Management Effectiveness of South Africa's Protected Areas

Department of Environmental Affairs

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REPUBLIC OF SOUTH AFRICA

This report addresses goal 4.2 of the Convention on Biological Diversity's Programme of Work for protected areas. The project leading to the report was a collaborative effort, led by the Forum of Chief Executive Officers of Protected Areas, managed by the Department of Environmental Affairs and with the full participation of the following protected area management authorities –

Department of Environmental Affairs	DEA
Department of Agriculture, Forestry & Fisheries	DAFF
South African National Parks	SANParks
iSimangaliso Wetland Authority	iSimangaliso
Western Cape Nature Conservation Board	CapeNature
Eastern Cape Parks Board[1]	E C Parks
Ezemvelo Kwazul-Natal Wildlife	EKZNW
Free State Department of Tourism, Environment & Economic Affairs	Free State
Gauteng Department of Agriculture & Rural Development	Gauteng
Limpopo Department of Economic Development, Environment & Tourism	Limpopo
Mpumalanga Tourism & Parks Agency	MTPA
Northern Cape Department of Tourism, Environment & Conservation	N Cape
North West Parks & Tourism Board	NWPTB

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[1] Now the Eastern Cape Parks and Tourism Agency

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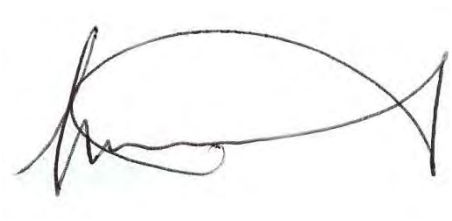
FOREWORD

As a Contracting Party to the Convention of Biological Diversity, South Africa has an obligation to meet the goals set out in the Programme of Work for Protected Areas. This report addresses Goal 4.2 in which Parties are to undertake management effectiveness evaluations of at least 30% of their protected areas.

South Africa is a complex country and this is reflected both in its biodiversity and its conservation management structures. We have no less than 13 management authorities responsible for the 294 State protected areas at national and provincial levels.

While we take pride in the management of our biodiversity, this is the first national assessment of the effectiveness of the management of our protected areas. To do this assessment we adapted the Management Effectiveness Tracking Tool (METT-SA) for our conditions and proceeded with a nationally coordinated self assessment of our management by the management authorities themselves. This assessment can be considered to be no more than a first scan to provide a baseline against which the individual management authorities can measure their future performance. The exercise has identified a number of problem areas, in the tool itself, in the method of application and in the management of our protected areas.

The baseline will be used to set targets in both the short and the long term for the improvement of the management of our protected areas, and to measure that improvement.



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Chairman: CEO Forum on Protected Areas
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PART 1

1. Introduction

The World Parks Congress (Durban, 2003) celebrated the fact that the world had achieved and indeed passed the target of including 10% of its terrestrial area included in protected areas. However, concern was expressed that a number of these protected areas were no more than "paper parks" or protected areas in name only.

This concern was one of the issues taken up by the Convention on Biodiversity's VII Conference of Parties held in 2004 to be addressed in the Programme of Work for Protected Areas approved at the conference.

The overall purpose of the programme of work on protected areas is to support the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas that collectively, *inter alia* through a global network contribute to achieving the three objectives of the Convention and the 2010 target to significantly reduce the current rate of biodiversity loss at the global, regional, national and sub-national levels and contribute to poverty reduction and the pursuit of sustainable development, thereby supporting the objectives of the Strategic Plan of the Convention, the World Summit on Sustainable Development's Plan of Implementation and the Millennium Development Goals.

The programme of work consists of four interlinked elements intended to be mutually reinforcing and cross-cutting in their implementation. The fourth programme element deals with standards, assessment, and monitoring. This report specifically addresses Goal 4.2 - *To evaluate and improve the effectiveness of protected areas management* - where parties are expected to implement management effectiveness evaluations of at least 30% of their protected areas by 2010, and include this information in national reports to the Convention.

South Africa's CEO Forum on Protected Areas, comprising of the chief executive officers of the protected area management authorities and the heads of provincial environment departments, chaired by the Department of Environment, adopted a recommendation to conduct a national assessment of the management effectiveness of South Africa's protected areas at its meeting of 11 November 2008. The project was to be a collaborative one, led by the Department of Environment Affairs, with participation by all 12 management authorities. A sub-committee to provide oversight for the project was established (Part 5), and members were responsible for leading the process in their respective management authorities.

Only terrestrial protected areas (state owned and managed at national and provincial level) were considered as marine protected areas were assessed in a separate study (Tunley 2009)

1.1 Policy and Legislative Framework

The White Paper on the Conservation and Sustainable use of South Africa's Biological Diversity is South Africa's policy for the implementation of its obligations in terms of the Convention on Biological Diversity. Our approach to establishing a system of representative, ecologically viable protected areas

is set out in this paper. This is further developed in the National Protected Areas Expansion Strategy (2010).

South Africa's system of protected areas is established in the National Environmental Management: Protected Areas Act, 2003 (the Act) and comprises of the following types of protected areas –

- Special nature reserves as declared in terms of section 18 of the Act;
- National Parks as declared in terms of section 20 of the Act;
- Nature reserves as declare in terms of section 23 of the Act;
- Protected environments as declared in terms of section 28 of the Act;

In addition the Act recognises the following protected areas as part of South Africa's system of protected areas

- World heritage sites as proclaimed in terms of section 1 of the World Heritage Convention Act, 1999;
- Marine protected areas declared in terms of section 43 of the Marine Living Resources Act, 1998;
- Forest nature reserves and forest wilderness areas declared in terms of section 8 of the National Forests Act, 1998; and
- Mountain catchment areas declared in terms of the Mountain Catchment Areas Act, 1979

The declaration of protected environments and mountain catchment areas was designed to include land which is used for activities other than conservation, and in private ownership and often without the assignment of a management authority. As such they are considered buffer areas and therefore have not been included in this study.

1.2 Management of protected areas in South Africa

A Register of Protected Areas has been established in terms of section 10 of the National Environmental Management: Protected Areas Act, 2003. There are 294 state owned and managed (at national and provincial level) terrestrial protected areas recorded in the Register, with a total area of 6 898 834 ha representing 6,2% of South Africa's continental land area. These protected areas range in size from 1 915 571 ha (Kruger National Park) to 4,2 ha (Lilie Forest Nature Reserve). In addition, there are 21 marine protected areas, and the Prince Edward Islands (33 500 ha) are declared as a special nature reserve. These protected areas are managed by 13 different management authorities.

Table 1: Number of terrestrial protected area types in South Africa and their area

Type of protected area	Number	Area
Special nature reserves	2	33 501
National parks	23	3 820 737
Nature reserves	216	2 344 083
Forest protected areas	46	341 317
World Heritage sites	7	1 273 399
Total	294	7 813 037

In terms of the Constitution of the Republic of South Africa 1996, nature conservation, with the exception of national parks and marine resources is a concurrent legislative function. This means that legislation for conservation (including protected areas) may be enacted at both national and provincial levels. Therefore management authorities for protected areas are established at both national and

provincial level. At present there are four management authorities for protected areas at national level and nine at provincial level. This has led to a range of management styles, each with its own advantages and disadvantages. Table 1 provides the number of protected areas by legal type managed by each management authority.

Table 2: Terrestrial protected areas in South Africa by management authority (data from the Register of Protected Areas as of April 2010)

	Special nature reserves	National parks	Nature reserves	World Heritage sites	Forest protected areas	Total no	Area (ha)
DEA	1	-	-	1*	-	2	33 501
DAFF	-	-	-	-	18	18	20 748
SANParks	-	23	-	1**	-	23	3 829 737
iSimangaliso	-	-	-	1	-	1	234 564
CapeNature	1	-	41	-	1	43	747 679
E C Parks	-	-	14	-	9	23	418 192
EKZNW	-	-	65	1	16	82	522 809
Free State	-	-	18	-	-	18	203 244
Gauteng	-	-	6	-	-	6	26 987
Limpopo	-	-	24	-	2	26	189 239
MTPA	-	-	27	-	-	27	248 937
N Cape	-	-	6	-	-	6	62 820
NWPTB	-	-	15	-	-	15	243 191
TOTALS	2	23	216	4	46	291	6 781 648

In reading Table 2 it should be noted that * while DEA remains the management authority for the Cape Floral Region World Heritage site, sections are managed by SANParks, CapeNature and EC Parks and th area is included under them); ** Mapungubwe is declared both a national park and a World Heritage site. The three World Heritage sites declared as cultural sites (Robben Island, Fossil Hominid sites and Richtersveld cultural landscape) are not included in Table 2 or the assessment as they are cultural World Heritage sites, managed as such and not primarily for the conservation of biodiversity.

1.3 Biomes of South Africa

In South Africa nine biomes are recognized – Fynbos, Succulent Karoo, Desert, Nama-Karoo, Grassland, Savanna, Albany thicket, Indian Ocean Coastal Belt and Forest (Fig 1). The three largest biomes (Savanna (32% area of South Africa), Grassland (27,9%), and Nama-Karoo (19,5%)) together account for almost 80% of the total area of the country while the two smallest (Forest (0,3%) and Desert (0,5%)) account for less than 1% of the area (Mucina and Rutherford 2006).

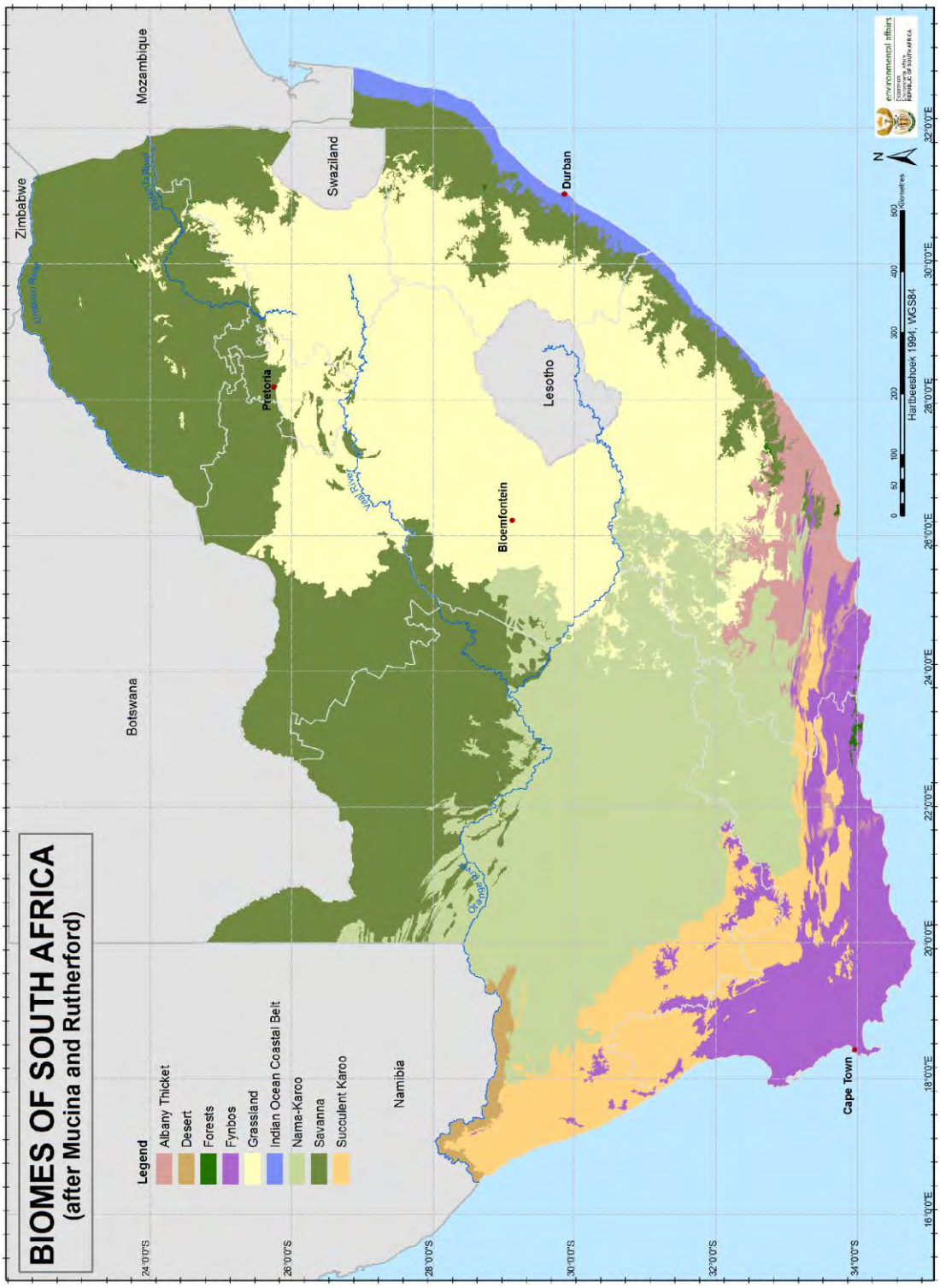

Figure 1: Biomes of South Africa

Distribution of protected areas by biome is shown in table 3

Table 3: Protected areas by biome

Biome	Special nature reserves	National parks	Nature reserves	World Heritage sites	Forest protected areas
Albany thicket	-	2	11	-	5
Coastal	-	-	31	1	1
Desert	-	1	2	-	-
Forest	-	3	5	-	2
Fynbos	1	4	30	1	12
Grassland	-	2	63	1	10
Nama-karoo	-	2	3	-	0
Savanna	-	6	63	1	7
Succulent karoo	-	2	2	-	-
*Sub-Antarctic**	1	-	-	-	-

The discrepancies in the total number of protected areas between Table 2 and Table 3 is due to the GIS database (from which Table 3 was derived) consolidating certain areas (eg Cape Floral Kingdom World Heritage site comprises of a number of Forest protected areas, nature reserves and a national park) thereby reducing the total number of areas. The three cultural World Heritage sites are excluded.

1.4 Approach

In assessing the effectiveness of the management of South Africa's protected areas, the following steps were taken. A review of international best practice was followed by a review of assessments done in South Africa by various management authorities in the country. This was followed by a study tour to Australia, led by the Department of Environmental Affairs with representatives from most of the management authorities in South Africa. These three activities informed the CEO's Forum decision to –

- Undertake a national assessment of the management effectiveness of South Africa's protected areas led by the Department of Environmental Affairs;
- To use the Management Effectiveness Tracking Tool as adapted for South Africa (METT-SA) to do the assessment to establish a common baseline; and
- To establish a sub-committee to oversee the project

Two meetings of the sub-committee were held. The first introduced the tool to be used, a version of the WWF/World Bank's Management Effectiveness Tracking Tool adapted for South Africa known as the METT-SA Version 1(2008), and discussed the process to implement the project. The second meeting was held to review the tool after having completed the exercise, and to consider improvements for a METT-SA Version 2.

The members of the sub-committee were also responsible for convening workshops for their individual management authorities where the background and reasons for the study were presented; the METT-SA was introduced as the tool of choice for the study and then guiding the participants through an exercise of applying the METT-SA. In the case of SANParks, workshops were held with each cluster (management unit). The management authorities themselves were responsible for completing the score-sheets for each protected area and submitting them for analysis.

The score sheets were analysed and results for 230 terrestrial protected areas are presented. Results for each of the legal protected area type in terms of the National Environmental Management: Protected Areas Act, 2003 (special nature reserves, national parks, World Heritage sites and nature reserves) are presented next and finally pressures and threats are presented for all protected areas and by biome.

Richtersveld National Park – desert biome

PART 2

2. Previous assessments done in South Africa

A number of assessments of the management effectiveness of protected areas have been done by various institutions in South Africa. A range of methodologies have been used over an extended time frame. In addition, since 2004 a number of changes have been taking place in conservation in South Africa, where there has been changes in responsibilities, in legislation, and in institutions. Therefore no attempt has been made to compare the results of these studies. Here we set out what assessments have been done in which types of protected areas.

2.1 Process

A literature review was followed by a request to all protected area management authorities for information on any processes undertaken by them.

No attempt was made to compare results. This has been done internationally, where the different approaches have been compared (Leverington, et al 2008).

2.2 Results

Based on a literature search and responses from protected area management authorities, six different tools or methods have been used to assess the management effectiveness of state owned and managed protected areas in South Africa over the period 2004 to 2009. These have been variously applied to special nature reserves, national parks, nature reserves, protected environments, World Heritage sites, areas protected in terms of the National Forest Act, 1998 and marine protected areas

2.2.1 RAPPAM

The Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) method developed by the IUCN provides policy makers and protected area authorities with a relatively quick and easy method to identify major trends and issues that needs to be addressed for improving management effectiveness in any given system of protected areas. The RAPPAM methodology is designed for broad-level comparison among many protected areas that together make a protected area network or system (Ervin 2003, 2007). A comprehensive testing of this tool was done in KwaZulu Natal (Goodman 2003) followed by Mpumalanga[2].

2.2.2 METT

The Management Effectiveness Tracking Tool (METT), developed by the WWF in collaboration with the World Bank, has been designed to track and monitor progress towards worldwide protected area management effectiveness. The primary aim of the tracking tool is to supply consistent data about the progress of protected area management over time. The World Bank has been using the METT in monitoring its projects since 2001. The Global Environmental Facility (GEF) has also made the METT mandatory for use in all projects in protected areas funded by GEF-3 grant. As such it has been applied in the C.A.P.E. (Cape Action for People and Environment) programme as well as the uKhahlamba-

[2] Looke pers comm

Drakensberg World Heritage site. In addition the Free State, the Eastern Cape Parks and CapeNature tested this tool in their protected areas[3].

2.2.3 SoB

The State of Biodiversity report (SoB) developed by SANParks for their own use is aimed at assessing the effectiveness of SANParks management of its biodiversity. It forms an important component of the organisations Balanced Score Card assessment tool aimed at measuring SANParks management effectiveness (Knight 2007). The State of Biodiversity report has been done for all national parks annually since 2007.

2.2.4 PAIME

The Protected Areas Integrity Management Evaluation (PAIME) is based on the SANParks State of Area Integrity Management and tested by the Eastern Cape Parks. It is based on the assumption that protected areas are poorly managed; the management authority is inefficient in its operations, and lacks tools for measuring management effectiveness. It is aimed at exposing persons responsible for the maintenance of area integrity of protected areas order to establish the quality and standard of area integrity management effectiveness of the management authority as assessed at operational levels with a strong emphasis on protected area safety and security within the context of a particular protected area.

2.2.5 SoMPA

The State of marine protected areas (SoMPA) tracks and monitors progress that has been made in the last five years, based on the areas of concerns that have been highlighted by previous reviews (Bewane 2008).

2.2.6 SoF

State of forests (SoF) monitors progress toward sustainable forest management in terms of a set of criteria, indicators and standards developed in terms of the National Forests Act, 1998 (Anon 2005).

2.2.7 Summary of results

Besides the information found in the literature, information on management effectiveness assessments were received from CapeNature (for nature reserves and part of a World Heritage site) , Eastern Cape Parks Board (for nature reserves and part of a World Heritage site), Ezemvelo KZN Wildlife (for nature reserves and two World Heritage sites), Free State (nature reserves), marine protected areas, Mpumalanga Tourism and Parks Agency (nature reserves), SANParks (national parks and one World Heritage site) and for the uKhahlamba-Drakensberg World Heritage site[4]. Table 4 shows which methodologies have been applied to which protected area type.

[3] Balfour, Hayter, Mtimkhulu, Palmer pers comm
[4] Balfour, Boyd, Goodman, Hayter, Knight, Looke, Mtimkhulu, Palmer pers comm

Table 4: Protected area type by Methodology

Where: METT = Management Effectiveness Tracking Tool, RAPPAM = Rapid Assessment and Prioritization of Protected Area Management, SOB = State of Biodiversity, PAIME = Protected Area Integrity Management Evaluation, SoF = State of Forests, SoMPA = State of Management of Marine Protected Areas

	METT	RAPPAM	SoB	PAIME	SoF	SoMPA
Special nature reserves	1	-	-	-	-	-
National parks	9	-	20	-	-	2
Nature reserves	74	116	-	14	-	-
Protected environments	2	-	1	-	-	-
World Heritage sites	2	3	1	1	-	1
Forest protected areas	30	19	-	3	18	-
Marine protected areas	10	-	2	-	-	22
TOTALS	128	138	23	18	18	25

In reading Table 4 it should be noted that the World Heritage sites assessed include national parks, nature reserves and forest reserves. In each of three World Heritage sites even though some of these may not have been completed , the site was considered having been assessed. Those national parks, nature reserves and forest reserves included in World Heritage sites have been counted as national parks, nature reserves or forest reserves which leads to double counting. Finally some areas have been assessed using more than one methodology.

2.3 Discussion

Given the caveats above, it is estimated that 171 protected areas were assessed for their management effectiveness over the period 2004 to 2010. This includes 58% of our terrestrial protected areas and 100% of our marine protected areas.

During that time span a number of changes in management responsibilities have been effected, particularly with regard to state forests and forest protected areas. These areas are being released from forestry, and most of them are being either assigned to or handed over to protected area management authorities by the Department of Agriculture, Forestry and Fisheries to be managed as nature reserves and or World Heritage sites or national parks. The most obvious of these being the transfer of the Garden Route indigenous forests to SANParks (now declared as the Garden Route National Park), the transfer of state forests to iSimanagaliso Wetland Authority to form part of the iSimangaliso Wetland Park World Heritage site and the transfer of state forests and wilderness areas to the uKahlamba-Drakensberg World Heritage site, managed by Ezemvelo KZN Wildlife.

The three management authorities most active in repeat assessment are SANParks, Ezemvelo KZN Wildlife and CapeNature.

PART 3

3. Assessment of management effectiveness of South Africa's protected areas using METT-SA

Part 3 reviews the process of adaptation of the WWF/World Bank Management Effectiveness Tracking Tool (METT) for the assessment of effective management of South African protected areas. The process that led to the development of a South African version (METT-SA version1) is described here. This part further describes the characteristics and application of METT-SA version1 to all terrestrial protected areas in South Africa. As a result of dialogue between all role players, during the assessment process, refinements were made to the METT-SA version 1. This led to the development of METT-SA Version 2, which after further refinement, will be used for future assessments and will include all protected areas.

3.1 The METT-SA Version 1 (2008)

The internationally accepted Management Effectiveness Tracking Tool (METT) was developed by the World Commission for Protected Areas (WCPA) and World Wide Fund for Nature (WWF) (Hocking et al. 2000) & (Stolton et al. 2003). It serves the function of a tracking tool to identify trends in the management effectiveness of protected areas. It has been widely tested and has been applied around the world. As part of the application of the METT in South Africa, the system was adapted to make it more applicable to South African conditions. The adapted version is known as METT-SA Version1 2008.

3.2 Process followed to develop the METT-SA Version 1 (2008)

In 2005, Beyond Horizons Consulting was appointed to adapt and apply the WWF/World Bank METT to protected areas managed by the City of Cape Town (Britton and Langley 2007). An extensive consultative and participatory process involving field staff, protected area managers and senior management was followed. In this process the original METT was amended to best meet the needs of the City of Cape Town. The result was a METT operating in Excel which allowed for automatic scoring and easier adjustment of the total score to account for non-applicable indicators. Guided by the principles of the Adaptive Management Cycle (Hockings et al. 2000), the indicators were grouped into the elements of adaptive management.

The adapted method was then applied to 24 protected areas managed by the City of Cape Town. Analysis of the results allowed the City of Cape Town to identify and rectify problems at both the organisational structure and protected area level. The City of Cape Town considered the exercise very worthwhile and it has had a profound effect on the way that the organisation is now operating.

Informed by the success of the City of Cape Town project, the Cape Action for People and the Environment (C.A.P.E.) programme in conjunction with the Department of Environmental Affairs agreed to further adapt the METT to make it applicable for the assessment of all protected areas in the Cape Floral Region. In 2007, Southern Hemisphere Consulting (with Beyond Horizons Consulting as sub-consultants) was appointed by the C.A.P.E. programme with funding from the Global Environmental Facility (GEF) to carry out this project. The adapted METT was applied to the assessment of 7 national parks managed by SANParks, 15 nature reserves managed by CapeNature, 10 nature reserves

managed by Eastern Cape Parks and 5 protected areas managed by the Nelson Mandela Bay Metropole. As a result of the participatory process, further amendments were made to the METT such that:

- All applicable aspects of the National Environmental Management: Protected Areas Act, 2003 were included;
- The guidelines for management plans as compiled by the Department of Environmental Affairs were included (Cowan, 2006);
- Where necessary, questions relating to indicators were rephrased to reflect South African circumstances.

This trial version of the METT was then applied to all 46 protected areas managed by CapeNature. Feedback from this process informed further amendments, used to produce the final adaptation of the METT. At this stage the adapted METT was renamed as METT-SA Version 1 (2008) on the recommendation of the World Bank to avoid confusion with other adaptations being applied elsewhere in South Africa and Africa. Hereafter in this document, the METT-SA version 1 (2008) will be referred to as METT-SA.

3.3 Characteristics of METT-SA

The general characteristics of the METT-SA can be summarized as follows:

- It is a quick and easy self evaluation tool applied by protected area managers to track longer term trends in management effectiveness.
- The system has 33 indicators with 10 supplementary questions with a total score of 109.
- It includes of the relevant sections of the National Environmental Management: Protected Areas Act, 2003.
- Includes the Department of Environmental Affairs management plan guidelines (Cowan, 2006)
- It has an automatic scoring system in Excel including automatic adjustment of scores when non applicable items are excluded
- The score is automatically presented as a percentage of the adjusted total
- The questions relating to the indicators have been rephrased to better reflect South African circumstances
- The scores are grouped under the elements of adaptive management, providing an indication of where priority actions are required
- It has been extensively tested and has proved to be a practical management tool especially where the evaluation is carried out by way of an interactive discussion in a multidisciplinary team.

3.3.1 Strengths

- It is a quick and easy self evaluation (no external expertise is required) tool for managers
- It works best in an interactive group and as a result can also function as a management tool.
- It provides a baseline for uniform reporting

- It identifies priorities and records the next steps that the manager intends taking towards addressing these priorities.

3.3.2 Weaknesses

- When converting between the 2007 & 2003 versions of Excel, some of the automatic scoring particularly the "non applicable" items malfunction. This necessitated the production of two versions.
- It is weak on the measurement of biodiversity objectives
- It is weak on the measurement of outcomes

Although the METT-SA includes indicators to score the presence of the latter two, there is a need for more detailed assessments for these.

3.4 Application of METT-SA

As the METT-SA is designed as an review of overall longer term progress, it should be applied at 2-3 year intervals.

It does not eliminate the need for other tools and should be complemented by other performance measurement tools. The results of the METT-SA will give an indication of priority areas for the application of additional tools.

As many of the items scored are outside of the control of the manager, it should under no circumstances be applied as a staff performance measure.

It is not intended to compare one area against another and should not be used for this purpose. If analyses of individual results are done for an organization, then these should merely be used to indicate trends and not compare areas.

3.5 Scope of assessment in South Africa.

Originally it was intended that all Marine Protected Areas (MPAs) should be included in the assessment. However, as the METT-SA required some adjustments to be fully applicable to MPAs and as an assessment of MPAs had been completed in 2009 (Tunley 2009) the assessment of further MPAs was suspended. Thus, only terrestrial protected areas managed at national and provincial level were assessed in this process. Full details of assessment of MPAs can be found in Tunley (2009). However an examination of the report revealed that the assessment was not a full METT and it is thus recommended that version 2 of the METT-SA be amended for application to MPAs in the next assessment.

3.6 Process followed

The project coordinator and the service provider attended workshops arranged by each of the protected area management authorities. At each workshop an introduction on the background of the study and the intent to report to the Convention on Biodiversity (CBD) was presented, followed by an introduction

to the METT-SA and its role in assessing management effectiveness. Participants were grouped at computers where they applied the METT-SA to selected protected areas. During these sessions the participants were assisted with any queries that they had. Feedback was also received on improvements to the METT-SA with the intent of producing version 2. In some instances the METT-SA was completed for the protected areas for that authority during the session. Otherwise the participants then arranged for each protected area to be assessed in groups with the staff of the protected area. The number and types of protected areas that were assessed and relevant authorities are shown in Table 5.

Table 5: Numbers and types of protected areas assessed per authority

Management authority	Special Nature Reserve	National Park	World Heritage site	Nature Reserve	Forest Reserve	Total
DEA	1	-	-	-	-	**1**
CapeNature	1	-	-	32	7	**40**
Eastern Cape	-	-	-	13	2	**15**
EKZNW	-	-	1	62	4	**67**
Free State	-	-	-	14	-	**14**
Gauteng	-	-	-	4	-	**4**
iSimangaliso	-	-	1	-	-	**1**
Limpopo	-	-	-	33	1	**34**
Mpumalanga	-	-	-	18	-	**18**
Northern Cape	-	-	-	6	-	**6**
North West	-	-	-	11	-	**11**
SANParks	-	18	1	-	-	**19**
	2	**18**	**3**	**193**	**14**	**230**

3.7 Notes with regard to the data

During the initial application of the METT-SA to protected areas managed by CapeNature, an error was found in the automatic scoring system. This was corrected and the scores which had been determined prior to this were amended. Thus the scores recorded in this report may differ from those used in the analysis conducted by CapeNature. A corrected set of results has been supplied to CapeNature. The data for CapeNature includes three marine islands which are managed as nature reserves. After examination of the scores they were retained in the data base as the evaluation did not differ significantly from the mainland nature reserves. The protected area known as False Bay Rocks, managed by CapeNature, was excluded from the assessment as these inundated at spring high tides.

During 2009, Ezemvelo KZN Wildlife (EKZNW) applied a version of the METT-SA to all protected areas under their control. The results obtained from this assessment required adjustment to be included in the national assessment. This entailed taking an average where indicators had been split, excluding indicators not in the national assessment and scoring all indicators out of a maximum of 3. The average deviation of the total average converted scores from the EKZNW scores was -1%. When

conducting detailed analyses or more in depth in investigations, it would be advisable to use the original EKZNW data and results reported in Carbutt and Goodman (2010)

As Mapungubwe National Park is both a World Heritage site and a national park, it was excluded from the national parks list and was only included in the analysis of World Heritage sites. The Tsitsikamma National Park and the Wilderness National Park were evaluated as a single unit as part of the Garden Route National Park.

During the workshop with Mpumalanga it was apparent that there was an inconsistency with the scores allocated to indicator 5.3: Heritage Resources Assessment. When the results were received, the scores for each protected area were adjusted to give a consistent response. The corrected results were supplied to Mpumalanga.

In this version of the METT-SA, Outputs and Outcomes were combined. They have been separated in version 2.

A feature of the METT-SA is that the total score is automatically reduced when indicators are recorded as "not applicable". Total scores and scores for the elements of the adaptive management cycle are thus automatically expressed as a percentage of the adjusted total.

3.8 Comparison of scores

The METT-SA is designed as an assessment tool to measure trends of how effectively a protected area is being managed. Thus, the score should not be seen as a "pass" or "fail" but as an indication of the level of effective management. It is also important to note that as many of the indicators measure items that are out of the direct control of the protected area manager (eg legal status, design, security of budget), the score should rather be a reflection on the ability of the organisation to effectively manage the protected area. As the METT-SA is site specific it is not intended to compare one area against another. If this is done it should only be to examine trends and not to "reward" or "punish". Whilst this report compares scores of different types of protected areas managed by 12 different management authorities, it must always be remembered that the purpose of this exercise is to examine overall trends and to advise the Department of Environmental Affairs towards applying corrective measures or provide assistance where required.

3.9 Setting norms and standards

Section 11 of the National Environmental: Protected Areas Act (NEM: PAA) allows the Minister to prescribe norms and standards for the achievement any objectives of the Act for both national and provincial protected areas. The Minister may also set indicators to measure compliance with the norms and standards. The Minister has yet to formally set such norms and standards for the performance of protected area management.

As the METT-SA is a self evaluation tool which detects trends in management effectiveness, it would be inappropriate to use the METT-SA to set performance standards. If achievement scores are set for the METT-SA, it will most likely influence the scoring during self assessment. Although EKZNW has set a standard of 77% (Carbutt and Goodman, 2010) for all their protected areas, it is questioned if this is the correct way to apply the METT-SA.

It is thus recommended that a participatory process be undertaken with all authorities to determine the most effective way of setting norms and standards. Given the wide range of scores achieved in this study, it may be advisable to set achievable standards and methods for each authority.

3.10 Performance bench marks used in this report

As an interim measure the national working group of the CEO's forum recommended that the national mean of scores be considered as the interim national norm for all authorities. At the time the mean of 49% was not known. A standard was not set. As the analysis progressed, it was clear the low mean of 49% was not a realistic bench mark against which to measure performance. As the mean was made up largely from the scores for provincially managed protected areas little variation was evident when nature reserves and forest reserves were compared to the national mean. Thus alternate interim bench marks were sought.

These were obtained from global study by the University of Queensland (Leverington et al 2008). It must be emphasized that these were merely used as guidelines in the absence of any norms or standards for South Africa.

3.10.1 Score categories

Leverington et al. (2008) conducted an analysis of results of various assessments carried out across the world. This report divided the scores into three categories:

- Less than 33%: Management clearly inadequate
- 33-67 %: Basic management with significant deficiencies
- 67% and above: Sound management

Although the above categories are merely based on a division of scores into three equal ranges, it was considered advisable to use the score of 67% and above as a very preliminary standard as a guideline in this report to determine the number of protected areas achieving sound management. Figures later in this report reflect these three divisions by colour (red = ≤33%, orange = 33-67%, green = ≥67%).

3.10.2 Minimum score for individual indicators

Leverington et al. (2008) set a minimum standard of 45% for individual indicators. Ideally a minimum score should be set for each indicator; however as an interim measure the minimum standard of 45% was applied in the assessment for this report. Scores were also compared to the national average for each indicator.

3.10.3 Indicators linked to effective management

Leverington et al (2008) conducted a correlation analysis on a wide range of international assessments. They concluded that there are 24 indicators that are strongly linked to effective management. At a workshop with CapeNature the equivalent South African indicators were aligned with these. The indicators were ranked according to the most important to improve overall scores and the ranking to improve outcomes.

For this study, the top 10 groupings were chosen as a possible instrument to assist in the decision of where priority action should be taken to improve overall score. These and the relevant METT-SA indicators are shown in Table 6. Note that it was decided to concentrate on improvement of overall

score as this is to have a more short term implication for the longer term impact on outcomes. There are however five groupings of indicators that have a joint influence on score and outcomes. These are shaded in Table 6.

3.10.3 The top ten and bottom ten indicators

Leverington et al (2008) found that there was a similarity in the top ten and lowest ten scoring indicators for a range of protected areas assessed using the tracking tool. In this study the lowest ten scoring indicators were assessed against the indicators linked to effective management.

Table 6: The top ten indicator groupings correlated to overall management effectiveness in ranked order

Ranking to improve overall score	Groupings with relevant METT-SA Indicators The shaded indicators are also in the top ten for influencing Outcomes
1	**Adequacy of infrastructure, equipment and facilities** 4.6 Adequacy of operational equipment & infrastructure 4.7 Maintenance of operational equipment & infrastructure
2	**Communication programme** 4.8 Education and awareness program
3	**Results and outputs have been produced** 5.2 Ecological condition assessment 5.3 Heritage condition assessment 5.4 Protection systems. 4.13 Performance evaluation system
4	**Natural resources and cultural protection** 1.1 Legal status 1.2 Protected area regulations 2.4 Land & water use planning outside of protected area 3.6 Law enforcement 4.2 Biodiversity resource management 4.3 Heritage resource management
5	**Management planning** 2.2 Strategic Management Plan (SMP) 2.3 Conservation Development Framework (CDF)
6	**Adequacy of relevant and available information** 1.4 Biodiversity resource inventory 1.5 Heritage resource inventory
7	**Research and monitoring** 3.1 Research and Monitoring programme
8	**Visitors catered for and impacts managed appropriately** 5.1 Visitor facilities. This is linked to 2.3 CDF
9	**Involvement of communities and stakeholders** 4.9 Neighbours 4.10 Advisory committee committee/forum 4.11 Community partners 4.12 Commercial tourism
10	**Effectiveness of administration, work programmes, internal organisation** 4.1 Annual Plan of Operations. This is linked to 2.2 SMP 4.5 Administrative systems

After Leverington et al. (2008)

PART 4

4. Results and discussion

4.1 All protected areas

Two hundred and thirty protected areas as listed in Table 5 were assessed for their management effectiveness. This equates to approximately 78% of South Africa's protected areas listed in the Register of Protected Areas.

Total scores (including supplementary items) ranged from 10% to 86%, with a total mean of 49% with a standard deviation of 10.72. One hundred and eight (47%) protected areas scores were below the mean, 121 (53%) above the mean and only 31 (14%) above the 67% level for sound management. The distribution of these scores is illustrated in Figure 2.

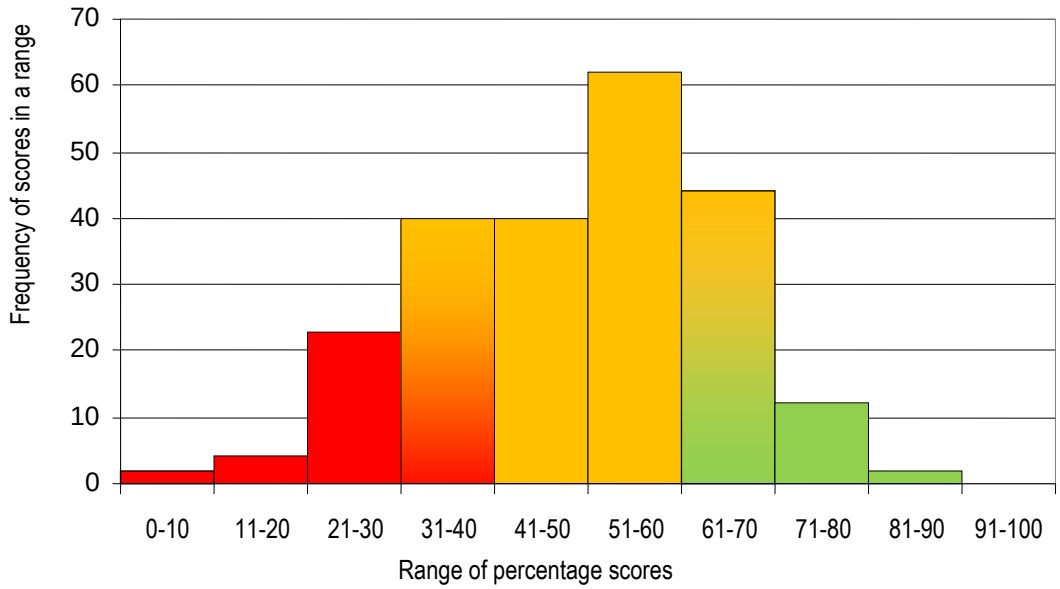

Figure 2: Percentage occurrence of total percentage scores for all protected areas
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

Although there are 52% of protected areas scoring above 50%, the national average is brought down by the large number of nature reserves scoring below 40%. Further analysis will seek to find the cause of the lower performing areas.

A comparison of scores against the means for Africa and the rest of the world from Leverington et al. (2008) is shown in Table 7.

Table 7: The scores for all of the South African protected areas compared to results from surveys conducted in Africa and the world

	South Africa (2009/10)	Africa (2010)+	Global* (2008)
Percentage mean	49	50	53
Percentage of protected areas below 33%	15	14	14
Percentage of protected areas above 67%	14	15	21

+Leverington pers comm
*Leverington et al (2008)

Before drawing conclusions from Table 7 it must be borne in mind that the African and Global data is based on scores calculated from a range of different methods. The average for Africa also includes scores from South Africa, but not the results of this study. Bearing this in mind, South Africa compares reasonably well against Africa, but is below the Global mean for the 2008 data. .

4.1.1 Scores for elements of adaptive management

Leverington et al. (2008) found that the strongest correlation between the grouped scores for adaptive management elements and overall effectiveness lay with *Inputs* and or a combination of *Inputs* and *Process*. Figure 3 gives an indication that a national level, attention should be given to both *Inputs* and *Process*. However, in order to determine where interventions would be most effective, it is essential that comprehensive management plans that set measureable targets be put in place.

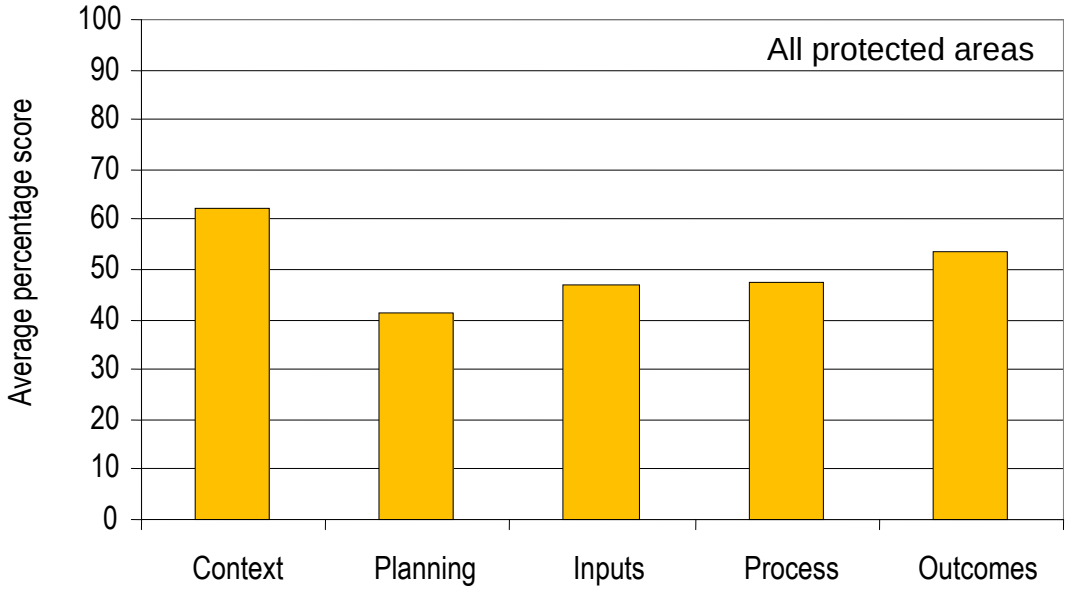

Figure 3: Average Score for adaptive management elements for all protected areas
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

4.1.2 Indicators

The national average for each indicator is shown in Figure 4.

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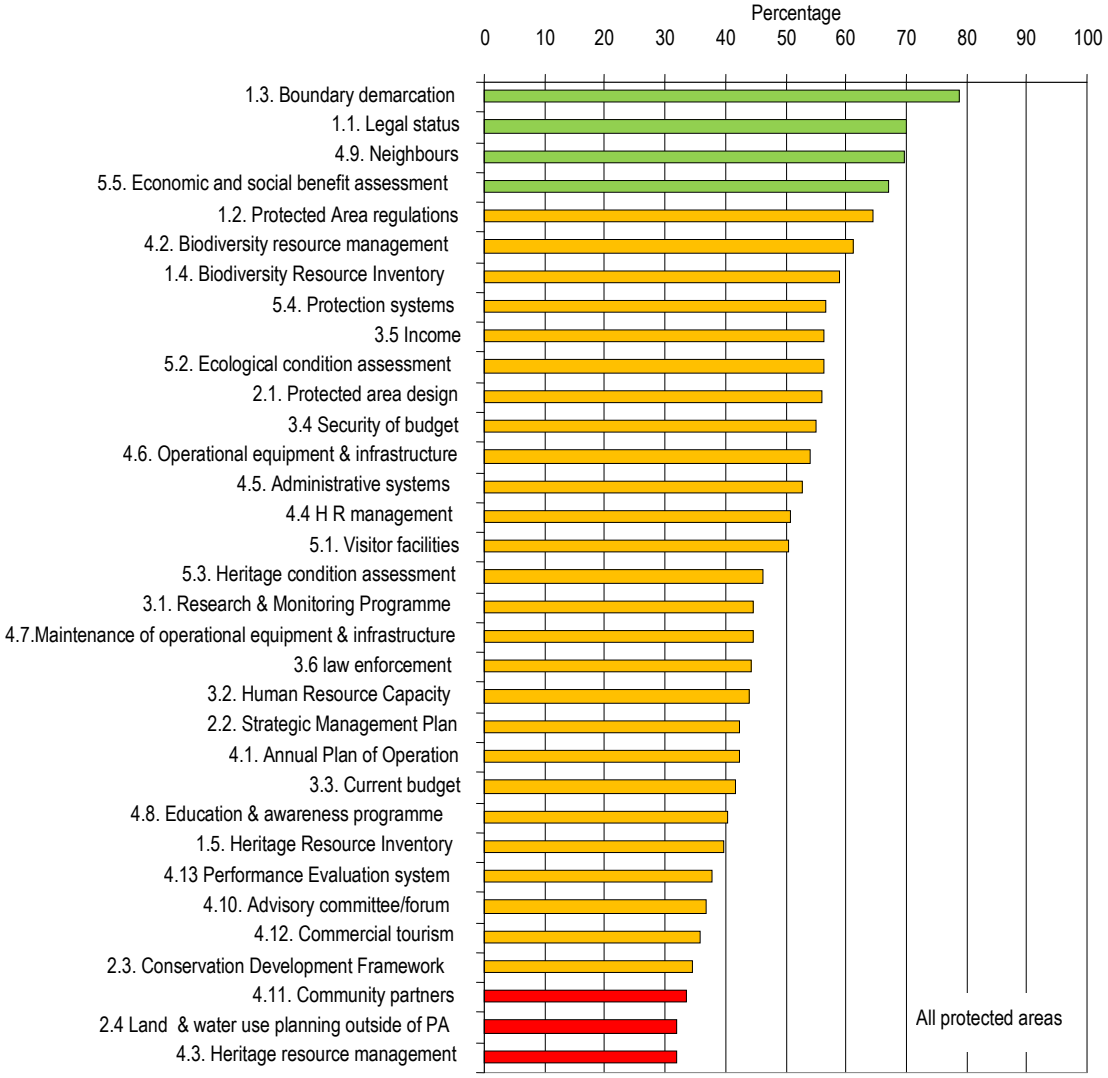


Figure 4: Average score for each indicator (excluding supplementary items) for all protected areas in descending order of score
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

To assist in analysing the national average scores for each indicator, an arbitrary score of 45 % (based on Leverington et al) was set as the level below which management is considered unsatisfactory.

Scores for the indicators in each grouping for each authority are shown in Table 8.

Table 8: Average percentage scores for each authority compared to the national average for each indicator. Scores in bold are equal to or greater than the national average. Shaded cells are below 45%

Elements of adaptive management	Indicator No.	Indicator	National Average	Cape Nature	E C Parks	EKZNW	Free State	Gauteng	iSimangaliso	Limpopo	MTPA	NWPTB	N Cape	SANParks
Context	1.1	Legal status	**70**	61	69	**75**	**95**	33	**100**	44	63	**88**	**100**	**93**
	1.2	Protected Area regulations	**64**	**68**	36	**67**	**67**	50	**100**	58	**70**	**79**	50	**82**
	1.3	Boundary demarcation	**79**	63	67	**77**	**88**	**92**	67	**93**	**85**	**97**	72	77
	1.4	Biodiversity Resource Inventory	**59**	**63**	36	**66**	**67**	**67**	**100**	34	**70**	**61**	39	**72**
	1.5	Heritage Resource Inventory	**40**	**41**	4	**43**	**57**	**42**	**100**	23	**48**	**48**	33	**56**
Planning	2.1	Protected area design	**56**	**60**	36	50	55	**67**	**67**	**56**	**63**	**64**	**61**	**70**
	2.2	Strategic Management Plan	**42**	**44**	38	**43**	33	**58**	**100**	15	**56**	**61**	33	**72**
	2.3	Conservation Development Framework	**34**	**34**	**36**	30	33	8	**100**	10	**41**	**61**	33	**77**
	2.4	Land & water use planning outside of PA	**32**	31	4	28	21	25	**67**	**32**	**56**	**48**	22	**48**
Inputs	3.1	Research & Monitoring Programme	**45**	**48**	36	44	**88**	**67**	**100**	16	41	**55**	33	**61**
	3.2	Human Resource Capacity	**44**	36	33	**52**	43	**75**	**67**	32	43	**64**	33	**51**
	3.3	Current budget	**42**	35	33	**57**	**57**	**50**	**67**	21	7	**64**	22	**58**
	3.4	Security of budget	**55**	**67**	**64**	**67**	**100**	42	**100**	24	28	**73**	22	**72**
	3.5	Income	**56**	**71**	33	**100**	33	**75**	**100**	12	**67**	**67**	33	**93**
	3.6	law enforcement	**44**	36	33	**53**	**48**	**58**	**67**	29	**46**	**58**	33	**56**
Process	4.1	Annual Plan of Operation	**42**	34	4	**46**	**100**	**75**	**100**	14	31	**64**	**94**	**58**
	4.2	Biodiversity resource management	**61**	**61**	56	**61**	**69**	**67**	**67**	58	54	**73**	56	**69**
	4.3	Heritage resource management	**32**	28	4	**67**	**45**	**58**	**100**	18	**48**	**39**	28	**46**
	4.4	H R management	**51**	**51**	2	**62**	**57**	50	**67**	39	50	**64**	47	**63**
	4.5	Administrative systems	**53**	51	36	**56**	**67**	42	**67**	37	**61**	**64**	39	**67**
	4.6	Operational equipment & infrastructure	**54**	50	33	**60**	**71**	**92**	**67**	34	**54**	**64**	50	**68**
	4.7	Maintenance of operational equipment & infrastructure	**44**	39	31	**54**	43	**67**	**67**	23	**52**	**58**	**44**	**54**
	4.8	Education & awareness programme	**40**	35	33	**41**	33	**83**	**100**	19	**61**	33	33	**74**
	4.9	Neighbours	**70**	69	51	69	**76**	58	**100**	66	**70**	**82**	**72**	**82**
	4.10	Advisory committee/forum	**37**	28	**47**	**41**	0	**75**	**100**	22	**54**	21	11	**74**
	4.11	Community partners	**34**	28	**44**	**67**	0	8	**100**	24	**54**	24	7	**72**
	4.12	Commercial tourism	**36**	29	9	**45**	**67**	25	**67**	29	**63**	30	7	**57**
	4.13	Performance Evaluation system	**38**	**43**	**64**	**67**	33	33	**100**	2	31	**48**	6	**79**
Outputs/ Outcomes	5.1	Visitor facilities	**51**	44	31	**58**	41	50	**67**	46	**51**	**58**	47	**67**
	5.2	Ecological condition assessment	**56**	55	**58**	53	**62**	50	**67**	47	**63**	**73**	**67**	**61**
	5.3	Heritage condition assessment	**46**	**49**	**62**	**46**	**56**	0	**100**	39	26	**48**	28	**63**
	5.4	Protection systems	**57**	43	56	**59**	33	**75**	**67**	**69**	54	**85**	39	**63**
	5.5	Economic and social benefit assessment	**67**	62	53	**72**	**67**	**67**	**100**	65	**67**	**67**	53	**81**

No further comment is given on Table 8 above and a more detailed analysis will be required for each authority to determine where and how scores could be improved. It may be advisable for each authority to examine, where applicable, the different management priorities for nature reserves and forest reserves. In doing this the guidelines supplied in section 4.1.1 may be useful to give indications for setting priorities.

In the following section indicators scoring less than 45% at a national level are listed (see Table 8 for a breakdown of all authorities). Guided by the rankings as set out in Table 6 and also the level of threats recorded in Table 15, these indicators have been arranged in a recommended grouping of priorities.

4.1.2.a Top priority

Indicator 2.2: Strategic Management Plan (SMP) (42%)

The National Environment Management: Protected Areas Act, 2003 stipulates very clearly that all protected areas are required to have an approved management plan. A management plan should also set strategic objectives and performance targets. It is unlikely that effective management can be objectively measured in the absence of such performance targets. The low score is thus a cause for concern. As the ranking (Table 6) is 5, it is considered as an issue that should receive urgent attention at national level. This is also linked to Indicator 3.5: Annual Plan of Operations.

Indicator 3.5: Annual Plan of Operations (42%)

An Annual Plan of Operations is a fundamental part of management as it looks at how best to organize available (often limited) resources. It is a way of ensuring that priorities as set by the Strategic Management Plan are addressed. Considering that the national averages for Human Resources Capacity (Indicator 3.2), Current Budget (Indicator 3.3) and Maintenance of Operational Equipment and Infrastructure (Indicator 4.7) are low, it is imperative that attention be given to this important aspect, particularly where no management plans are in place.

Indicator 4.7: Maintenance of Operational Equipment and Infrastructure (44%)

The maintenance of capital assets is often the first item to suffer when budgets are cut. This has long term implications for operations in the protected area. This is reflected in the ranking of 1 in Table 6.

Indicator 3.2: Human Resource Capacity (44%)

Many respondents emphasized the lack of and quality of staff available when reporting on threats. Many management authorities are operating below the optimal level of staffing. There is also a concern of the lack of expertise within this inadequate complement. The lack of succession programmes where experienced staff are due to leave on pension without replacement was also recorded. This issue together with Indicator 3.3: Budget, is clearly a top priority.

Indicator 4.13: Performance Evaluation System (38%)

If the principles of adaptive management are to be applied in all protected areas, then it is vital that each organization has an effective method of evaluating their own performance. The institution of an appropriate performance evaluation system in all authorities should be seen as a top priority at national level.

Indictor 3.4: Law Enforcement (44%)

As poaching is recorded as the second most frequent threat to protected areas (Table 15), it is essential that this aspect receive urgent attention. This not only relates to the budget and staffing levels, but more importantly to the training and equipping of staff. It is recommended that an evaluation system such as the Protected Area Integrity Management Evaluation (PAIME) as applied by Eastern Cape Parks or the State of Area Integrity Management (SoAIM)

as applied by SANParks, be applied in authorities where this important aspect is below the minimum acceptable level.

Indicator 3.3: Current Budget (42%)

Many of the top priorities are dependent on adequate budget. During the interaction with the various authorities when applying the METT-SA, it was very clear that several authorities were operating at levels where the basic level of operations could not be maintained.

4.1.2.b Medium priority

Indicator 2.4: Land and Water use outside of Protected Area (32%)

This indicator is ranked as 4 in Table 6 and should thus be seen as a priority. Further, if the relatively high frequency scores of the threat Land use changes on the boundary (40%) and the threat Water Resource Management outside of the Protected Area (36%) are considered (Table 15), then this indicator could have a higher priority depending on the applicability to specific protected areas.

Indicator 2.3: Conservation Development Framework (34%)

The Conservation Development Framework is an expansion of the requirement of National Environmental Management: Protected Areas Act, 2003 to have a zoning of the protected area as part of the management plan. It is a plan that ensures that the impacts of visitors and visitor facilities in the protected area are minimal. It also ensures that the potential conflicts between the different types of users are managed. Although it is a vital part of visitor management, it is considered as a less important area to receive attention at this stage given the low level of fundamental items listed under top priorities.

Indicator 4.8: Education and Awareness Programme (40%)

In the current version of METT-SA, Education and awareness are dealt with together. However they are two different concepts that have been separated in version 2 of the METT-SA. The institution of a communication programme which communicates on a regular basis with a wide range of role players is considered essential for the overall management effectiveness. This includes regular internal communication to ensure that all employees are aware of what is happening.

4.1.2.c Lower priority

Indicators 1.5: Heritage Resource Inventory (40%) & 4.3: Heritage Resource Management (32%)

All conservation authorities are in terms of the National Heritage Resources Act, 1999 obliged to maintain, conserve and report on heritage resources under their control. Most authorities have not yet responded to this. It is not seen as an urgent priority in terms of increasing the overall effectiveness score. However it is an issue that needs resolution in the longer term.

Indicator 4.10: Advisory Committee/Forum (37%)

As this is ranked at 10 and entails considerable effort and skills to manage and maintain, it is not seen as a priority.

Indicator 4.12: Commercial Tourism (36%)

This relates to the relationship between commercial operators and concessionaires and the management authority and should only be seen as a priority where it is applicable.

4.1.3 Supplementary items

Supplementary items represent elements of management that should be applied as a matter of course, either because of legal requirements or because they are fundamental to sound management. Thus, if an area is being effectively managed then a full score of 1 will be applied. Where the score is a zero it is an indication that attention should be given to this aspect of management. The results shown in Figure 5 are an indication that attention needs to be given to the aspects covered by supplementary items for each authority. As some of the supplementary items are open to interpretation and some were not given a "not applicable" option, no detailed analysis and comment is given in this report.

Addo Elephant National Park – Albany Thicket Biome

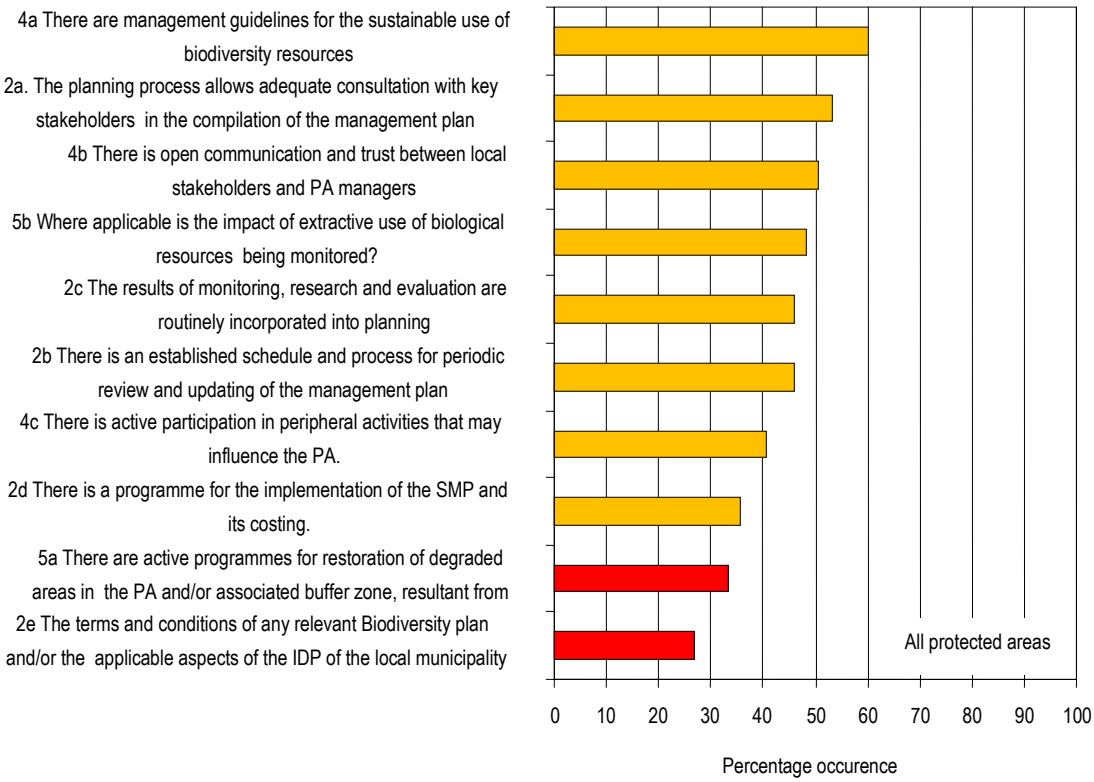


Figure 5: The percentage occurrence of scores of 1 for supplementary items for all protected areas in descending order of score
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

A short explanation of the relevance of the supplementary items follows.

Supplementary item 2a. The planning process allows adequate consultation with key stakeholders in the compilation of the management plan

This is prerequisite of the National Environmental Management: Protected Areas Act, 2003 and any scores of zero should be a cause for investigation

Supplementary item 2b. There is an established schedule and process for periodic review and updating of the management plan

This a fundamental requirement of the adaptive management cycle and a full score is a prerequisite for sound management

Supplementary item 2c. The results of monitoring, research and evaluation are routinely incorporated into planning

This is not only a fundamental requirement of the adaptive management cycle but is essential to ensure that biodiversity conservation targets are met. Thus, a full score is a prerequisite for sound management

Supplementary item 2d. There is a programme for the implementation of the Strategic Management Plan and its costing.

This is prerequisite of the National Environmental Management: Protected Areas Act, 2003 and any scores of zero should a cause for investigation

Supplementary item 2e. The terms and conditions of any relevant Biodiversity plan and/or the applicable aspects of the Integrated Development Plan of the local municipality have been taken into account.

This is a stipulation of the National Environmental Management: Protected Areas Act, 2003. In reality very few of the local authority planning products have been produced. This has led to different interpretations in the scoring. As a result no conclusions should be drawn from low scores. This item has been changed in version 2 of the METT-SA to better record interactions with local authority planning exercises.

Supplementary item 4a. There are management guidelines for the sustainable use of biodiversity resources.

This is not always applicable as some authorities do not allow any extraction of biodiversity resources

Supplementary item 4b There is open communication and trust between local stakeholders and Protected Area managers

This is very subjective and it is unlikely that 100% compliance can be recorded. Thus no conclusions should be drawn from low scores.

Supplementary item 4c. There is active participation in peripheral activities that may influence the Protected Area.

With considerable pressure being placed on protected areas from outside influences, it is vital that authorities should participate in activities such as water catchment management. Generally there is little or no capacity for this to be undertaken.

Supplementary item 5a.There are active programmes for restoration of degraded areas in the Protected Area and/or associated buffer zone, resultant from visitor use.

This has been interpreted differently by different assessors and as there was no "not applicable" option, no conclusions should be made on low scores.

Supplementary item 5b. Where applicable is the impact of extractive use of biological resources being monitored?

This is related to Supplementary items 2c and 4a. If biological resources are being extracted and the impacts are not being monitored then it is unlikely that biodiversity conservation targets (if they have ever been set) can be met. Thus low scores should be a cause for further investigation.

4.1.4 Comment

From the above it can be concluded that on average, the management effectiveness of protected areas in South Africa is below international standard. It can also be concluded that the management of protected areas is not fully compliant with the National Environmental Management: Protected Areas Act, 2003.

uKhahlaba-Drakensberg World Heritage site – Grassland Biome

4.2 Special nature reserves

South Africa has only two special nature reserves, the Prince Edward Islands Special Nature Reserve and the Brenton Blue Butterfly Special Nature Reserve. Management of the former remains with the Department of Environmental Affairs while the management of the Brenton Blue Butterfly Special Nature Reserve has been delegated to CapeNature. Due to the vast differences in management approach (relating primarily to access) between these two protected areas and the other terrestrial protected areas in South Africa, their scores were excluded from the calculations for the national average scores.

4.2.1 Brenton Blue Butterfly Special Nature Reserve

A total score 60% was achieved for Brenton Blue Butterfly Special Nature Reserve. As it was the only protected area in this category on continental South Africa, no comparison is made to the national average or the Prince Edward Islands Special Nature Reserve. Scores for each indicator for the Brenton Blue Butterfly Special Nature Reserve are presented in Table 9

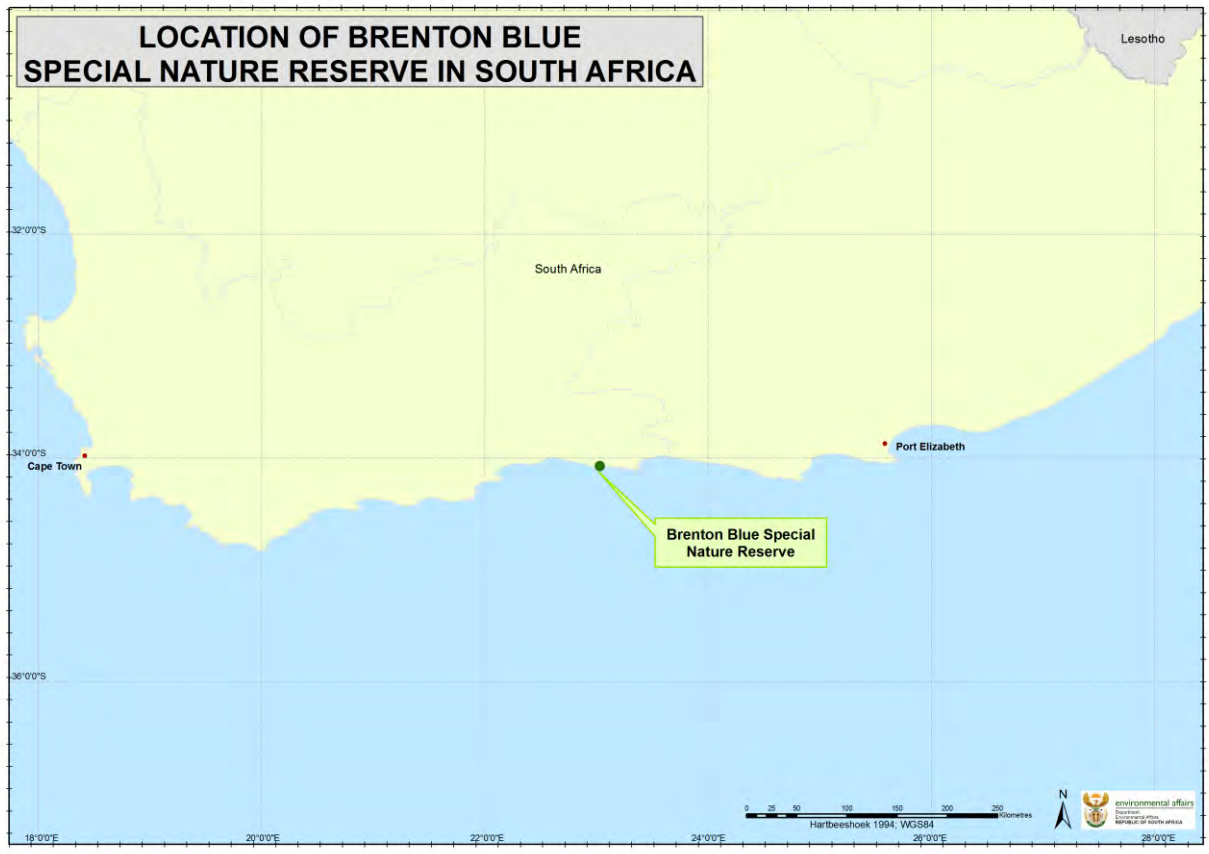


Figure 6: Location of the Brenton Blue Butterfly Special Nature Reserve

Table 9: Scores for indicators for the Brenton Blue Butterfly Special Nature Reserve

Category	Indicator	Score (max=3)
Context	1.1. Legal status	3
	1.2. Protected Area regulations	3
	1.3. Boundary demarcation	2
	1.4. Biodiversity Resource Inventory	3
	1.5. Heritage Resource Inventory	0
Planning	2.1. Protected area design	2
	2.2. Strategic Management Plan	2
	2.3. Conservation Development Framework	3
	2.4 Land & water use planning outside of PA	1
Inputs	3.1. Research & Monitoring Programme	3
	3.2. Human Resource Capacity	1
	3.3. Current budget	0
	3.4 Security of budget	2
	3.5 Income	N/A
	3.6 Law enforcement	1
Process	4.1. Annual Plan of Operation	0
	4.2. Biodiversity resource management	3
	4.3. Heritage resource management	0
	4.4 H R management	1
	4.5. Administrative systems	1
	4.6. Operational equipment & infrastructure	3
	4.7.Maintenance of operational equipment & infrastructure	2
	4.8. Education & awareness programme	1
	4.9. Neighbours	2
	4.10. Advisory committee/forum	2
	4.11. Community partners	3
	4.12. Commercial tourism	N/A
	4.13 Performance Evaluation system	1
Outcomes	5.1. Visitor facilities	2
	5.2. Ecological condition assessment	3
	5.3. Heritage condition assessment	N/A
	5.4. Protection systems	3
	5.5. Economic and social benefit assessment	2
Total %		**60%**

4.2.1.a Comment

Although there is room for improvement, the Brenton Blue Butterfly Special Nature Reserve is reasonably well managed. An examination of the scores for indicators will need assessment to establish how to reach a more acceptable overall score. Guided by Table 6, the lower scoring indicators in Inputs and Process should be reviewed and priorities for attention set.

4.2.2 Prince Edward Islands Special Nature Reserve

The total score for the Prince Edward Islands Special Nature Reserve is 84%. This protected area is located in the Southern Ocean and comprises of the two Sub-Antactic islands Prince Edward and Marion Islands. As the only protected area of its type, no comparison is made to the national average nor is the score included to calculate the national average. Scores for each indicator are presented in Table 10.

Table 10: Scores for indicators for the Prince Edward Islands Special Nature Reserve

Category	Indicator	Score (max=3)
Context	1.1. Legal status	3
	1.2. Protected Area regulations	3
	1.3. Boundary demarcation	3
	1.4. Biodiversity Resource Inventory	3
	1.5. Heritage Resource Inventory	3
Planning	2.1. Protected area design	3
	2.2. Strategic Management Plan	2
	2.3. Conservation Development Framework	3
	2.4 Land & water use planning outside of PA	3
Inputs	3.1. Research & Monitoring Programme	3
	3.2. Human Resource Capacity	3
	3.3. Current budget	0
	3.4 Security of budget	3
	3.5 Income	N/A
	3.6 Law enforcement	2
Process	4.1. Annual Plan of Operation	3
	4.2. Biodiversity resource management	3
	4.3. Heritage resource management	2
	4.4 H R management	2
	4.5. Administrative systems	2
	4.6. Operational equipment & infrastructure	2
	4.7.Maintenance of operational equipment & infrastructure	2
	4.8. Education & awareness programme	1
	4.9. Neighbours	N/A
	4.10. Advisory committee/forum	3
	4.11. Community partners	N/A
	4.12. Commercial tourism	N/A
	4.13 Performance Evaluation system	2
Outcomes	5.1. Visitor facilities	N/A
	5.2. Ecological condition assessment	3
	5.3. Heritage condition assessment	2
	5.4. Protection systems	3
	5.5. Economic and social benefit assessment	3
Total %		**84%**

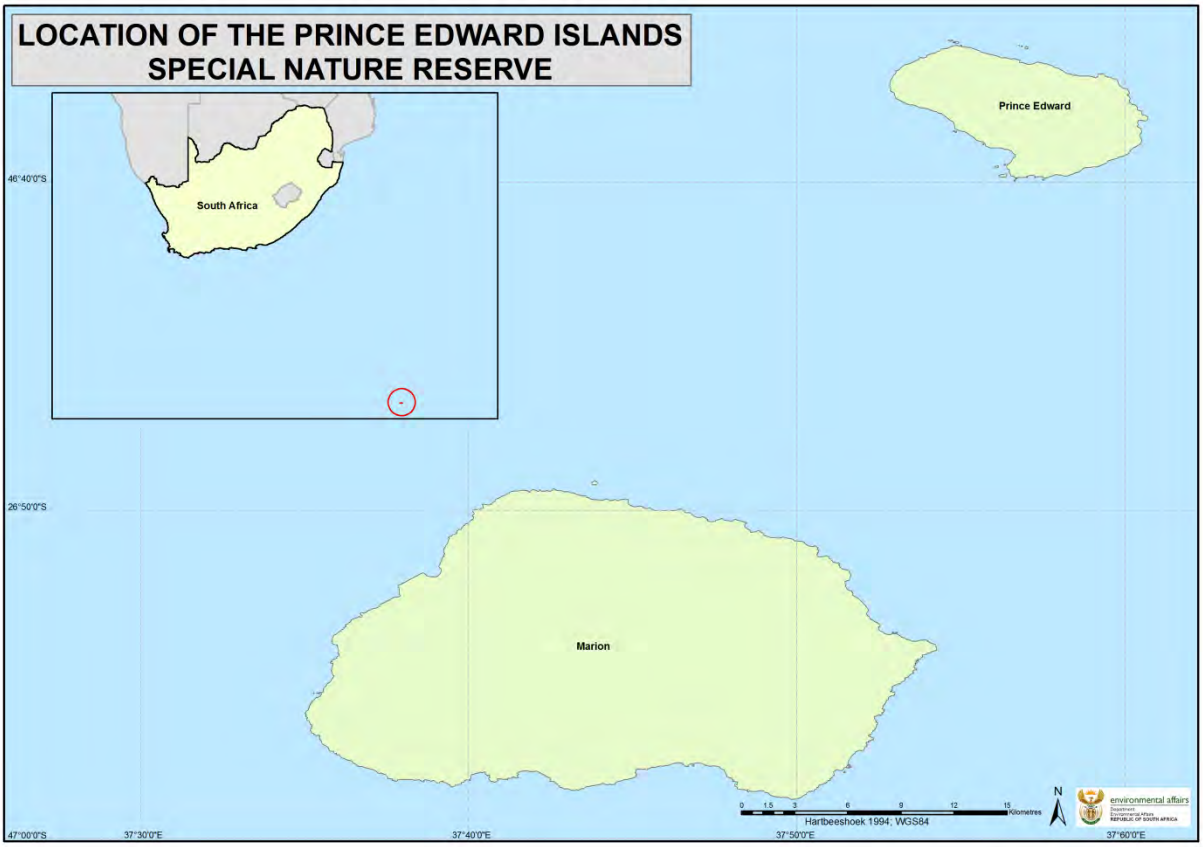


Figure 7: Location of the Prince Edward Islands Special Nature Reserve

4.2.2.a Comment

A number of the indicators were not applicable due to legal constraints set up in terms of section 18(2) of the National Environmental Management: Protected Areas Act, 2003 which establishes special nature reserves to protect highly sensitive ecosystems or features and to make the area primarily available for scientific research or environmental monitoring. Tourism to these areas is therefore not allowed and no income is derived from them. In addition, the Prince Edward Islands are isolated and managed from Cape Town, from which a team is sent annually. Logistics are therefore the main factor to consider in the management of the Special Nature Reserve.

4.3 National parks

Nineteen of the national parks currently managed by South African National Parks (SANParks) were assessed. The Tsitsikamma National Park and the Wilderness National Parks were assessed as part of the Garden Route National Park, as they are managed as a business unit and the Minister has published his intention to merge the three parks into one[5]. Similarly the remnant of Vaalbos National Park is managed as part of Mokala National Park and therefore not considered separately. As Mapungubwe is also a World Heritage site, it was excluded from the analysis of national parks and was analysed separately as a World Heritage site. Groenkloof National Park, the headquarters of SANParks in Pretoria, was not assessed as a protected area.

The total average score for national parks of 68 % (range 55-83) is well above the national average of 49%. There were no national parks scoring below 49%. However only 11 (61%) of national parks scored above 67%, the level set for sound management.

The full set of scores and the variance with the national average are given in Appendix 2.

Kruger National Park – Savanna Biome

[5] The merge was published in October 2010

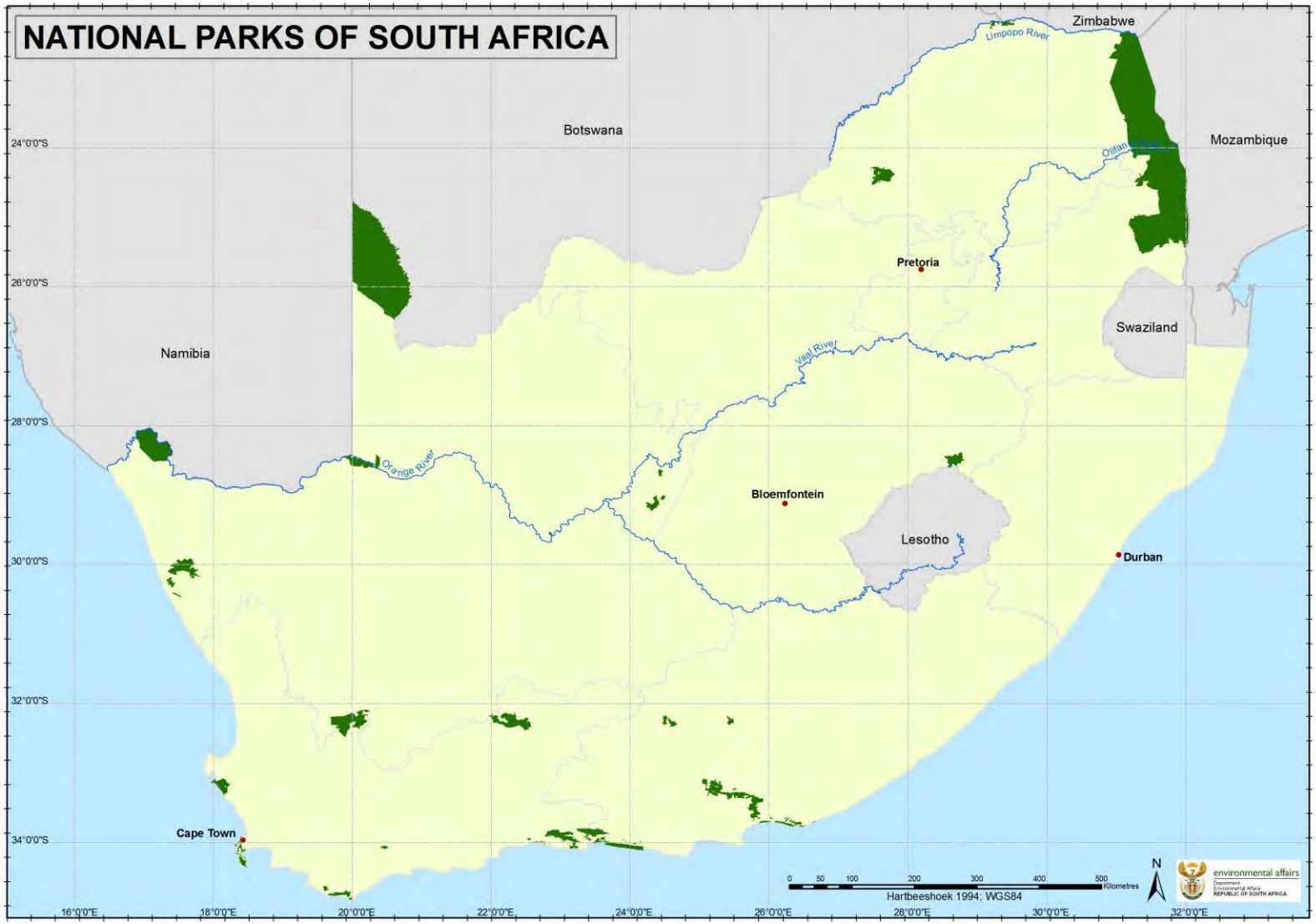


Figure 8: National parks of South Africa

4.3.2 Indicators

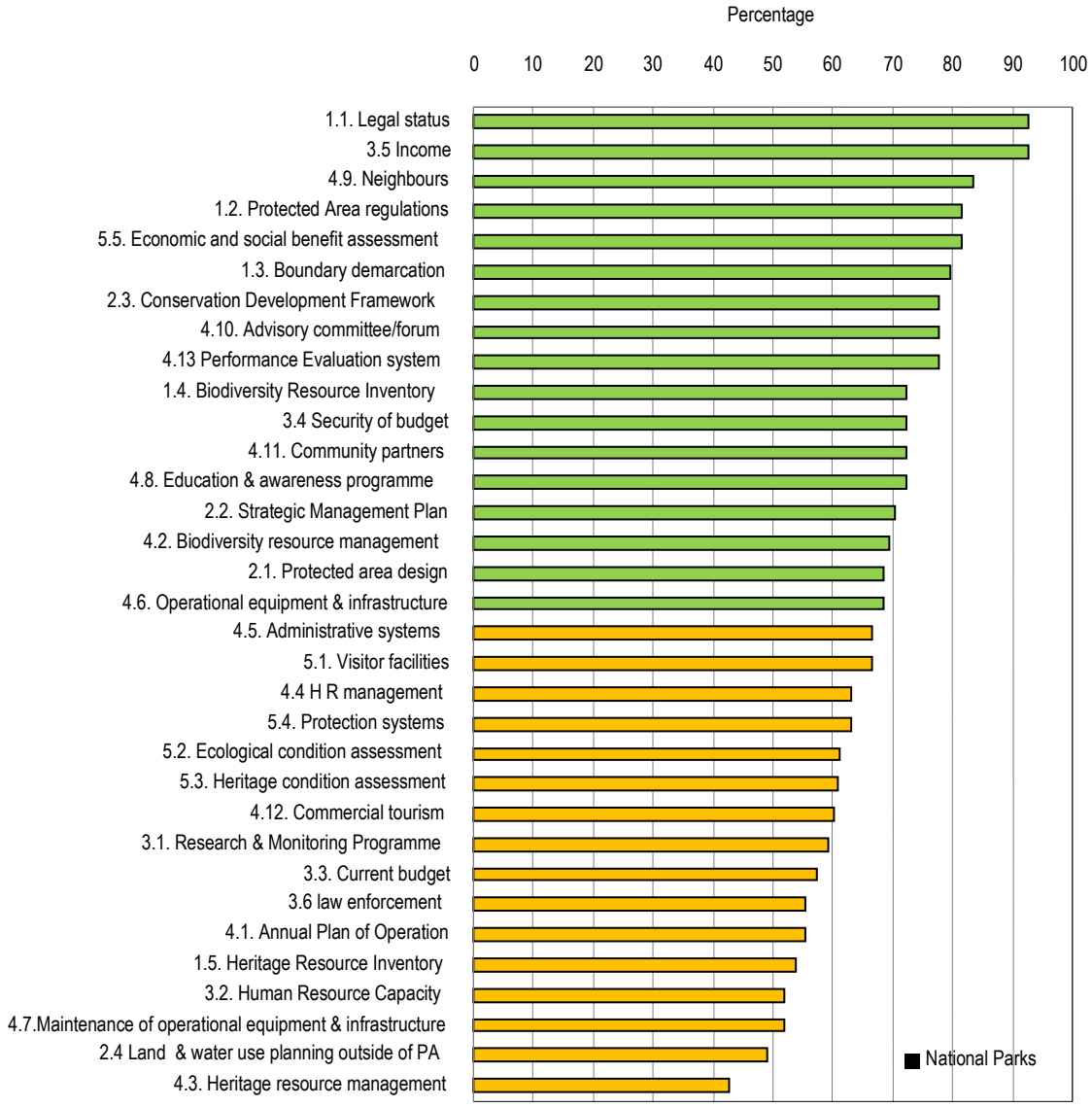


Figure 9: National parks: average percentage score for each indicator (excluding supplementary items)
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

In the lowest 10 scores for indicators, the following indicators are considered priorities in order of the ranking as per the guidelines given in Table 6.

Table 11: Priority indicators to be addressed

Ranking as per Table 6	Ranking national parks	Indicator
1	31	4.7 Maintenance of operational equipment and infrastructure
4	27	3.6 Law enforcement
4	33	4.3 Heritage resource management
4	32	2.4 Land and water use planning outside of protected area (this also relates to the relatively high frequency of these issues as threats listed in Table 17)
4	25	3.1 Research and monitoring programme
11	28	4.1 Annual plan of operations

4.3.3 Comment on national parks

Although national parks are more effectively managed than the national average, only 61% scored above the "sound management" score of 67%. The three lowest scores (Mokala, Tankwa Karoo & Namaqua National Parks) are parks still under development. It is expected that the scores for management effectiveness of these parks will improve as resources are allocated to them and development takes place.

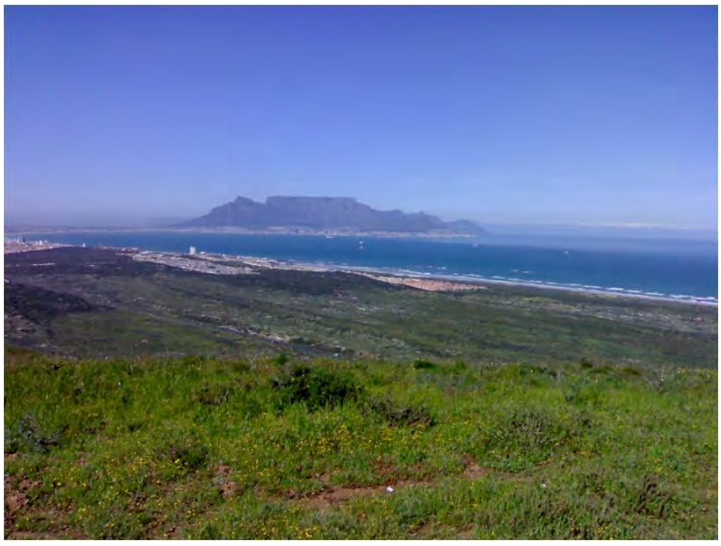


Table Mountain National Park – Fynbos Biome

4.4 World Heritage sites

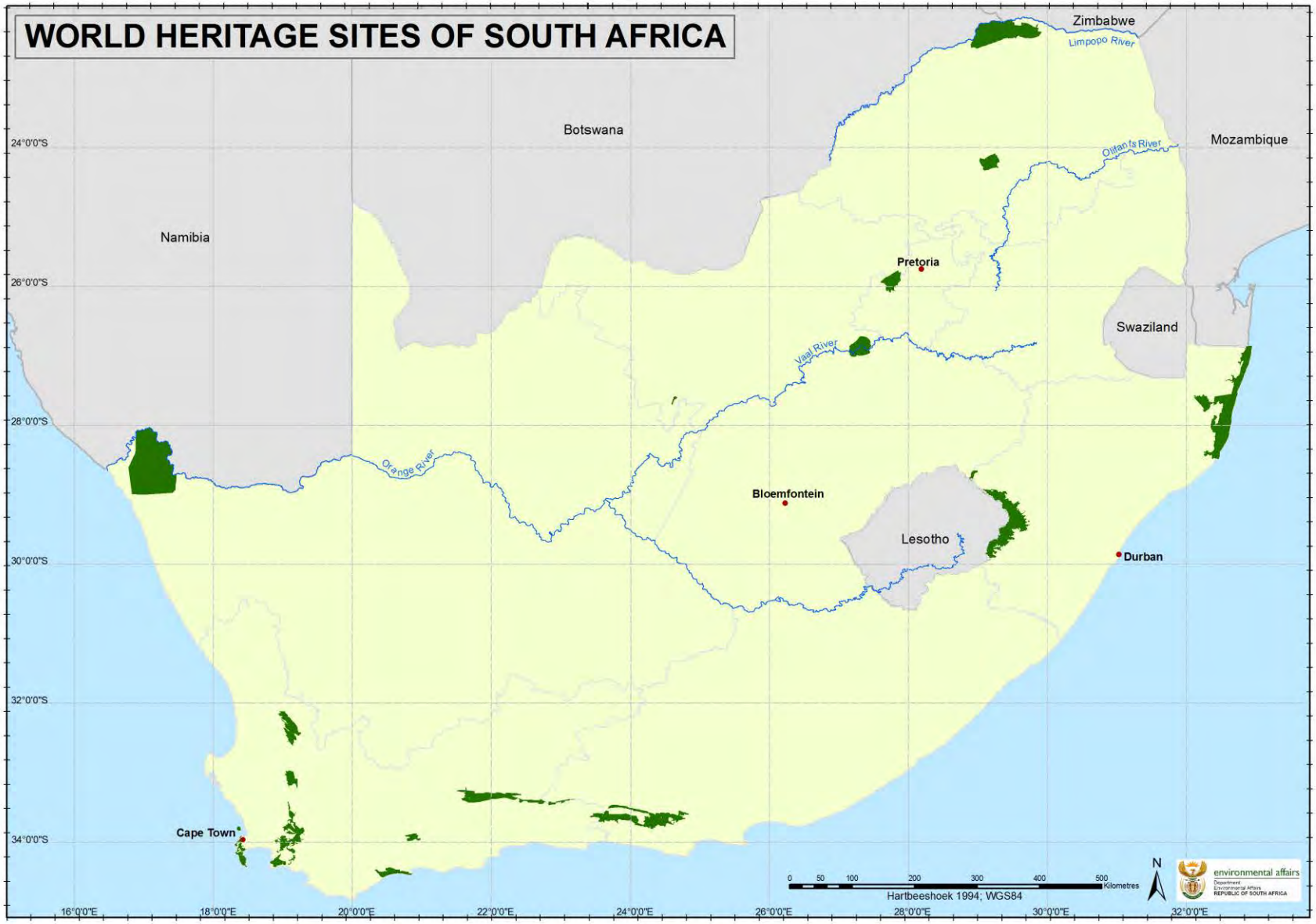
The METT-SA was applied to the iSimangaliso Wetland Park, uKhahlamba-Drakensberg Park and Mapungubwe World Heritage sites (the latter is also a national park). The Cape Floral Region World Heritage site is a complex series of different protected areas managed by three different management authorities at both national and provincial levels, spread throughout the Fynbos biome. It was thus considered impractical to apply the METT-SA to this site. Instead the component parts were assessed as national parks, nature reserves and forest protected areas individually. The remaining three World Heritage sites, Robben Island, the Fossil Hominid Sites, and the Richtersveld Cultural Landscape are cultural sites and thus not included in this assessment. It is intended that all World Heritage sites will be assessed at a later stage..

The total mean of 78 % score is well above the national average of 49%. All three World Heritage sites scored higher than the 67% guideline score for soundly managed protected areas.

Table 12: Total percentage scores for World Heritage sites

World Heritage site (WHs)	Management Authority	Total percentage score
uKhahlamba Drakensberg	EKZNW	73
iSimangaliso Wetlands Park	iSimangaliso	86
Mapungubwe	SANParks	75
WHs Mean		78

Mapungubwe World Heritage site


WORLD HERITAGE SITES OF SOUTH AFRICA
Zimbabwe
Limpopo River
Botswana
Mozambique
Olifants River
Namibia
Pretoria
Swaziland
Vaal River
Orange River
Bloemfontein
Lesotho
Durban
Cape Town
24°0'0"S
26°0'0"S
28°0'0"S
30°0'0"S
32°0'0"S
34°0'0"S
16°0'0"E
18°0'0"E
20°0'0"E
22°0'0"E
24°0'0"E
26°0'0"E
28°0'0"E
30°0'0"E
32°0'0"E
0 50 100 200 300 400 500 Kilometres
Hartbeeshoek 1994; WGS84
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environmental affairs
Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

4.4.2 Indicators

Ranked average scores per indicator are presented in Figure 11.

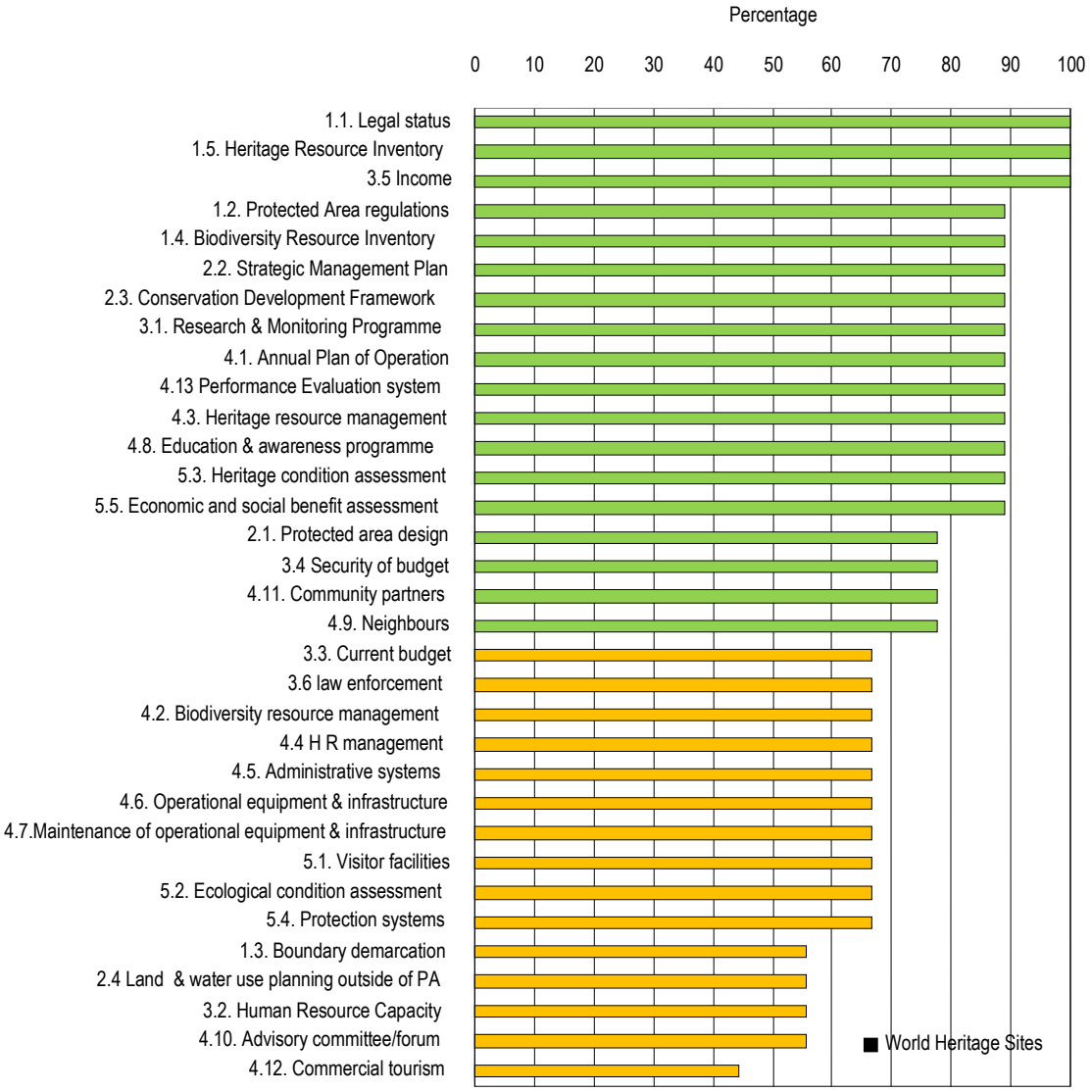


Figure 11: World Heritage sites, average percentage score for each indicator (excluding supplementary items)
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

The average for all indicators except 1.3: Boundary demarcation is well above the national average. The lower than average score for 1.3 can be attributed to the extended nature of the boundaries for iSimangaliso and Ukhlamaba Drakensberg.

In the lowest 10 scores the following indicators (Table 13) are considered priorities in order of the ranking as per the guidelines in Table 6.

Table 13: Priority indicators to be addressed

Ranking as per Table 6.	Ranking World Heritage sites	Indicator
1	25	4.6 & 4.7 Maintenance and adequacy of operational equipment and infrastructure
3	28	5.4 Protection systems
3	27	5.2 Ecological condition assessment
4	30	2.4 Land and water use planning outside of protected area
9	26	5.1 Visitor facilities
10.	33	4.12 Commercial tourism
10	32	4.10 Advisory committee/ forum

4.4.3 Comment on World Heritage sites

All World Heritage sites are soundly managed. A strategy for each World Heritage site should be put in place to improve those aspects of management reflected in lower ranking scores.

Although the management of World Heritage sites is well above the national average an examination of the scores in Inputs and Process would be advisable to determine interventions to improve the level of Outcomes.

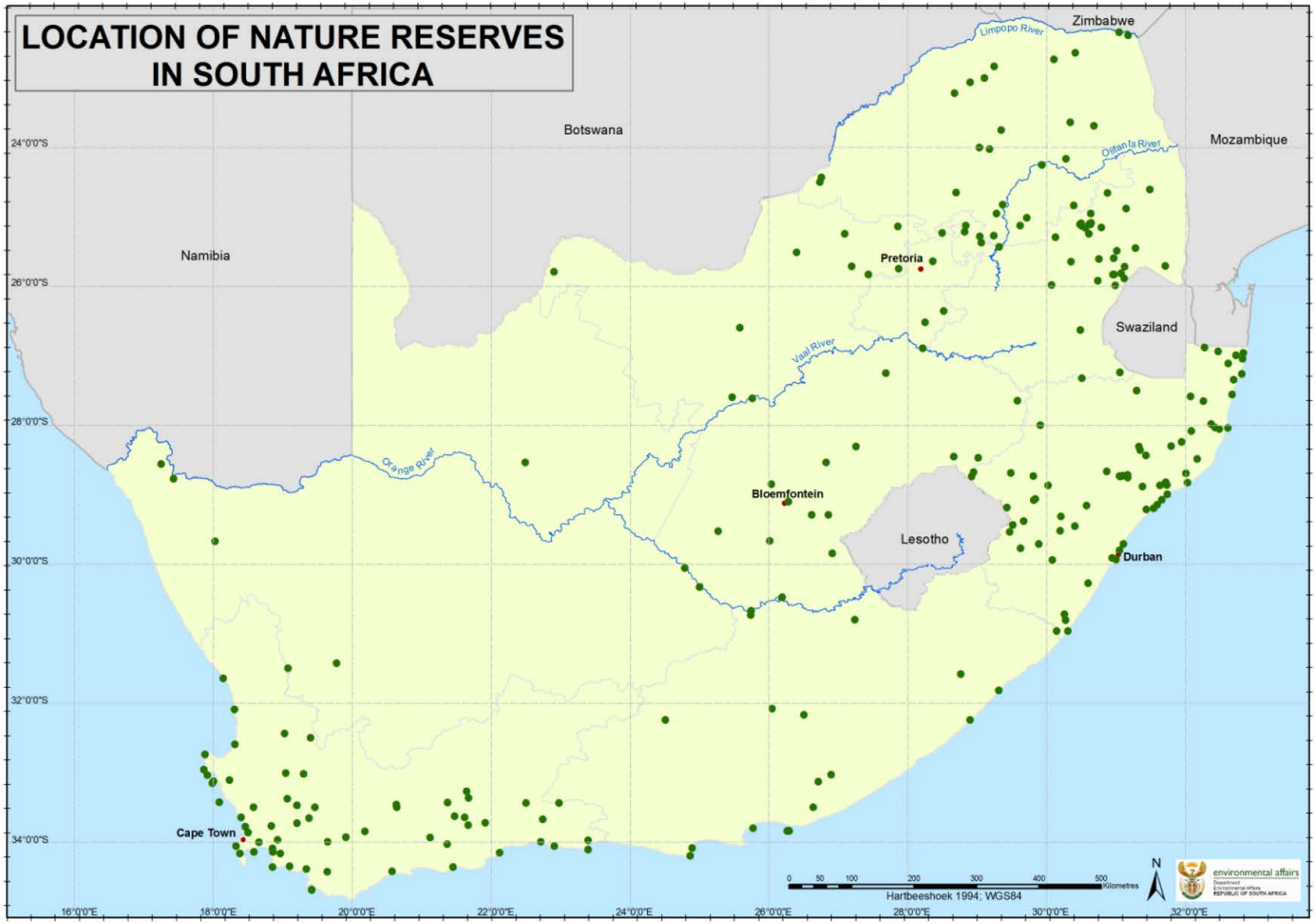
iSimangaliso Wetland Park World Heritage site – Indian Ocean Coastal Belt Biome

4.5 Nature reserves

The 193 provincial nature reserves assessed are managed by 9 different management authorities (Table 5). This total includes three marine islands managed by CapeNature. Although these are not typical nature reserves, after examination of their scores it was decided to keep them in the assessment. The protected area known as False Bay Rocks being tidally inundated rock islands, managed by CapeNature was removed from the data base as it is totally different from any other protected area in the country.

The total average score of 47% (range 9-79%) for all nature reserves is slightly below the national average of 49%. As nature reserves comprise 83% of the 229 protected areas assessed, the averages for nature reserves will be close to the national average. One hundred (52%) nature reserves scores fell below the national mean and 93 (48%) were above, with only 16 (9%) scores above the "soundly managed level of 67%

Coegap Nature Reserve – Succulent Karoo Biome


LOCATION OF NATURE RESERVES
IN SOUTH AFRICA
Zimbabwe
Limpopo River
Botswana
Mozambique
Olifants River
Namibia
Pretoria
Swaziland
Vaal River
Orange River
Bloemfontein
Lesotho
Durban
Cape Town
24°0'0"S
26°0'0"S
28°0'0"S
30°0'0"S
32°0'0"S
34°0'0"S
16°0'0"E
18°0'0"E
20°0'0"E
22°0'0"E
24°0'0"E
26°0'0"E
28°0'0"E
30°0'0"E
32°0'0"E
0 50 100 200 300 400 500 Kilometres
Hartbeeshoek 1994; WGS84
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environmental affairs
Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

4.5.2 Indicators

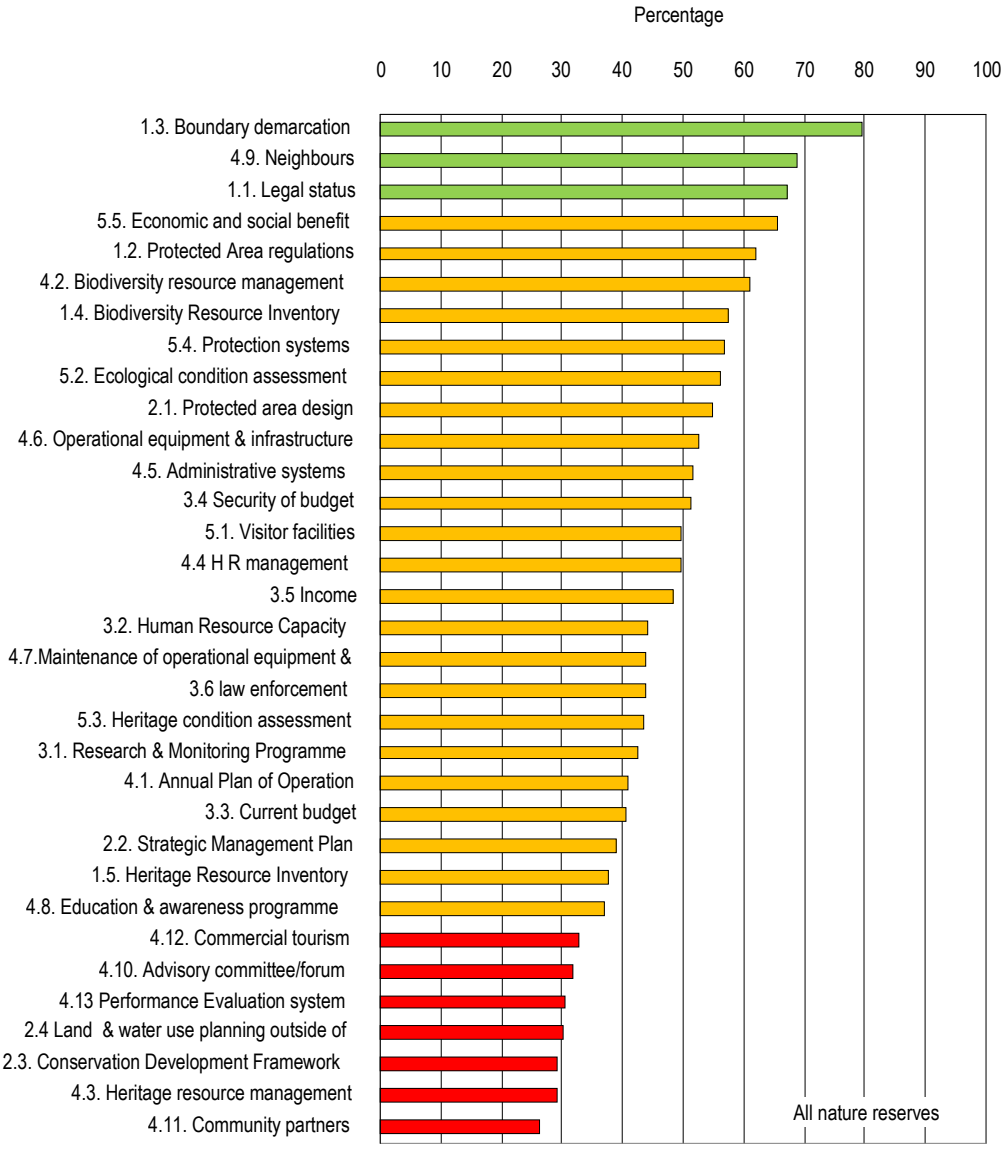


Figure 13: All nature reserves: average percentage score for each indicator (excluding supplementary items)
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

There are 17 indicators that have not achieved the interim minimum of 45%. This is clearly a cause for concern. As there are a wide range of factors influencing performance and differences between authorities, it is advisable to assess the scores achieved per authority.

4.5.3 Comment on nature reserves

On average the management of nature reserves is clearly not effective and a strategy for each authority to improve management effectiveness is urgently required.

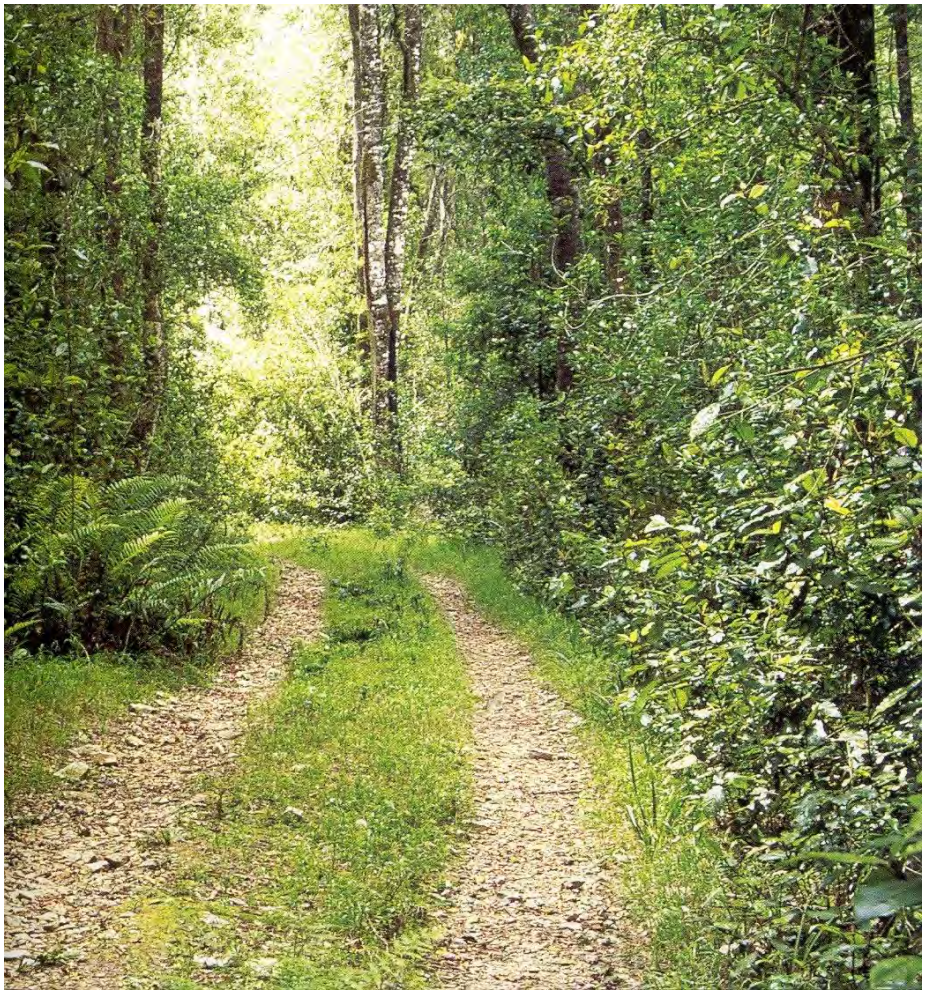
Although most natures reserves are reasonably well established (Context =60%) clearly urgent attention required is to examine the factors influencing the low scoring of Inputs, Process and Planning for all nature reserves by each management authority.

Ndumo Nature Reserve – Savanna Biome

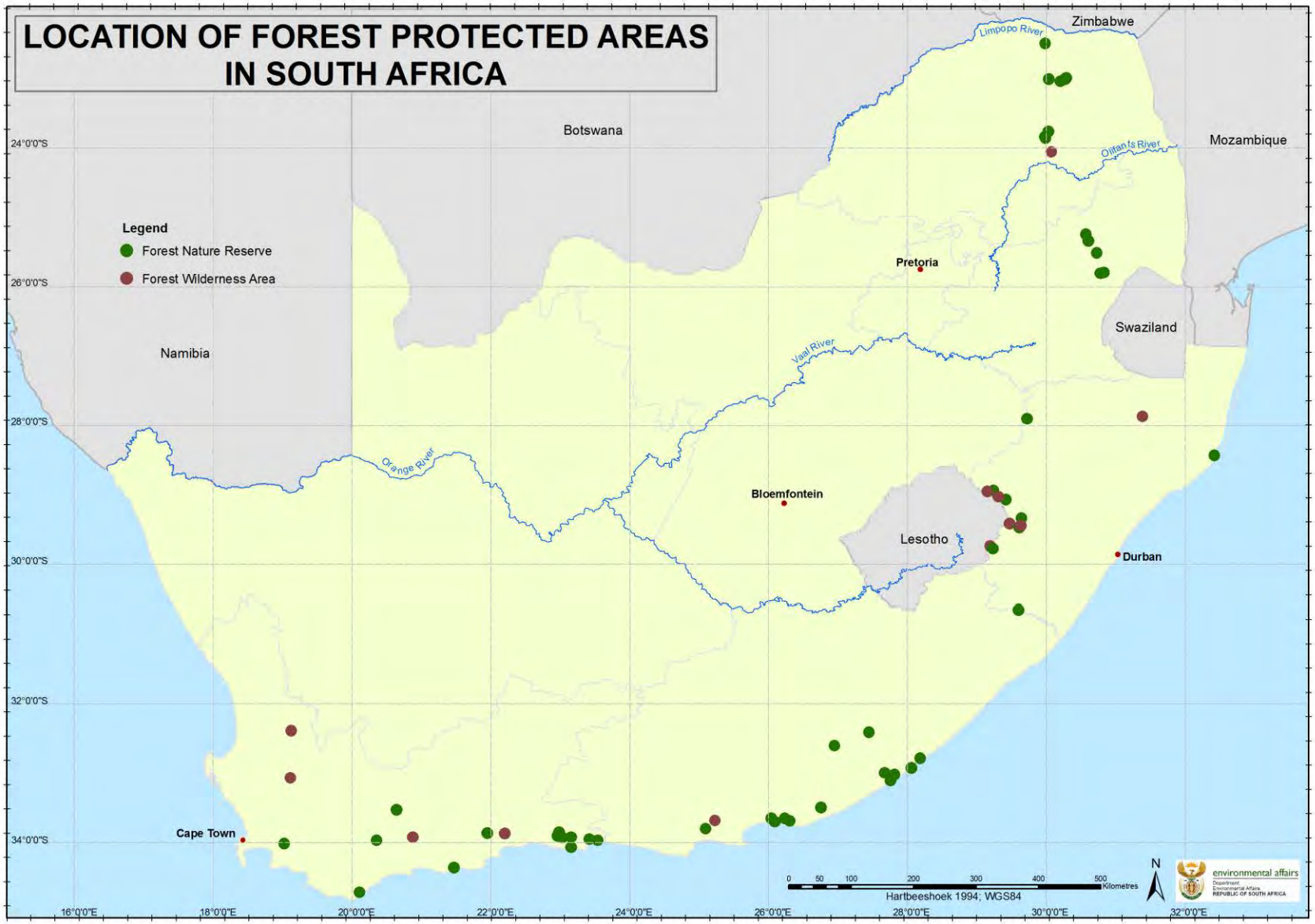
4.6 Forest protected areas

Forest nature reserves and forest wilderness areas are declared in terms of the National Forests Act, 1998. Only 14 of the 46 listed in the Register of Protected Areas were assessed in this study. These are managed by four provincial management authorities (Cape Nature, Eastern Cape Parks Board, Ezemvelo-KZN-Wildlife and Limpopo Department of Economic Development, Environment & Tourism) primarily as nature reserves. This category of protected area was analysed separately to detect any discernable differences from nature reserves as the authorities responsible for these areas had indicated that their overall score was negatively influenced by having to manage this category of protected area.

The scores for Forest protected areas ranged from 10-67% with a mean of 47%. Eight of the areas scores were below the national mean, six above it and only one above the soundly managed score of 67% The results for Forest protected areas are slightly below the national average and the average for all nature reserves.



Knysna forest – Garden Route National Park


LOCATION OF FOREST PROTECTED AREAS
IN SOUTH AFRICA
Legend
Forest Nature Reserve
Forest Wilderness Area
Zimbabwe
Botswana
Mozambique
Namibia
Swaziland
Lesotho
Pretoria
Bloemfontein
Durban
Cape Town
Limpopo River
Olifants River
Vaal River
Orange River
24°0'0"S
26°0'0"S
28°0'0"S
30°0'0"S
32°0'0"S
34°0'0"S
16°0'0"E
18°0'0"E
20°0'0"E
22°0'0"E
24°0'0"E
26°0'0"E
28°0'0"E
30°0'0"E
32°0'0"E
0 50 100 200 300 400 500 Kilometres
Hartbeeshoek 1994; WGS84
N
environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

4.6.2 Indicators

When the average scores for individual indicators are compared (Fig 11) there are indications that there are different management priorities between the two. These differences however showed no discernable statistical significance.

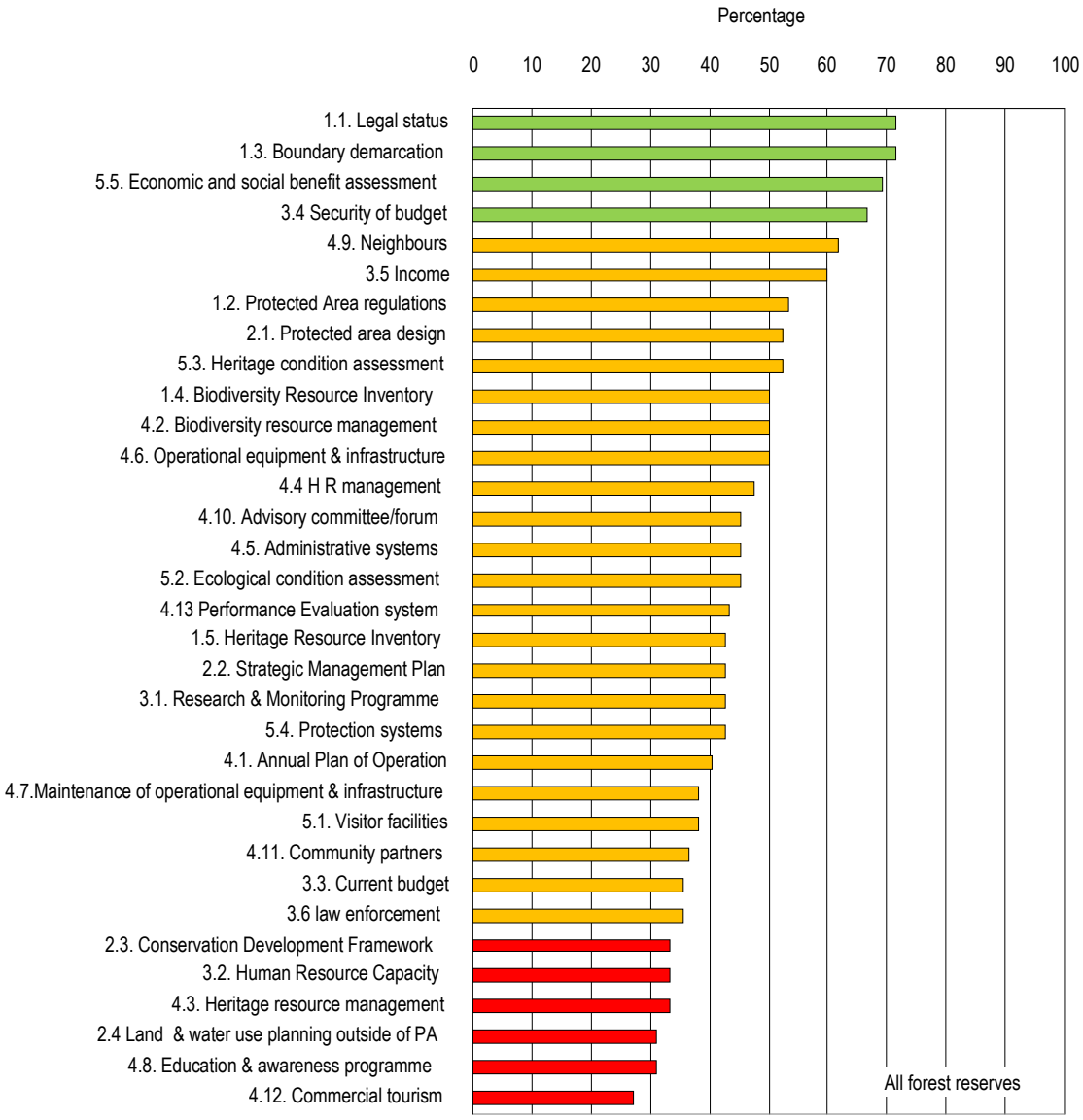


Figure 15: All forest reserves: average percentage score for each indicator (excluding supplementary items)
Where Red = less than 33%: management clearly inadequate; orange = 33-67 %: basic management with significant deficiencies; green = 67% and above: sound management

4.6.3 Comment on forest protected areas

Although forest reserves are the least effectively managed of all protected areas there is no appreciable difference to that of nature reserves. An analysis of the scores for forest reserves for the elements of adaptive management compared to those of nature reserves showed that the scores are very similar. No discernable difference could be found between the two protected area types.

A further review of the data has shown that there is little indication that the average scores of provincial management authorities are negatively influenced by the scores for forest reserves. A comparison of the individual scores for the indicators does however show that there are different management priorities. These should be addressed by each authority.

It should be noted that the sample analysed excludes substantial State Forest areas, which have not been declared forest nature reserve or forest wilderness area, but are nevertheless managed by the provincial management authorities with minimal resources. It is quite likely that the spread of resources has contributed to lower management effectiveness in other areas.

4.7 Summary of scores for protected area type

A summary of average scores per protected area type is presented in Table 14. Clearly the management effectiveness of nature reserves and Forest areas is below average and well below the desired soundly managed score of 67%. Ezemvelo-KZN-Wildlife has already set a short term target for the management of their protected areas of 77% (Carbutt & Goodman 2010). It is hoped that all the management authorities will follow this example.

Table 14: Summary of average scores per protected area type

Protected area type*	Mean total percentage score	Percentage of scores below national mean	Percentage of scores above national mean	Percentage of scores over 67%
All types	49	47	53	14
World Heritage site	80	0	100	100
National park	68	0	100	61
Nature reserve	47	50	50	9
Forest reserve	45	58	42	7

* Special nature reserves have not been included as their scores were not used to determine the mean.

4.8 Pressures and threats

The METT-SA has a section for recording the pressures and threats affecting the protected area.

Pressures and threats are extrinsic to the protected area. These may be the forces of nature or the actions of other authorities within or adjoining the protected area which have a detrimental effect on the integrity of the protected area.

Pressures are influences that have been experienced in the past 5 years or longer and threats are either the manifestation of the pressure into the future (next 5 years) or expected influences that have not yet occurred. Management should be pre-emptive to these threats. By also listing a pressure as a threat, management is indicating that under the current management regime, the threat is unlikely to diminish. It is important to note that issues such as lack of staff or inadequate budget are within the power of management to solve and are dealt with in the METT-SA.

During the development of the METT-SA all the authorities on whom the METT-SA had been tested, had applied some form of review of pressures and threats in their organization and the respondents were able supply the necessary information, often from their management plans. Thus, in the initial stages of the project, it was assumed that all authorities had applied some form of assessment of pressures and threats during the compilation of management plans. As the assessment was expanded into other authorities, it was soon realized that this was not the case and that there were varying interpretations of the concept in different organizations. Many of the managers were identifying aspects of management as pressures and threats. Also, it was clear that the distinction between the two was not clearly understood. A standard list of pressures and threats with definitions was then produced. This was applied to the remaining protected areas. At a workshop held in Pretoria on 24th & 25th February 2010, the standard list was adapted further. This list was then used to edit the pressures and threats that had previously been recorded for some protected areas so that all protected areas corresponded to the same definitions. Thus the data cannot be regarded as reliable and results reported here indicative only.

No weighting was given and the results are the solely the percentage occurrence as recorded for each protected area. As a result, the data recorded merely as an occurrence, is not entirely reliable and should be used to show trends at best. Initial analyses showed that there were some trends, but that the data is unreliable. In order to make some use of the data collected, the data for pressures and threats was combined so that each occurrence either as a pressure or a threat was combined as an occurrence of that the pressure/threat for a specific protected area. For convenience the combined pressure/threat is referred to as threats in the section that follows. The percentage occurrence of the combined threats is listed in Table 15.

The METT-SA Version 2 (2010) has been amended to contain the standard list of pressures and threats and which will be scored according to the RAPPAM system to indicate the relative influence of each pressure and threat and the differences over time. In order to ensure that the pressures and threats are consistently applied it is recommended that the scoring system be thoroughly tested and amended as required in conjunction with each authority.

Table 15: Summary of the percentage occurrence of combined threats expressed as a percentage for 214* protected areas ranked from highest to lowest incidence

Threat	Percentage Occurrence
Invasive plants	72
Illegal extraction of resources (poaching)	65
Inappropriate fire regime	53
Boundary integrity	42
Climate change	41
Land use changes on boundaries	40
Alien animals	37
Historical land use (erosion)	36
Water resource management outside of protected area.	36
Protected area isolation & fragmentation	34
Habitat shifting and alteration	31
Pollution	30
Tourism & recreation impacts	30
Unsustainable use of resources	23
Disease: Indigenous and exotic	21
Servitudes	21
Waste disposal	18
Socio-economic levels in adjoining areas	17
Vandalism & crime	17
Mining and Mining rights. Extraction of non renewable resources	17
Farming practices on boundaries	14
Water extraction in protected area	14
Land claims/disputes	11
Purposeful species eradication	6
Water provision for wildlife	6

* 15 of the protected areas were not included as the completed sheets only reflected management concerns such as budget and staffing.

In the following table (Table 16), the percentage occurrence of the combined threats per biome is presented. Note that Islands are not regarded as one of the biomes, but were extracted as they differ from other terrestrial protected areas. An arbitrary percentage occurrence of 40 was used to set a level of significance for a biome. The threats were then arranged in descending order of the number of biomes with a percentage occurrence over 40% for that threat.

Table 16: Summary of threats for each biome. Threats are ranked by occurrence in biomes from top to bottom. Threats with an occurrence greater than 40% are marked in bold

Threat	Succulent Karoo (n=2)	Indian Ocean Coastal Belt (n=24)	Desert (n=2)	Forest (n=4)	Albany Thicket (n=4)	Nama Karoo (n=4)	Grassland (n=54)	Savanna (n=73)	Fynbos (n=44)	Island (n=3)	Number of biomes with a threat occurrence over 40%
Illegal extraction of resources (poaching)	**100**	**79**	**50**	**100**	**50**	**75**	**65**	**77**	34	**67**	9
Invasive plants	**50**	**92**	0	**100**	**100**	**75**	**72**	**59**	**84**	33	8
Climate change	**50**	**75**	**50**	**50**	**50**	**50**	39	34	32	**67**	7
Inappropriate fire regime	**50**	**63**	0	**75**	**50**	0	**57**	**45**	**64**	0	7
Habitat shifting and alteration	**50**	**67**	**50**	**50**	**50**	**50**	26	38	2	0	6
Water resource management outside of protected area.	**50**	**46**	**50**	25	**50**	**50**	35	33	34	0	5
Protected area isolation & fragmentation	0	**67**	**50**	**75**	**50**	25	**43**	22	25	0	5
Boundary integrity	**50**	**54**	**50**	50	25	**50**	**61**	26	39	0	5
Historical land use	0	**54**	0	**50**	0	0	**46**	**45**	11	0	4
Land use changes on boundaries	**100**	**42**	0	25	**50**	25	31	34	**64**	0	4
Tourism & recreation impacts	**50**	**42**	**100**	**50**	0	0	22	32	32	33	4
Unsustainable use of resources	**50**	29	**50**	**50**	0	0	31	23	9	33	3
Alien animals	**50**	**71**	0	50	25	0	**44**	30	25	33	3
Servitudes	**50**	33	**50**	**75**	25	0	20	25	7	0	3
Pollution	0	**54**	0	**75**	**50**	25	24	37	11	33	3
Water extraction in protected area	**50**	0	0	25	25	**50**	7	15	20	0	2
Socio-economic levels in adjoining areas	**50**	13	**50**	25	25	0	15	23	11	0	2
Disease: Indigenous and exotic	0	**42**	0	0	**50**	0	19	30	2	33	2
Farming practices on boundaries	**50**	4	**50**	0	0	25	9	11	27	0	2
Mining and Mining rights. Extraction of non renewable resources	0	13	**100**	25	0	**50**	17	23	5	0	2
Vandalism & crime	**50**	21	0	0	0	0	24	22	5	0	2
Waste disposal	0	33	0	**50**	0	0	26	19	0	0	2
Water provision for wildlife	0	0	0	0	0	0	0	16	0	0	0
Purposeful species eradication	0	13	0	0	0	25	7	7	0	0	0
Land claims/disputes	0	8	0	0	25	0	7	21	5	0	0

As highlighted in the text, Tables 15 & 16 above should only be used as an indication of trends. For example, the threat: Habitat shifting and alteration, only shows a 2% occurrence for Fynbos. This can be attributed to the fact that this threat was only added to the standard list after the assessment for CapeNature had been completed.

4.8.1 Definitions of pressures and threats

Pressure/Threat	Definition
Alien animals	Includes feral cats, dogs, donkeys, cattle, rodents, reptiles, fish and birds (e.g. Mallard duck and Indian Myna). -cross breeding of feral animals with indigenous species-invasive species e.g. fallow deer
Boundary integrity	The open access system makes control over illegal access and activities very difficult to apply. Land invasions and disturbances.
Climate change	The impact of climate change according to current and future projections on biodiversity in the PA. Vegetation changes and drying up of streams. Increased floods.
Disease: indigenous and exotic	Both indigenous and exotic. Tuberculosis (European), anthrax (Asian), rinderpest, foot-and-mouth, avian flu. Corridor disease, nagana, foot-and-mouth, rabies, heartwater, redwater.
Farming practices on boundaries	Herbicide and insecticide spraying, genetic contamination e.g. from *Protea* orchards and Canola fields.
Habitat shifting and alteration	This includes bush encroachment (increase in the density of woody plants to the detriment of grassland-dependent species) which may be as a result of environmental influences. Loss of key habitat.
Historical land use	Former land use practices that have a long term effect on the protected area e.g. erosion caused by cattle, management tracks, etc. (erosion as a result of tourist activities must be scored under tourism & recreation pressure/threat). Old mine workings and tips.
Illegal extraction of resources (poaching)	Poaching -illegal removal of plants, animals and non biotic resources. It also refers to illegal hunting outside of the protected area.
Inappropriate fire regime	Too frequent fires which could be as a result of natural or human action (including arson) which have altered the veld age distribution in the protected area so that habitats and species are threatened.
Invasive plants	Non-indigenous and indigenous plants (excluding bush encroachment) which establish and advance aggressively and out-compete natural indigenous vegetation, resulting in dense infestations.
Land claims/disputes	Land claims within protected area may make the reserve unsustainable.
Land use changes on boundaries	Planned or unplanned land use changes e.g. informal housing, mining, residential or industrial development, ploughing which have an influence on the integrity of the protected area. This is linked to protected area isolation.
Mining & Mining rights. Extraction of non renewable resources	Mining and Mining rights. Issue of prospecting permits. Sand extraction-gravel pits within protected area
Pollution	Pollution from outside of protected area-smoke-water-light pollution (excluding impacts of farming see 21)
Protected area isolation & fragmentation	The protected area is isolated from other natural areas and the lack of corridors makes the long term sustainability difficult. Edge effect.
Purposeful species eradication	This refers to the deliberate attempt to eradicate an indigenous species, e.g. tsetse fly, mosquito, red billed quella and jackal.
Servitudes	Impact of public road infrastructure, rail, power line service corridors and servitudes that traverse the PA resulting in road-kills and also facilitating the

Pressure/Threat	Definition
	spread of alien organisms and diseases. Also poses increased security risks (poachers have easy access into PA).
Socio-economic levels in adjoining areas	The low levels of socio-economic conditions is such that the local population places great pressure on the illegal use of resources. Unrealistic expectations of benefits from protected areas.
Tourism & recreation impacts	Increased tourism and recreation is placing pressure on facilities and the environment. Current facilities are unable to cope with numbers or limit impacts. Demand for new activities and facilities is beyond the carrying capacity. Over expectations of investors. Overcrowding is destroying the intended visitor experience. Recreational uses of coastal zone and beaches adjoining protected area. Political favours give unsustainable rights over carrying capacity.
Unsustainable use of resources	The demand for the legal use of resources is under pressure (often political) for more delivery to local communities leading to unsustainable levels being reached. Management is unable to effectively monitor extractive use.
Vandalism & Crime	Wanton destruction of assets and/or collection of artifacts; poor management practices resulting in inadequate protection of facilities, infrastructure and heritage assets
Waste disposal	The impacts of waste disposal including waste water treatment from tourism and management facilities. This also refers to waste generated by management activities e.g. old buildings, rubble, fencing materials, scrap metal, implements, etc.
Water extraction in protected area	Water extraction for management and tourism facilities-water rights for adjoining properties and municipalities. It also refers to water extraction within a protected area by water management authorities without taking the needs of the protected area into account.
Water provision for wildlife	The impact of providing water points for animals as demanded by tourism authorities. Overgrazing -loss of biodiversity
Water resource management outside of protected area	Dam building and water abstraction upstream and other activities in catchments leading to loss of stream flow and siltation. Dam building below protected area flooding river basin within the protected area. Lack of adherence to ecological reserve It also refers to water extraction within a protected area by water management authorities.

PART 5

5. Conclusions

5.1 Number of protected areas assessed

Two hundred and thirty protected areas were assessed using the METT-SA (Version 1) during this study. This equates to 78% of the total number of protected areas on the Register of Protected Areas managed by the state at national and provincial level in South Africa. Therefore South Africa has exceded the recommendations set out in Goal 4.2 of the Convention on Biological Diversity's Programme of Work for Protected Areas, in which Parties are to implement management effectiveness evaluations of at least 30% of their protected areas by 2010.

5.2 Choice of tool

The Management Effectiveness Tracking Tool has been used in a number of countries to evaluate the management effectiveness of their protected areas. The adaption of this tool to the METT-SA (Version 1) for use in South Africa made it more relevant to our situation, and relatively easy to apply. One of its shortcomings is that it does not assess the value of the protected area to the system. The assessment of pressures and threats was added part of the way through the assessment programme. This will be remedied in the follow up studies. In addition it is not designed to provide comparisons between protected areas or between management authorities. The method of application was one of self evaluation by the management authority for their protected areas. Some of these authorities provided a rigorous peer review system in their assessments while others did not. Some of the authorities involved a wide range of staff responsible for different aspects of the management of their protected areas, while others restricted the involvement to their senior management. Therefore any comparison of scores between protected areas and or between management authorities is only indicative at best and irrelevant at worst.

5.3 What this study provides

This study provides a baseline for each protected area managed by its management authority against which the authority can measure its progress in improving (or otherwise) the management of the protected area. The study has helped identify problems at the specific protected area which need to be addressed in order to improve that management over the next few years. Some of the problems will be relatively simple to improve, while others may be complex, difficult and demand increased resources before improvement can be made.

5.4 Recommendations

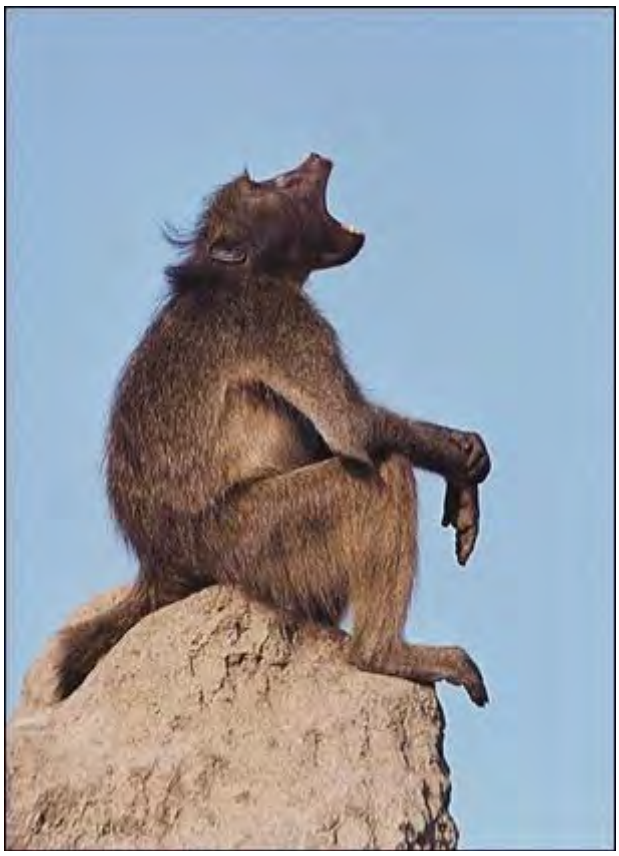
A review of the value of each protected area should be undertaken. Those areas which have no value to the protected area estate, should lose their protected area status and the resources used for their management should be redeployed to those that do and are in need of additional resources.

Each management authority should set a short term goal for the improvement of the management of their protected areas, based on addressing the problems identified in this study. It is recommended that a minimum score using the METT-SA (Version1) assessment tool should be set at 67%. Where possible, following the Ezemvelo-KZN-Wildlife example (Carbutt and Goodman 2010), a minimum

effective score should be set at 77%. Having set a target, the management authorities should work effectively towards improving the management of their protected areas.

An annual, internal review on the progress towards meeting the targets should be undertaken. Where possible the peer review system should be employed, at least within the management authority.

Finally, a similar national assessment should be done in 2014 to check progress. That assessment should attempt to obviate the problems identified in this 2010 study.



Chacma baboon

PART 6

6. Participants in the process

This project was a collaborative one. As such this report is a reflection on the efforts of all those who participated in it. The following sections list the CEO Forum TaskTeam and the participants in the primary workshops.

6.1 Protected Areas CEO Forum Task Team on the Management Effectiveness Assessment of South Africa's Protected Areas

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iSimangaliso Wetland Authority

Bronwyn James

SANParks

P Daphne (M Knight)

CapeNature

Gail Cleaver, Lucille Meyer (Coral Birss)

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Free State Province

D Hayter, T Selema

Limpopo Province

G Knill (J Kruger)

Mpumalanga Tourism and Parks Agency

R Ngwenya

Northern Cape Province

D Badenhorst

North West Parks and Tourism Board

E Madamalala

6.2 Participants in the workshops

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SANParks

G Bell	M Magakgala	P Sieben
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P Daphne	L Moolman	Nomvuselolo Songelwa
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N Johnson	Lucy Pharma	Carli Venter
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A Kearns	B Schraader	W Vermeulen
M Knight	D Shabangu	

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R Hiseman
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C Hugo
Vicki Hudson
J Huishamen
J Jafta
D Jephtha
M Johns
M Julies
C Lamberts
B le Roux
A MacDonald
T Maliehe
J Makampies
T Marshall
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G Mortimer
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C Mooney
L Michaels
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H Niewowudt
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D Rossouw
M Scheepers
AnneLise Schutte-Vlok
Justine Sharples
K Shaw
P Shone
K Spencer
B Swanepoel
W Tabata
T Taute
Helene van der Westhuyzen
Tinie van der Westhuizen
Collette van Deventer
C van Tonder
P van Zyl
Antoinette Veldtman
Mavis Vonga
A Wheeler
D Widerman
J Wibooi

Eastern Cape Parks

D Balfour
Bev Geach
W Mzazi
P Tyldesley

Ezemvelo Kwazulu-Natal Wildlife

B Barnes
J T Biyeza
R Blok
C Carbutt
N Cele
T Conway
R Coopoosamy
C Coverdale
H De Bruyn
Z Dindikazi
J Dives
B Dlamini
D Druce
R Faure
B Gcaba
A M Gcabashe
K Gillings
P S Goodman
M M Gxashi
C Hanekom
D Heard
T Hlongwane
B Howells
R Jones
G H Keet
K E Khanyile
A Khoza
N Khumalo
C E Khumalo
D P Lawson
S Louw
P B Lowry
P F Mahlaba
A Marchant
P Massyn
W Matthews
A Mavuso
E S Mavuso
K McCann
S McKean
W P Mhlongo
K Morty
V Mthethwa
O Mthimkhulu
C Mulqueeny
L Myeza
G Nair
S Ndlovu
J Ngubane
M P Ngwenya
K Nhleko
J Ntsele,
B J Nxele
A Nzuza

B Pather
R Penn Sawers
A M Phungula
P V Radebe
S M Ras
L M Ruddle
I Rushworth
E M Zungu
R Schütte
N A Sigubudu
G Smith
D Swart
P M Tembe
R Uys
Carmen van Tichelen
J Vermeulen
A Wood
E R Wolter
R S Zikheli
L Zulu

uKahlamba Drakensberg World Heritage site (managed by Ezemvelo KZN Wildlife)

J Crowson
E Goosen
S Krueger
Y Mkhize
O Mthimkulu
M Myeza
I Rushworth

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A Khorommbi
J Kruger
L K Mabila
N S Makhari
S S Manganyi
M S Mashele
W L Mokganya
S Mphaphuli
D Musetsho
M M Nemutamvuni
M Ramatsea
N K Tshinavhe
C Visagie

Mpumalanga Tourism & Parks Agency

M Bain
B Bhengu
M Bourn
J Coetzee
S Hedzane
A Jiyane
L Loock
E M Mabotja
D Mahlangu
S Manyike
T Middleton
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S Sibiya
T Thanyani
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White paper on the conservation and sustainable use of South Africa's biological diversity (1997)

Pers com

D. Balfour: : Information on previous assessments completed for protected areas under the management of Eastern Cape Parks Board

A. Boyd: Information on assessments completed for marine protected areas

P. Goodman: Information on previous assessments completed for protected areas under the management of Ezemvelo-KZN-Wildlife;

D. Hayter: Information on previous assessments completed for protected areas under the management of the Free State Province

M. Knight: Information on the State of Biodiversity assessments undertaken at national parks

L. Looke: Information on previous assessments completed for protected areas under the management of the Mpumalanga Tourism and Parks Agency

D. Marais: GIS support Department of Environmental Affairs

O. Mthimkhulu: Information on previous assessments done for the uKahlamba-Drakensberg World Heritage site

G. Palmer: Summary of earlier METT evaluations for CapeNature protected areas

Fiona.Leverington of the University of Queensland, Australia. Information on the analysis of world data survey

APPENDICES

APPENDIX 1: Scores for Special Nature Reserves compared to the national average

Management authority	Name	Total percentage score	Difference from national average	Above or below national average (49%)	Above or below 67%
Environmental Affairs	Prince Edward Islands	84	35	Above	Above
CapeNature	Brenton Blue Butterfly	60	11	Above	Below

Marion Island – part of the Prince Edward Islands Special Nature Reserve

APPENDIX 2: Scores for World Heritage sites compared to the national average

Management authority	Name	Total percentage score	Difference from national average	Above or below national average (49%)	Above or below 67%
EKZNW	uKhahlamba Drakensberg	73	24	Above	Above
SANParks	Mapungubwe	75	26	Above	Above
iSimangaliso	iSimangaliso Wetland Park	86	36	Above	Above

Fish traps – Kosi Bay – iSmangaliso Wetland Park WHs; Golden Rhino – Mapungubwe WHs
San rock art – iKhahlamba-Drakensberg WHs

APPENDIX 3: Scores for national parks compared to the national average

Authority	National park	Total percentage score	Percentage difference from national average	Above or below national average (49%)	Above or below 67%
SANParks	Mokala	55	6	Above	Below
SANParks	Tankwa Karoo	56	7	Above	Below
SANParks	Namaqua	58	9	Above	Below
SANParks	West Coast	59	10	Above	Below
SANParks	Bontebok	63	14	Above	Below
SANParks	Augrabies Falls	64	15	Above	Below
SANParks	Kalahari Gemsbok	66	17	Above	Below
SANParks	Agulhas	67	18	Above	Above
SANParks	Camdeboo	67	18	Above	Above
SANParks	Golden Gate Highlands	69	20	Above	Above
SANParks	Garden Route	71	23	Above	Above
SANParks	Richtersveld	72	24	Above	Above
SANParks	Mountain Zebra	73	24	Above	Above
SANParks	Table Mountain	75	26	Above	Above
SANParks	Addo	76	27	Above	Above
SANParks	Karoo	78	29	Above	Above
SANParks	Marakele	80	31	Above	Above
SANParks	Kruger	83	34	Above	Above

Karoo National Park – Nama-karoo Biome

APPENDIX 4: Scores for nature reserves and forest protected areas compared to the national average by province

4a: Eastern Cape

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
E C Parks	East London Coast	28	-21	Below	Below
E C Parks	Tomas Baines - Waters Meeting	28	-21	Below	Below
E C Parks	Nduli-Luchaba	29	-20	Below	Below
E C Parks	Great Fish River	32	-17	Below	Below
E C Parks	Tsolwana-Commando Drift	33	-16	Below	Below
E C Parks	Mpofu-Fort Fordyce	34	-15	Below	Below
E C Parks	Formosa	36	-13	Below	Below
E C Parks	Mkambati	36	-13	Below	Below
E C Parks	Ongeluksnek	36	-13	Below	Below
E C Parks	Oviston	36	-13	Below	Below
E C Parks	Silaka	36	-13	Below	Below
E C Parks	Dwesa-Cwebe	37	-12	Below	Below
E C Parks	Hluleka	37	-12	Below	Below

4b: Kwazulu-Natal

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
EKZNW	Soada forest	25	-24	Below	Below
EKZNW	Kwa Yili	26	-23	Below	Below
EKZNW	iGxaingenwa	26	-23	Below	Below
EKZNW	INkelabantwana	26	-23	Below	Below
EKZNW	Marwaqa	28	-22	Below	Below
EKZNW	Erfs 179, 180 & 181	29	-20	Below	Below
EKZNW	Ndhloveni	29	-20	Below	Below
EKZNW	Xotsheyake	29	-20	Below	Below
EKZNW	Lake Eteza	29	-20	Below	Below
EKZNW	Marutswa	31	-18	Below	Below
EKZNW	Tugela Drift	36	-13	Below	Below
EKZNW	The Swamp	38	-11	Below	Below
EKZNW	Manguzi	41	-9	Below	Below
EKZNW	Umvoti vlei	43	-6	Below	Below
EKZNW	Blinkwater	45	-4	Below	Below
EKZNW	Emakhosini	45	-4	Below	Below
EKZNW	Fort Nottingham	45	-4	Below	Below
EKZNW	Himeville	45	-4	Below	Below
EKZNW	Doreen Clark	48	-1	Below	Below
EKZNW	Ntinini	49	0	Equal	Below
EKZNW	Coleford	49	0	Equal	Below
EKZNW	Umhlanga lagoon	49	0	Equal	Below
EKZNW	Isandlwana	51	2	Above	Below

4b: Kwazulu-Natal

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
EKZNW	Richards Bay	51	2	Above	Below
EKZNW	Midmar	52	3	Above	Below
EKZNW	Karkloof	53	4	Above	Below
EKZNW	Mbumbazi	53	4	Above	Below
EKZNW	Opathe	53	4	Above	Below
EKZNW	Spioenkop	54	5	Above	Below
EKZNW	Mount Currie	57	8	Above	Below
EKZNW	Weenen	57	8	Above	Below
EKZNW	Dlinza	58	9	Above	Below
EKZNW	Impendle	58	9	Above	Below
EKZNW	Queen Elizabeth Park	58	9	Above	Below
EKZNW	Pongola Bush	58	9	Above	Below
EKZNW	Ongoye	58	9	Above	Below
EKZNW	Wagendrift dam	59	10	Above	Below
EKZNW	Entumeni	59	10	Above	Below
EKZNW	Vernon Crookes	59	10	Above	Below
EKZNW	Oribi Gorge	60	11	Above	Below
EKZNW	Umtamvuna	60	11	Above	Below
EKZNW	Ntsikeni	60	11	Above	Below
EKZNW	Amatigulu	61	12	Above	Below
EKZNW	Sileza	61	12	Above	Below
EKZNW	Beachwood Mangroves	62	13	Above	Below
EKZNW	Skyline	62	13	Above	Below
EKZNW	Chelmsford	62	13	Above	Below
EKZNW	Lebombo Mountain	63	14	Above	Below
EKZNW	Mpenjati	63	14	Above	Below
EKZNW	North Park	63	14	Above	Below
EKZNW	Bluff	64	15	Above	Below
EKZNW	Umlalazi	64	15	Above	Below
EKZNW	Krantzkloof	67	18	Above	Above
EKZNW	Hhluhluwe Imfolosi Park	69	20	Above	Above
EKZNW	Phongola	69	20	Above	Above
EKZNW	Vryheid Hill	69	20	Above	Above
EKZNW	Enseleni	69	20	Above	Above
EKZNW	Harold Johnson	69	20	Above	Above
EKZNW	Ndumo	70	21	Above	Above
EKZNW	Kenneth Stainbank	70	21	Above	Above
EKZNW	Tembe	78	29	Above	Above
EKZNW	Ithala	79	30	Above	Above

4c: Free State

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
Free State	Rustfontein Dam	48	-1	Below	Below
Free State	Sterkfontein Dam	50	1	Above	Below
Free State	Soetdoring	52	3	Above	Below
Free State	Bathurst	53	4	Above	Below
Free State	Erfenis Dam	53	4	Above	Below
Free State	Sandveld	57	8	Above	Below
Free State	Caledon	57	8	Above	Below
Free State	Gariep	58	9	Above	Below
Free State	Maria Moroka	58	9	Above	Below
Free State	Kalkfontein Dam	59	10	Above	Below
Free State	Willem Pretorius	59	10	Above	Below
Free State	Koppies Dam	59	10	Above	Below
Free State	Tussen die Riviere.	61	12	Above	Below
Free State	Seekoeivlei	65	16	Above	Below

4d: Gauteng

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
Gauteng	Abe Bailey	46	-3	Below	Below
Gauteng	Roodeplaatdam	46	-3	Below	Below
Gauteng	Leeufontein	52	3	Above	Below
Gauteng	Suikerbosrand	61	12	Above	Below

4e: Limpopo

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
Limpopo	Lillie	12	-37	Below	Below
Limpopo	Kalkbank	16	-33	Below	Below
Limpopo	Machaka	16	-33	Below	Below
Limpopo	Leswena	19	-30	Below	Below
Limpopo	Mogol Dam	22	-27	Below	Below
Limpopo	Bewaarkloof	22	-27	Below	Below
Limpopo	Manombe	23	-26	Below	Below
Limpopo	Stellenbosch	24	-25	Below	Below
Limpopo	Moletjie	26	-23	Below	Below
Limpopo	D'Nyala	27	-22	Below	Below
Limpopo	Manthrombi	28	-21	Below	Below
Limpopo	Brackenridge	28	-21	Below	Below
Limpopo	Tzaneen Dam	31	-18	Below	Below
Limpopo	Nzhelele	32	-17	Below	Below
Limpopo	Doorndraai Dam	34	-15	Below	Below

4e: Limpopo

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
Limpopo	Letaba Ranch	34	-15	Below	Below
Limpopo	Wonderkop	34	-15	Below	Below
Limpopo	Mphaphuli	34	-15	Below	Below
Limpopo	Hans Merensky	36	-13	Below	Below
Limpopo	Turfloop	36	-13	Below	Below
Limpopo	Modjadji	36	-13	Below	Below
Limpopo	Wolkberg Caves	36	-13	Below	Below
Limpopo	Schuinsdraai	37	-12	Below	Below
Limpopo	Malebocho	37	-12	Below	Below
Limpopo	Nwanedi	38	-11	Below	Below
Limpopo	Nylsvley	39	-10	Below	Below
Limpopo	Langjan	39	-10	Below	Below
Limpopo	Blouberg	41	-8	Below	Below
Limpopo	Lekgalameetse	41	-8	Below	Below
Limpopo	Percy Fyfe	43	-6	Below	Below
Limpopo	Potlake	45	-4	Below	Below
Limpopo	Makhuya	51	2	Above	Below
Limpopo	Atherstone	57	8	Above	Below

4f: Mpumalanga

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
MTPA	Bushbuckridge	9	-40	Below	Below
MTPA	Mkhombo Barberton	30	-19	Below	Below
MTPA	Mountainlands	41	-8	Below	Below
MTPA	Andover	46	-3	Below	Below
MTPA	Mabusa	50	1	Above	Below
MTPA	SS Sokosana	51	2	Above	Below
MTPA	Mthethomusho	53	4	Above	Below
MTPA	Nooitgedacht	55	6	Above	Below
MTPA	Verloren Valei	58	9	Above	Below
MTPA	Mdala	59	10	Above	Below
MTPA	Sterkspruit	60	11	Above	Below
MTPA	Loskop dam	61	12	Above	Below
MTPA	Barberton	62	13	Above	Below
MTPA	Blyde River Canyon	63	14	Above	Below
MTPA	Mahushe Shongwe	65	16	Above	Below
MTPA	Manyleti	67	18	Above	Above
MTPA	Songenvilo	67	18	Above	Above
MTPA	Ohrigstad	68	19	Above	Above

4g: Northern Cape

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
N Cape	Nababiep	37	-12	Below	Below
N Cape	Doornkloof	41	-8	Below	Below
N Cape	Oorlogskloof	41	-8	Below	Below
N Cape	Rolfontein	42	-7	Below	Below
N Cape	Goeap	45	-4	Below	Below
N Cape	Witsand	46	-3	Below	Below

4h: North West

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
NWPTB	Kgaswane	46	-3	Below	Below
NWPTB	Vaalkop	47	-2	Below	Below
NWPTB	Barberspan	51	1	Above	Below
NWPTB	Molopo	56	7	Above	Below
NWPTB	Madikwe	56	7	Above	Below
NWPTB	Boskop	58	9	Above	Below
NWPTB	Borakalalo	60	11	Above	Below
NWPTB	Botsalano	62	13	Above	Below
NWPTB	Wolwespruit	65	16	Above	Below
NWPTB	Molemane Eye	68	19	Above	Above
NWPTB	Pilanesberg	70	21	Above	Above

4i: Western Cape

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
CapeNature	Soetendalsvlei	21	-28	Below	Below
CapeNature	Verlorenvlei	26	-23	Below	Below
CapeNature	Waterval	27	-22	Below	Below
CapeNature	Kleinjongensfontein	36	-13	Below	Below
CapeNature	Blomboschfontein	37	-12	Below	Below
CapeNature	Limietberg	39	-10	Below	Below
CapeNature	Waenhuiskrans	39	-10	Below	Below
CapeNature	Knersvlakte	39	-9	Below	Below
CapeNature	Jonkershoek	40	-9	Below	Below
CapeNature	Matjiesrivier	40	-9	Below	Below
CapeNature	Vrolijkheid MCA	40	-9	Below	Below
CapeNature	Walker Bay	41	-8	Below	Below
CapeNature	Harmony Flats	41	-8	Below	Below
CapeNature	Outeniqua	42	-7	Below	Below
CapeNature	Kruisrivier	44	-5	Below	Below
CapeNature	Riverlands	45	-4	Below	Below
CapeNature	Rocherpan	47	-2	Below	Below

CapeNature	Kammanassie	48	-1	Below	Below
CapeNature	Driftsands	48	-1	Below	Below
CapeNature	Dassen Island	52	3	Above	Below
CapeNature	Salmondsdam	53	4	Above	Below
CapeNature	Keurbooms	53	4	Above	Below
CapeNature	De Hoop	54	5	Above	Below
CapeNature	Kogelberg	55	6	Above	Below
CapeNature	Goukamma	55	6	Above	Below
CapeNature	Swartberg	55	6	Above	Below
CapeNature	Grootvadersbosch	56	7	Above	Below
CapeNature	Vrolijkheid	57	8	Above	Below
CapeNature	Robberg	63	14	Above	Below
CapeNature	Dyer Island	63	14	Above	Below
CapeNature	Bird Island	66	17	Above	Below
CapeNature	Gamkaberg	69	20	Above	Above

APPENDIX 5: METT-SA (Version 1) Primary questions per indicator

INDICATOR	QUESTION
CONTEXT	
where are we now?	
1.1 Legal status	Does the PA have secure permanent conservation legal status in terms of the PAA?
1.2 Protected Area regulations	Are there legal mechanisms in place to control inappropriate activities?
1.3 Protected Area boundary demarcation	Is the boundary known and appropriately demarcated (e.g. fenced or marked with bollards/posts and sign posted?)
1.4 Biodiversity Resource inventory	Do you have enough information to manage the biodiversity?
1.5 Heritage Resource inventory	Do you have enough information to manage the area
PLANNING	
where do we want to be?	
2.1 Protected area design	Is the size and shape of the protected area adequate to achieve the conservation objectives?
2.2 Strategic Management plan	Is there an approved management plan (compliant with Protected Areas Act) and is it being implemented?
2.3 Conservation Development Framework	Is there a visitor use zoning system indicating position and nature of operation & visitor infrastructure?
2.4 Land and water use planning outside of the protected area	Does land & water use planning recognise the protected area and the achievement of the objectives?
Supplementary items a.	The planning process allows adequate consultation with key stakeholders in the compilation of the management plan
b.	There is an established schedule and process for periodic review and updating of the management plan
c.	The results of monitoring, research and evaluation are routinely incorporated into planning
d.	There is a programme for the implementation of the SMP and its costing
e.	The terms and conditions of any relevant Biodiversity plan and/or the applicable aspects of the IDP of the local municipality have been taken into account as required by the PAA.

INPUTS

what do we need?

3.1 Research & Monitoring Programme	Is there a programme of management-orientated research & monitoring that assists managers to manage better?
3.2 Human Resource capacity	Does the PA have sufficient HR capacity to manage the protected area?
3.3 Current budget	Is the current budget sufficient?
3.4 Security of budget	Is the budget secure?
3.5 Income	Is income from various sources applied to the management of the protected area?
3.6 Law enforcement	Has the PA the capacity/resources to enforce regulations & bylaws well enough?

PROCESSES

how do we go about it?

4.1 Annual plan of operation	Is there an annual work plan approved by the organization?
4.2 Biodiversity resource management	Is the protected area adequately managed (eg for fire, invasive species, poaching, sustainable use)?
Supplementary item	There are management guidelines for the sustainable use of biodiversity resources
4.3 Heritage resource management	Are heritage resources adequately managed (eg maintenance of monuments, cultural sites)?
4.4 HR Management	Is there an effective staff management programme in place
4.5 Administrative systems	Are the administrative systems supportive of effective management?
4.6 Operational equipment & infrastructure	Is there adequate operational equipment & infrastructure (as required for operational management purposes, but excluding tourism facilities)
4.7 Maintenance of equipment and infrastructure	Is equipment and infrastructure (including tourism/visitor facilities) adequately maintened?
4.8 Education and awareness programme	Is there a planned education programme?
4.9 Neighbours	Is there cooperation with adjacent landowners?
4.10 Advisory committee/forum	An advisory committee of local representatives and specialists advises on PA management and development issues
4.11 Community partners	Do community partners have input to management decision via the advisory committee?

4.12 Commercial tourism	Do commercial tour operators contribute to protected area management?
4.13 Protected area performance evaluation system	Is there a functioning evaluation system in place to measure performance against set objectives for the protected area?
Supplementary item a.	There is open communication and trust between local stakeholders and PA managers
b.	There is active participation in peripheral activities that may influence the PA

OUTPUTS/OUTCOMES

what are the results / achievements?

5.1 Visitor facilities	Are visitor/tourism facilities good enough and sufficient to prevent damage to the PA?
Supplementary item	There are active programmes for restoration of degraded areas in the PA and/or associated buffer zone, resultant from vistor use.
5.2 Ecological condition assessment	Are the biodiversity assets and values being managed consistent to objectives?
Supplementary item	Where applicable is the impact of legal and illegal extractive use of biological resources being monitored?
5.3 Heritage condition assessment	Are the heritage assets and values being managed consistent to objectives?
5.4 Protection systems	Are the available management mechanisms working to control both illegal and legitimate access or use?
5.5 Economic and social benefit assessment	Is the protected area providing economic and social benefits to local communities?

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