 below).

- Ensure documented support from the relevant provincial conservation authority for the draft BMP-E, in the form of a letter to this effect from a relevant individual or structure in the provincial conservation authority. A letter of support from the provincial conservation authority must accompany the submission of the draft BMP-E to SANBI for review (see Phase 4 below). The letter must confirm that the provincial conservation authority believes that the biodiversity objective(s) and management objectives of the BMP-E are coherent and achievable, and that the management actions support the achievement of the management objectives.

- In cases where there is more than one implementer of the BMP-E, it may be useful to develop a Memorandum of Agreement between the implementers, setting out the agreed roles and responsibilities including any financial contributions.

Principles of ecosystem management

The following basic principles of ecosystem management should inform the development of BMP-E:

- Understand variability as part of ecosystem functioning;
- Take a holistic approach, including dealing with both terrestrial and aquatic aspects;
- Maintain ecosystem function and integrity;
- Recognise the importance of ecological processes, including disturbance regimes;
- Encourage knowledge-based adaptive management.

Phase 4: Review of draft plan

The purpose of this phase is to ensure that the BMP-E is consistent with the requirements of these norms and standards, and in the case of a biodiversity stewardship BMP-E that it is also consistent with the requirements of the relevant provincial biodiversity stewardship

programme. Steps in the review phase differ depending on whether the BMP-E is part of a biodiversity stewardship programme or not.

For a BMP-E developed as part of a biodiversity stewardship programme:

- Submit the draft BMP-E to the relevant provincial biodiversity stewardship committee(s) or other structure(s). These differ from province to province.
- If necessary, make the required changes in consultation with relevant stakeholders and resubmit the draft BMP-E to the relevant provincial biodiversity stewardship committee(s) or other structure(s).
- If the draft BMP-E meets the requirements of the relevant provincial biodiversity stewardship programme, the provincial conservation authority will provide a unique reference number for the BMP-E, in consultation with SANBI.
- Note that the draft BMP-E must not be submitted to SANBI for review.

For a BMP-E that is not part of a biodiversity stewardship programme:

- Submit the draft BMP-E to SANBI for review. The submission must come from the lead implementer of the BMP-E,[32] accompanied by a letter from the relevant provincial conservation authority supporting the BMP-E, confirming that the biodiversity objective(s) and management objectives of the BMP-E are coherent and achievable, and that the management actions support the achievement of the management objectives.
- SANBI will ensure that the BMP-E is reviewed by at least two reviewers, usually one internal (SANBI) reviewer and one external reviewer with relevant expertise, within 90 days.
- The reviewers may require changes to be made to the draft BMP-E. If necessary, make the required changes in consultation with relevant stakeholders and resubmit the draft BMP-E to SANBI. SANBI will ensure that the revised draft BMP-E is reviewed within 60 days to confirm that the required changes have been made.
- SANBI will provide a letter confirming that the draft BMP-E is consistent with these norms and standards, as well as a unique reference number for the BMP-E.

Phase 5: Submission to the Minister, approval and publication

The purpose of this phase is to submit the draft BMP-E to the Minister who will publish the draft BMP-E for public comment, and to publish the final BMP-E. Steps in this phase include:

- Submit the draft BMP-E to the Minister. In the case of a stewardship BMP-E, the submission must come from the relevant provincial conservation authority, accompanied by a covering letter confirming that the draft BMP-E is consistent with these norms and standards. In the case of a BMP-E that is not part of a biodiversity stewardship

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[32] If the lead implementer is not the provincial conservation authority, the provincial conservation authority may wish to support the lead implementer in this process.

programme, the submission must come from the lead implementer of the BMP-E, [33] accompanied by a covering letter and the letter from SANBI confirming that the draft BMP-E is consistent with these norms and standards.

- The Minister must acknowledge receipt of the BMP-E within 90 days, stating whether the he or she is willing to approve the draft BMP-E for publication. If the Minister is not willing to approve the draft BMP-E for publication, he or she must provide the person or organisation who submitted the BMP-E with clear reasons for the failure of the BMP-E to be approved for publication. Before approving the BMP-E for publication, the Minister is obliged to identify a suitable person, organisation or organ of state willing to be responsible for the implementation of the plan – this must be the lead implementer identified in the draft BMP-E.

- If the Minister approves the draft BMP-E for publication, he or she must then:
  - o determine the manner of implementation of the plan (this is summarised in section F of the BMP-E, "BMP-E at a glance"),
  - o assign responsibility for the implementation of the BMP-E to the identified lead implementer (this can be done by means of a letter from the Minister to the lead implementer).
  - o publish the BMP-E by notice in the Gazette,

- If the Minister approves the draft BMP-E for publication, he or she may also enter into one or more BMAs regarding the implementation of the BMP-E or an aspect of it. This can be included in the notice by which the BMP-E is published in the Gazette, or done by means of an additional notice in the Gazette.

- The Minister must undertake consultation and public participation in accordance with Sections 99 and 100 of the Biodiversity Act. This includes inviting comment from the public on the draft BMP-E and giving due consideration to any representations or objections received. The Minister may request SANBI's assistance and/or the assistance of the relevant provincial conservation authority in considering and responding to such representations and objections. If necessary, the Minister may request the person or organisation who submitted the BMP-E to make changes that address the representations or objections received. If the representations or objections received indicate that substantial revisions are required to the draft BMP-E,[34] the Minister may return the draft BMP-E to the person or organisation who submitted it with a requirement for further engagement with the relevant stakeholders. In such a case the draft BMP-E may be resubmitted to the Minister only once the relevant representations or objections have been addressed and the review phase (Phase 4) has been repeated.

- Once the consultation and public participation process has been successfully concluded, the Minister must then publish the final BMP-E by notice in the Gazette, together with the accompanying BMA(s) if applicable.

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[33] As in Phase 4, if the lead implementer is not the provincial conservation authority, the provincial conservation authority may wish to support the lead implementer in this process.
[34] Substantial revisions would include, for example, substantive changes to the long-term biodiversity objective(s), the management objectives and/or the high-level action plan.

Note that BMP-Es are <u>not</u> required to be approved by MinTech or MINMEC (DEA's decision-making structures). BMP-Es that are not part of biodiversity stewardship programmes may be submitted to MinTech's Working Group 1 for noting only, not for approval.

Phase 6: Implementation

The purpose of this phase is to implement the BMP-E. The annual operational plan must be used as the basis for implementation, and must be reviewed annually by the lead implementer in consultation with essential stakeholders.

Phase 7: Monitoring and evaluation

The purpose of this phase is to monitor the implementation of the management actions identified in the BMP-E, and to evaluate whether the management actions are contributing to the achievement of the management objectives. If possible, progress towards achievement of the long-term biodiversity objective(s) should be evaluated as well.[35] Feedback from monitoring efforts may be used to adapt the management actions and the annual operational plan. As suggested in Chapter 6, a brief monitoring report drawn up at least annually would also provide a useful basis for the Minister's five-year review process (see Phase 8).

Phase 8: Five-year review

According to Section 46 of the Biodiversity Act, the Minister must review a published BMP at least every five years, and assess compliance with the plan and the extent to which its objectives[36] are being met. In order to fulfil this requirement the Minister is likely to require the assistance of the relevant provincial conservation authority as well as access to the monitoring information gathered as part of Phase 7.

If the timeframe of a BMP-E is longer than five years, the BMP-E need not be republished at the end of each five year period, provided that no substantial amendments are required following each five-yearly review.[37]

The Minister may amend a published BMP on own initiative or at the request of an interested person, organisation of organ of state. Before amending the BMP the Minister must consult the implementer of the BMP and any organ of state whose activities are affected by the

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[35] As noted earlier, the timeframes of the BMP-E may not be long enough to make a meaningful evaluation of whether the long-term biodiversity objective(s) are being achieved. In such cases the management objectives act as proxies for the long-term biodiversity objective.
[36] The Biodiversity Act does not specify whether these are biodiversity objectives or management objectives. Ideally both should be assessed, but as noted five years may be too soon to assess whether long-term biodiversity objectives are being met.
[37] Substantial amendments would include, for example, amendments to the long-term biodiversity objective(s), the management objectives and/or the high-level action plan.

implementation of the BMP, and must follow the consultative process required in Sections 99 and 100 of the Biodiversity Act.

8. Relationship of BMP-Es to other tools for biodiversity conservation

BMP-Es are one of a series of tools available to support the conservation, management and sustainable use of biodiversity. This chapter clarifies the relationship of BMP-Es to selected other tools including provincial spatial biodiversity plans, bioregional plans, biodiversity sector plans, and listing of threatened or protected ecosystems. The relationship of BMP-Es to Integrated Development Plans (IDPs), Spatial Development Frameworks (SDFs), Environmental Management Frameworks (EMFs), Catchment Management Strategies (CMSs) and Catchment Management Plans is also briefly discussed.

8.1 Provincial spatial biodiversity plans

Most provinces have developed or are developing a province-wide spatial biodiversity plan, as encouraged by the National Biodiversity Framework 2008.[38] These provincial spatial biodiversity plans, based on systematic biodiversity planning principles and methods, form the basis for bioregional plans/biodiversity sector plans and for provincial protected area expansion strategies. They also provide a useful context for BMP-Es and may help to identify ecosystems for which BMP-Es could be developed. Provincial spatial biodiversity plans are landscape-scale tools which provide maps of biodiversity priority areas, while the focus of a BMP-E is on management of a particular ecosystem at the local scale.

8.2 Bioregional plans

Bioregional plans are spatial biodiversity plans that are published in terms of the Biodiversity Act. They consist of maps that identify Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) accompanied by land-use guidelines for CBAs and ESAs. A bioregional plan must be based on a systematic biodiversity plan, usually a provincial spatial biodiversity plan and usually at a scale of 1:50 000 or finer. Bioregional plans are aligned with administrative boundaries, usually district, local or metropolitan municipalities.

The focus of a bioregional plan is on maps and guidelines to inform land-use planning and decision-making in a range of sectors, while the focus of a BMP-E is on management of a particular ecosystem at the local scale. A bioregional plan can provide a useful context for the development of a BMP-E, and it may be appropriate to develop a BMP-E for a CBA or ESA identified in a bioregional plan (see Chapter 3 on criteria for selecting ecosystems for BMP-Es).

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[38] DEA. 2009. National Biodiversity Framework. Notice no.813, Gazette no.32474, 3 August 2009

8.3 Biodiversity sector plans

Biodiversity sector plans are unpublished bioregional plans. Their relationship to BMP-Es is the same as that of bioregional plans.

8.4 Listed ecosystems

Listed threatened or protected ecosystems are specified in Section 43 of the Biodiversity Act as one of the categories of ecosystems for which BMP-Es may be developed. A BMP-E may be developed for a whole listed ecosystem, a group of listed ecosystems or part of a listed ecosystem, in accordance with the criteria for selecting ecosystems for BMP-E discussed in Chapter 3. Not all listed ecosystems require a BMP-E, and a BMP-E is not necessarily an appropriate tool for the management of a listed ecosystem.

8.5 Selected other tools relevant to environmental management and biodiversity conservation

Integrated Development Plans
Municipal IDPs could highlight existing BMP-Es, and could highlight ecosystems for which BMP-Es should be developed.

Spatial Development Frameworks
Municipal SDFs should incorporate CBAs and ESAs from bioregional plans, biodiversity sector plans or provincial spatial biodiversity plans, and could highlight ecosystems for which BMP-Es should be developed.

Environmental Management Frameworks
EMFs should incorporate CBAs and ESAs from bioregional plans, biodiversity sector plans or provincial spatial biodiversity plans. If a BMP-E is developed in an area for which an EMF already exists, the BMP-E may be able to draw on valuable information generated by the EMF. If an EMF is developed for an area in which a BMP-E already exists, the EMF should take into account the biodiversity objective(s) and management objectives of the BMP-E as well as the activities that are not compatible with the objectives of the BMP-E (see Chapter 6 on the content of a BMP-E, especially section C).`

Catchment Management Strategies and Plans
Every Catchment Management Agency (CMA) must develop a Catchment Management Strategy (CMS) for its Water Management Area. CMSs should highlight existing BMP-Es for freshwater ecosystems, and could highlight freshwater ecosystems for which BMP-Es should be developed. CMAs may also develop Catchment Management Plans for particular catchments or sub-catchments. Where applicable these should be aligned and cross-

referenced with BMP-Es that exist or are being developed in the catchments or sub-catchments concerned.

9. Roles of DEA, SANBI, Provincial Conservation Authorities and the Minister in relation to BMP-Es

DEA's role in relation to BMP-Es includes the following:

- Developing norms and standards for BMP-Es,
- Facilitating the submission of BMP-Es to the Minister, and facilitating the public comment process,
- Establishing and maintaining a register of published BMP-Es.

SANBI's role in relation to BMP-Es includes the following:

- Supporting the development of norms and standards for BMP-Es,
- Encouraging BMP-E pilots, for example through bioregional programmes and provincial biodiversity stewardship programmes,
- For BMP-Es that are not part of biodiversity stewardship programmes: reviewing draft BMP-Es to ensure that they are consistent with these norms and standards, and providing a letter to that effect with a unique reference number for each BMP-E,
- If necessary, assisting the Minister with considering and responding to representations and objections received as part of the public participation process for a BMP-E,
- Providing electronic access to published BMP-Es with accompanying GIS files of the ecosystems concerned, via the Biodiversity Advisor website (http://biodiversityadvisor.sanbi.org) or other equivalent,[39]
- Monitoring overall progress with development and publication of BMP-Es, as part of the National Biodiversity Monitoring Framework.

The role of provincial conservation authorities in relation to BMP-Es includes the following:

- Being involved in the development of all BMP-Es, whether or not they are developed as part of biodiversity stewardship programmes,
- For biodiversity stewardship BMP-Es: reviewing draft BMP-Es to ensure that they are consistent with these norms and standards, allocating a unique reference number to each BMP-E in consultation with SANBI, and submitting these BMP-Es to the Minister,
- For BMP-Es that are not part of biodiversity stewardship programmes: providing written support for draft BMP-Es before they are submitted to SANBI for review,
- If necessary, assisting the Minister with considering and responding to representations and objections received as part of the public participation process for a BMP-E.

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[39] Additional working documents may also be made available on the Biodiversity Advisor website (http://biodiversityadvisor.sanbi.org) or other equivalent, or may be lodged with the lead implementer.

The Minister's role in relation to BMP-Es includes the following:[40]

- Publishing norms and standards for BMP-Es,
- Acknowledging receipt of draft BMP-Es submitted for publication, and stating whether he/she is willing to approve them for publication,
- In cases where the Minister is not willing to approve a draft BMP-E for publication, providing the person or organisation who submitted the BMP-E with clear reasons for this,
- Assigning responsibility for implementing the plan to the person, organisation or organ of state identified in the BMP-E as the lead implementer,
- Publishing draft BMP-Es for comment, including entering into one or more BMAs if applicable,
- Giving due consideration to any comments received,
- Publishing final BMP-Es,
- Reviewing published BMP-Es at least every five years, and assessing compliance with the plan and the extent to which its objectives are being met.

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[40] As noted in footnotes 1 and 6, it is anticipated that the Biodiversity Act will be amended to allow for the Minister or MEC to publish a BMP and to enter into a BMA. If such amendments are made, the role of the Minister as set out here will also apply to the MEC.

Appendix: Sections of the Biodiversity Act relating to BMPs

Note that Section 45 of the National Environmental Management: Biodiversity Act (Act 10 of 2004) was amended by Section 34 of the National Environment Laws Amendment Act (Act 14 of 2009). The amended version of Section 45 is reflected below.

Biodiversity Management Plans
43. (1) Any person, organisation or organ of state desiring to contribute to biodiversity management may submit to the Minister for his or her approval a draft management plan for—
(a) an ecosystem—
        (i) listed in terms of section 52; or
        (ii) which is not listed in terms of section 52 but which does warrant special conservation attention;
(b) an indigenous species—
        (i) listed in terms of section 56; or
        (ii) which is not listed in terms of section 56 but which does warrant special conservation attention; or
(c) a migratory species to give effect to the Republic's obligations in terms of an international agreement binding on the Republic.
(2) Before approving a draft biodiversity management plan, the Minister must identify a suitable person, organisation or organ of state which is willing to be responsible for the implementation of the plan.
(3) The Minister must—
(a) publish by notice in the Gazette a biodiversity management plan approved in terms of subsection (1);
(b) determine the manner of implementation of the plan; and
(c) assign responsibility for the implementation of the plan to the person, organisation or organ of state identified in terms of subsection (2).

Biodiversity management agreements
44. The Minister may enter into a biodiversity management agreement with the person, organisation or organ of state identified in terms of section 43(2), or any other suitable person, organisation or organ of state, regarding the implementation of a biodiversity management plan, or any aspect of it.

Contents of biodiversity management plans
45. A biodiversity management plan must—
(a) be aimed at ensuring the long-term survival in nature of the species or ecosystem to which the plan relates;
(b) provide for the responsible person, organisation or organ of state to monitor and report on progress with implementation of the plan;
(c) be consistent with—
        (i) this Act;
        (ii) the national environmental management principles;

(iii) the national biodiversity framework;

(iv) any applicable bioregional plan;

(v) any relevant international agreements binding on the Republic; and

(d) take into consideration—

(i) any plans issued in terms of Chapter 3 of the National Environmental Management Act;

(ii) any municipal integrated development plan; and

(iii) any other plans prepared in terms of national or provincial legislation that is affected.

Review and amendment of biodiversity management plans

46. (1) The Minister must review a biodiversity management plan published in terms of section 43(3) at least every five years, and assess compliance with the plan and the extent to which its objectives are being met.

(2) The Minister, either on own initiative or on request by an interested person, organisation or organ of state, may by notice in the Gazette amend a biodiversity management plan published in terms of section 43(3).

(3) Before amending a biodiversity management plan, the Minister must consult—

(a) any person, organisation or organ of state implementing the plan; and

(b) any organ of state whose activities are affected by the implementation of the plan.

Consultation

47. (1) Before adopting or approving a national biodiversity framework, a bioregional plan or a biodiversity management plan, or any amendment to such a plan, the Minister must follow a consultative process in accordance with sections 99 and 100.

Co-ordination and alignment of biodiversity plans

48. (1) The national biodiversity framework, a bioregional plan and a biodiversity management plan prepared in terms of this Chapter may not be in conflict with—

(a) any environmental implementation or environmental management plans prepared in terms of Chapter 3 of the National Environmental Management Act;

(b) any integrated development plans adopted by municipalities in terms of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000);

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

(d) any other plans prepared in terms of national or provincial legislation that are affected.

(2) ...

(3) The Institute may—

(a) assist the Minister and others involved in the preparation of the national biodiversity framework, a bioregional plan or a biodiversity management plan to comply with subsection (1)