

**BMM WHS NOMINATION DOSSIER
APPENDIX V:
METT-SA SYSTEM**

**A report on the application of the METT-SA Version 1 (2008) to terrestrial
protected areas managed at national and provincial level in South Africa**

Presented to the Department of Environmental Affairs

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August 2010



CAVEAT 1

This report contains information that will have administrative and political implications for the various authorities and is presented to the Department of Environmental Affairs to be used as they see fit. Until the contents have been discussed with the various authorities, particularly those who are underperforming, it should be treated as a confidential internal report

CAVEAT 2

The METT-SA is a site specific self evaluation tool which detects trends in management effectiveness over time. The scores and comparison of scores to norms used in this report are intended to detect trends. It would be inappropriate if the METT-SA were to be used to set national or provincial standards as this could influence the way in which assessors apply scores.

Abbreviations

For easier reading the following abbreviations for the 11 authorities managing protected areas are used in this report.

CapeNature- CapeNature

Department of Environmental Affairs -DEA

Eastern Cape Parks Board - Eastern Cape Parks

Ezemvelo KwaZulu-Natal Wildlife - EKZNW

Free State Department of Economic Development, Tourism and Environmental Affairs - Free State

Gauteng Dept of Agriculture and Rural Development - Gauteng

iSimangaliso Wetland Park Authority - iSimangaliso

Limpopo Department of Economic Development, Environment & Tourism - Limpopo

Mpumalanga Tourism & Parks Agency - Mpumalanga

Northern Cape Department of Environment and Nature Conservation - Northern Cape

North West Parks & Tourism Board - North West

South African National Parks - SANParks

1. INTRODUCTION

In July 2009 the Department of Environmental Affairs (DEA) appointed Paul Britton of Beyond Horizons Consulting to apply the METT-SA Version 1 (2008) to all protected areas managed at national and provincial level in South Africa.

This document 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 document further describes the characteristics and application of METT-SA version1 to all terrestrial protected areas in South Africa. Analysis of the results of this first national assessment are presented and discussed. 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 is described in Section 7 and presented in Appendix 6 of this document.

2. 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.

2.1 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 Plan for People and the Environment (C.A.P.E.) in conjunction with the Department of Environmental Affairs & Tourism (DEAT) 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, 15 nature reserves managed by CapeNature, 10 protected areas 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 (NEM:PAA) were included
- The guidelines for management plans as compiled by the Department of Environmental Affairs and Tourism (DEAT) 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.

2.2 Characteristics of METT-SA

2.2.1 General characteristics

The general characteristics 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 32 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 (NEM:PAA).
- Includes DEA 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. .

2.2.2 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.

2.2.3 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.

2.3.4 Application

- 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. APPLICATION OF THE METT-SA TO TERRESTRIAL PROTECTED AREAS MANAGED AT NATIONAL AND PROVINCIAL LEVELS IN SOUTH AFRICA.

3.1 Scope of assessment.

Originally it was intended that all Marine Protected Areas (MPAs) should be included in the assessment. The METT-SA was applied to the following MPAs managed by CapeNature: Betties Bay, De Hoop, Goukamma, Robberg and Stilbaai. 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) and the results of the above assessments for CapeNature are included in the electronic data base accompanying this report. . 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.

3.2 Process followed.

Paul Britton of Beyond Horizons Consulting and Dr. Geoff Cowan of DEA visited each of the conservation authorities. At each meeting Dr Cowan gave an introduction on the background of the study and the intent to report to the Convention on Biodiversity (CBD). Paul Britton then gave 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 1.

Table 1: Numbers and types of protected areas assessed per authority

Management authority	Special Nature Reserve	National Park	World Heritage site	Nature Reserve	Forest Reserve	Total
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
	1	18	3	193	14	229

3.3 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.

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 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 Garden Route National Park was evaluated as a single unit.

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 consistency response. The corrected results were supplied to Mpumalanga.

Note that 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.

3.4 Comparison of scores.

The METT-SA is designed as 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, the score should rather be a reflection on the ability of the organisation to effectively manage. 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 11 different authorities, it must always be remembered that the purpose this exercise is to examine overall trends and to advise DEA towards applying corrective measures or provide assistance where required.

3.5 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.

3.6 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.

There 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.

3.6.1 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.

3.6.2 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.

3.6.2 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. The list with South African equivalents is appended as Appendix 4.

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 2. 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 2.

3.6.3 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 (section 3.6.2).

Table 2: 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)

4. RESULTS

4.1 ALL TERRESTRIAL PROTECTED AREAS

All 229 protected areas listed in Table 1, were assessed. Total scores (including supplementary items) ranged from 10 to 86%, with a total mean of 49% with a standard deviation of 10.72. The distribution of these scores is shown in Table 3 and illustrated in Figure 1.

Table 3: Distribution of scores for all protected areas

Number of protected areas assessed	National percentage mean (Range 9-86 %)	Percentage of protected areas below mean (n= 108)	Percentage of protected areas above mean (n= 121)	Above 67% (n=31)
229	49	47	53	14

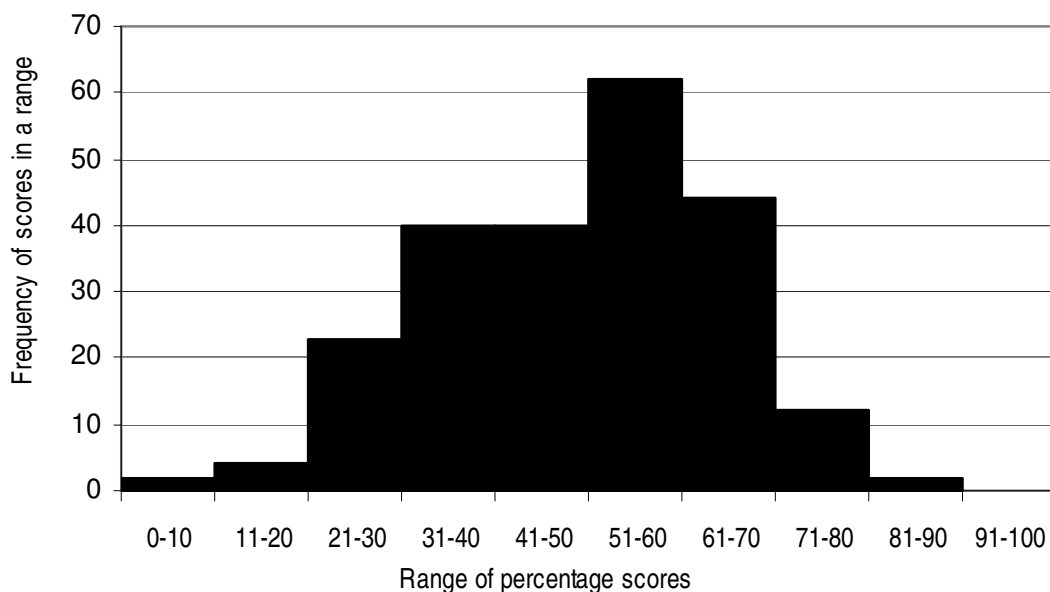


Figure 1: Percentage occurrence of total percentage scores for all protected areas

Although there are 52% of protected areas scoring above 50%, the national average is brought down by the large number of 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 4.

Table 4: 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 4 it must be borne in mind that the 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 his 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 2 gives an indication that a national level, attention should be given to 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.

Scores for the indicators in each grouping for each authority are shown in Table 14.

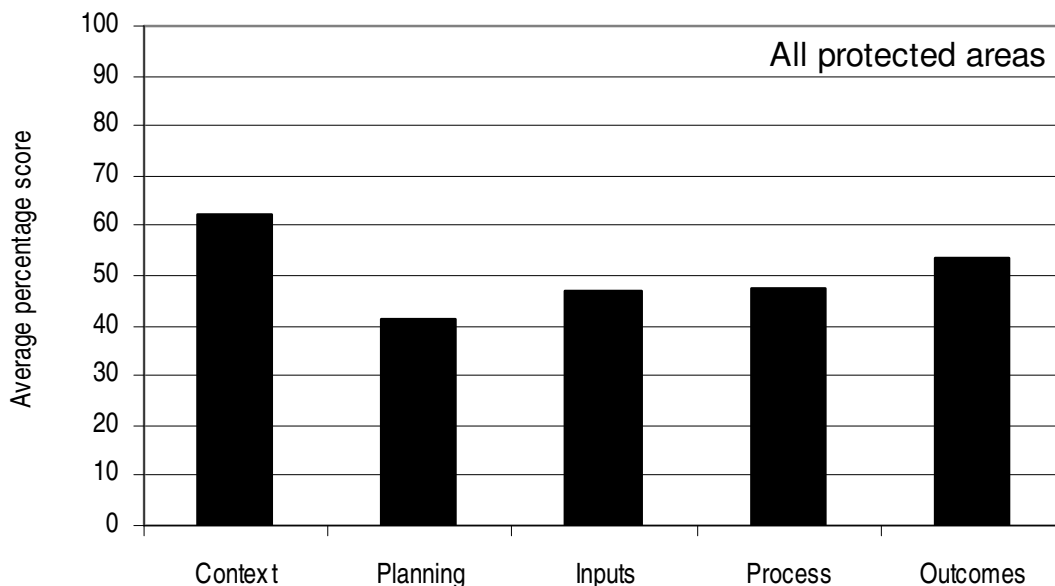


Figure 2: Average Score for adaptive management elements for all protected areas

4.1.2 Indicators

The national average for each indicator is shown in Figure 3.

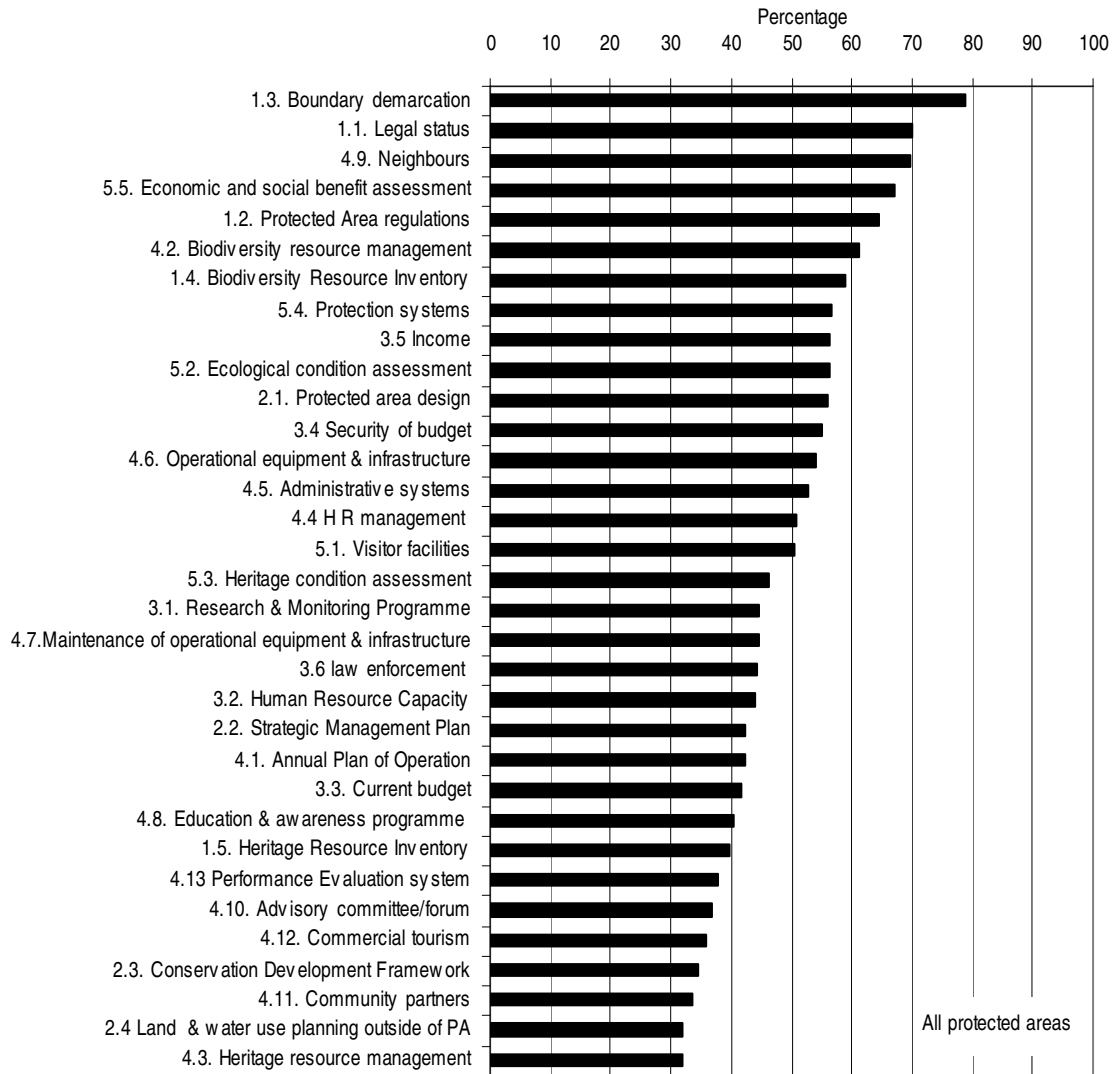


Figure 3: Average score for each indicator (excluding supplementary items) for all protected areas in descending order of score

To assist analysing the national average scores for each indicator, an arbitrary score of 45 % (based on Leverington et al) (see section 3.6.2) was set as the level below which management is considered unsatisfactory.

In the following section indicators scoring less than 45% at a national level are listed (see table 14 for a breakdown of all authorities). Guided by the rankings as set out in Table 2 and also the level of threats recorded in Table 17, these indicators have been arranged in a recommended grouping of priorities.

TOP PRIORITY

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

The NEM: PAA 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 2) 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 (APO) (42%)

An APO is a fundamental part of management as it looks at how best to utilise available (often limited) resources. It is a way of ensuring that priorities as set by the SMP 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 2.

Indicator 3.2: Human Resource Capacity (44%)

Many respondents emphasized the lack of and quality of staff available when reporting on threats. Many organisations 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 organisation 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.

Indicator 3.4: Law Enforcement (44%)

As poaching is recorded as the second most frequent threat to protected areas (Table 17), 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.

MEDIUM PRIORITY

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

This indicator is ranked as 4 in Table 2 and should thus be seen as a priority. Further, if the relatively high frequency scores of Threat # 10: Land use changes on the boundary (40%) and Threat # 2: Water Resource Management outside of the Protected Area (36%) are considered (Table 17), then this indicator could have a higher priority depending on the applicability to specific protected areas.

Indicator 2.3: Conservation Development Framework (CDF) (34%)

The CDF is an expansion of the requirement of NEM: PAA 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.

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 (Act 25 of 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 fig 4 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.

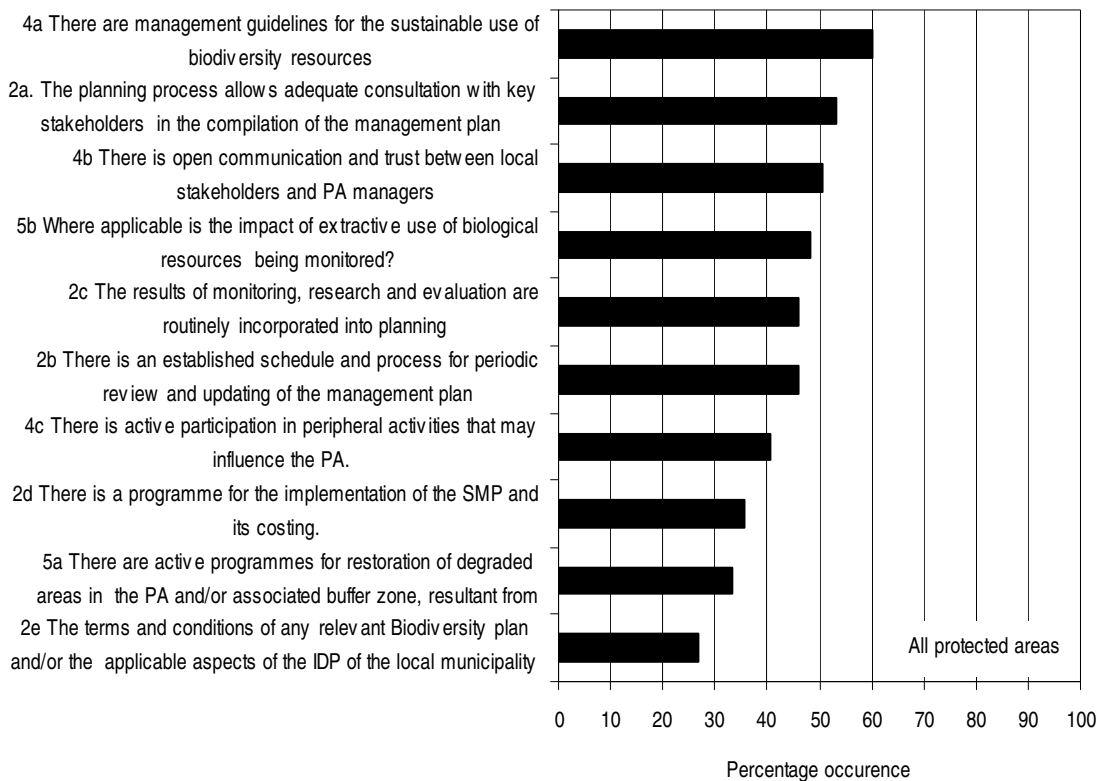


Figure 4: The percentage occurrence of scores of 1 for supplementary items for all protected areas in descending order of score.

The scores achieved per authority are given in Table 15 for information and as guidelines to determine issues requiring attention. What follows is a short explanation of the relevance of the supplementary items.

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

This is prerequisite of the NEM: PAA and any scores of zero should 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 SMP and its costing.

This is prerequisite of the NEM:PAA 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 IDP of the local municipality have been taken into account.

This is a stipulation of the NEM:PAA. 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 PA 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 PA.

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 PA 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 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 Overall 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 NEM: PAA.

4.2. SPECIAL NATURE RESERVES (SNR)

There are only two special nature reserves; Prince Edward Islands and Brenton Blue Butterfly. Only the Brenton Blue Butterfly SNR was assessed during the main process. Subsequent to the completion of the national analyses and the completion of this report, a METT-SA was compiled for the Prince Edward Islands. It was thus not included in the assessment of the national average. The total score achieved for Prince Edward Islands is 84%. The summary of scores for Prince Edward Islands is attached as Appendix 1.

A total score 60% was achieved for Brenton Blue Butterfly Special Nature Reserve (BBBSNR) managed by CapeNature. As it was the only protected area assessed in this category, no comparison is made to the national average. The scores per the elements of adaptive management are shown in Figure 5.

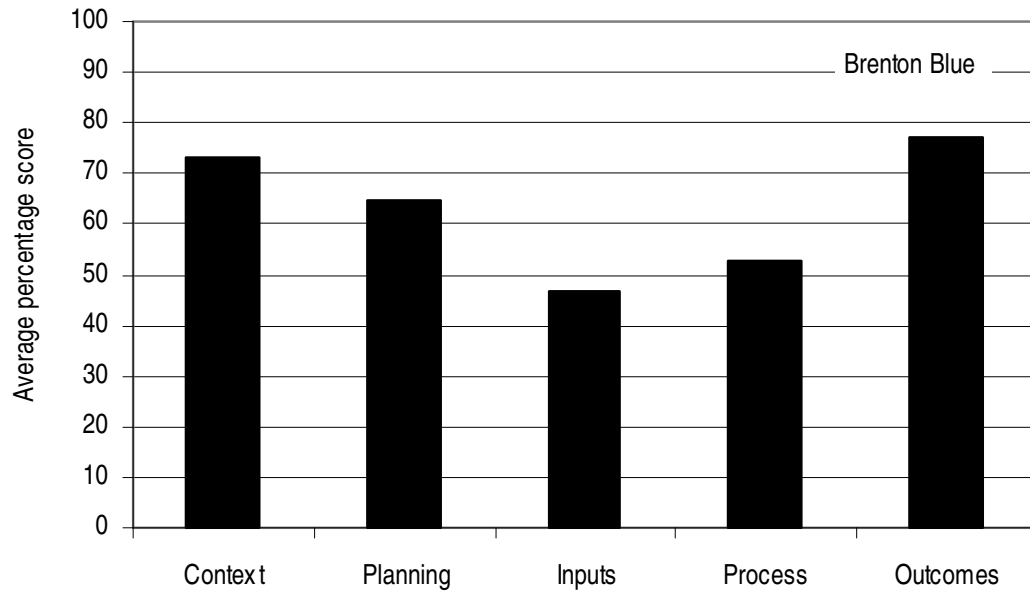


Figure 5: Brenton Blue Butterfly Special Nature Reserve, average percentage score for adaptive management elements

Table 5: 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 Overall comment

Although there is room for improvement, the BBBSNR 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 2, the lower scoring indicators in Inputs and Process should be reviewed and priorities for attention set. .

4.3 NATIONAL PARKS

All 19 of the national parks currently managed by South African National Parks (SANParks) were assessed. 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.

Table 6: Distribution of scores for national parks

Number of national parks assessed	National mean percentage score	National parks mean percentage (Range 55-83%)	Percentage of national parks below the national mean n= 0	Percentage of national parks above the national mean n= 18	Percentage of national parks above 67% n= 11
18	49	68	0	100	61

The total average score of 68 % (range 55-83) is well above the national average of 49%. There were no national parks scoring below 49%. However only 61% of national parks scored above 67% the level set for sound management. The three lowest scores (Mokala, Tankwa Karoo & Namaqua) are parks still under development.

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

4.3.1 Scores for elements of adaptive management

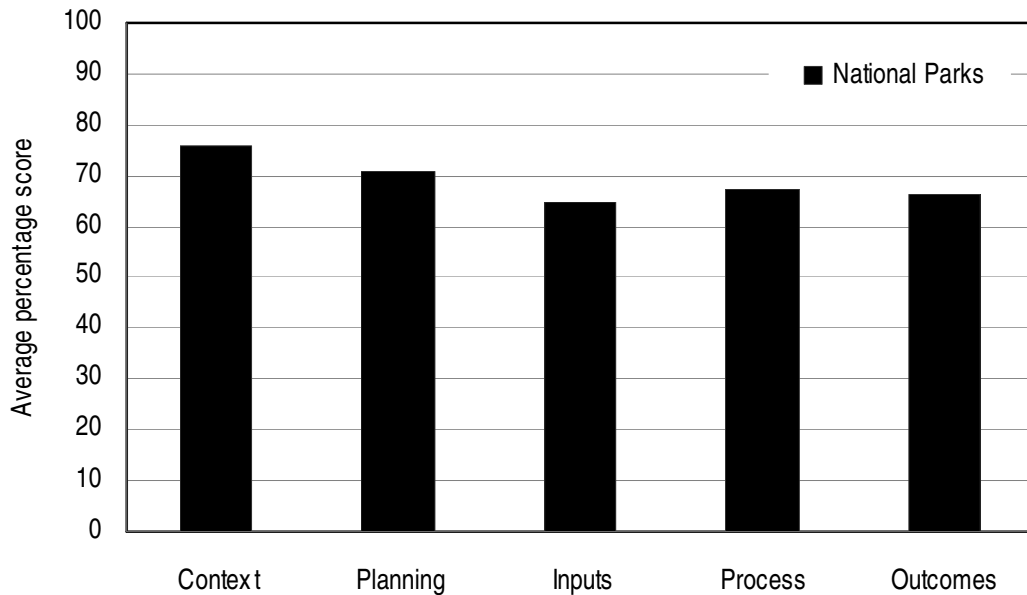


Figure 6: National parks: average percentage score for adaptive management elements

4.3.2 Indicators

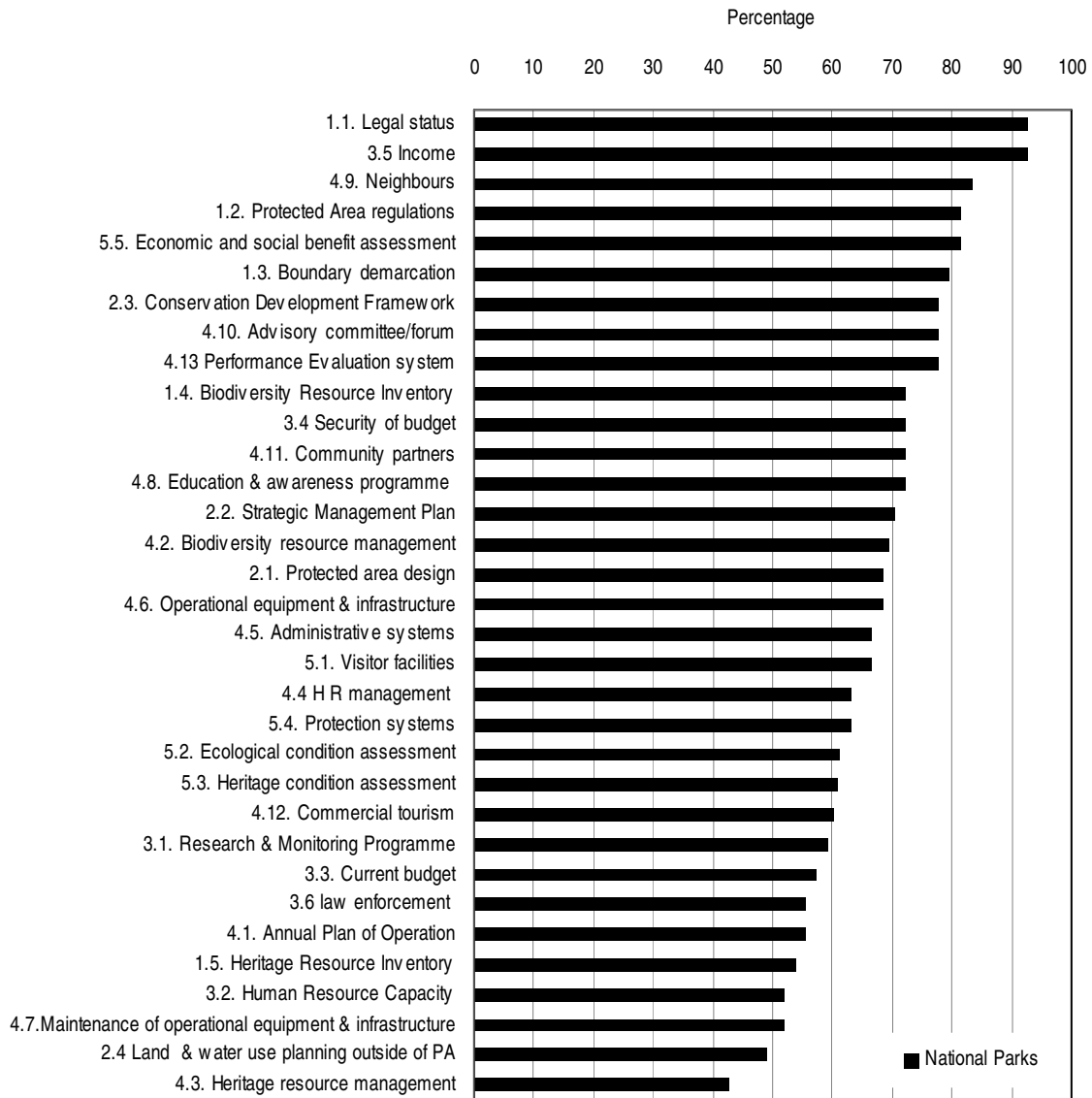


Figure 7: National parks: average percentage score for each indicator (excluding supplementary items)

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 2.

Ranking as per Table 2

1	4.7 Maintenance of operational equipment and infrastructure
4	3.6 Law enforcement
4	4.3 Heritage resource management
4	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	3.1 Research and monitoring programme
11	4.1 Annual plan of operations

4.3.3 Overall Comment

Although national parks are more effectively managed than the national average, only 61% scored above the “sound management” score of 67%.

A strategy to improve the overall score should be implemented by SANParks.

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 (CFRWHs) is a complex series of different protected areas managed by different authorities at both national and provincial levels, spread throughout the Fynbos biome. It was thus considered impractical to apply the METT-SA to the CFRWHs.

The total mean of 78 % score is well above the national average of 49%.

Table 7: Total percentage scores for World Heritage sites. All World Heritage sites scored higher than the 67% guideline score for soundly protected areas.

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

4.4.1 Scores for elements of adaptive management

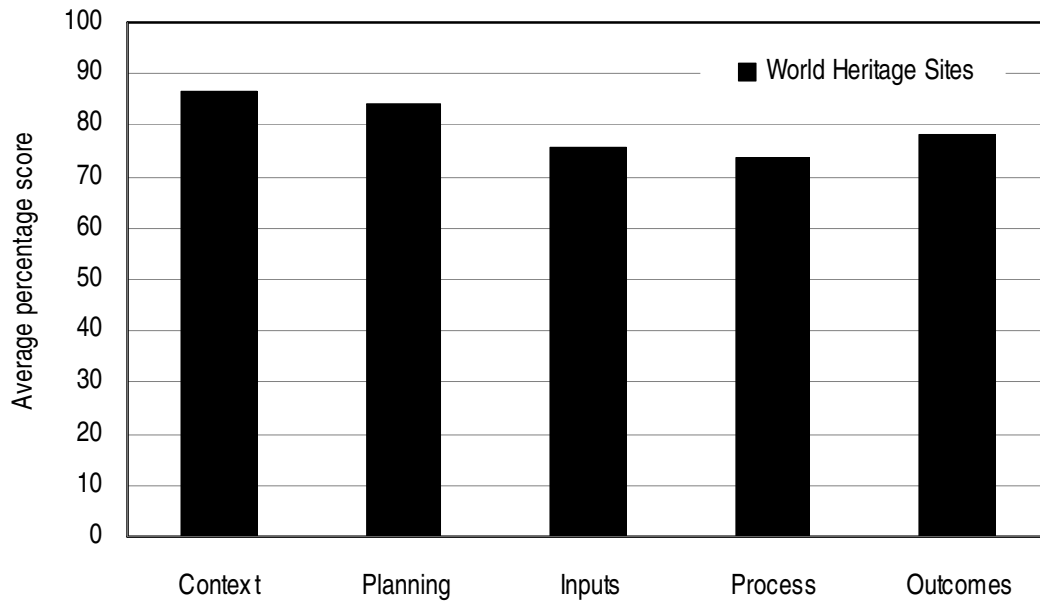


Figure 8: World Heritage sites, average percentage score for adaptive management elements

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.

4.4.2 Indicators

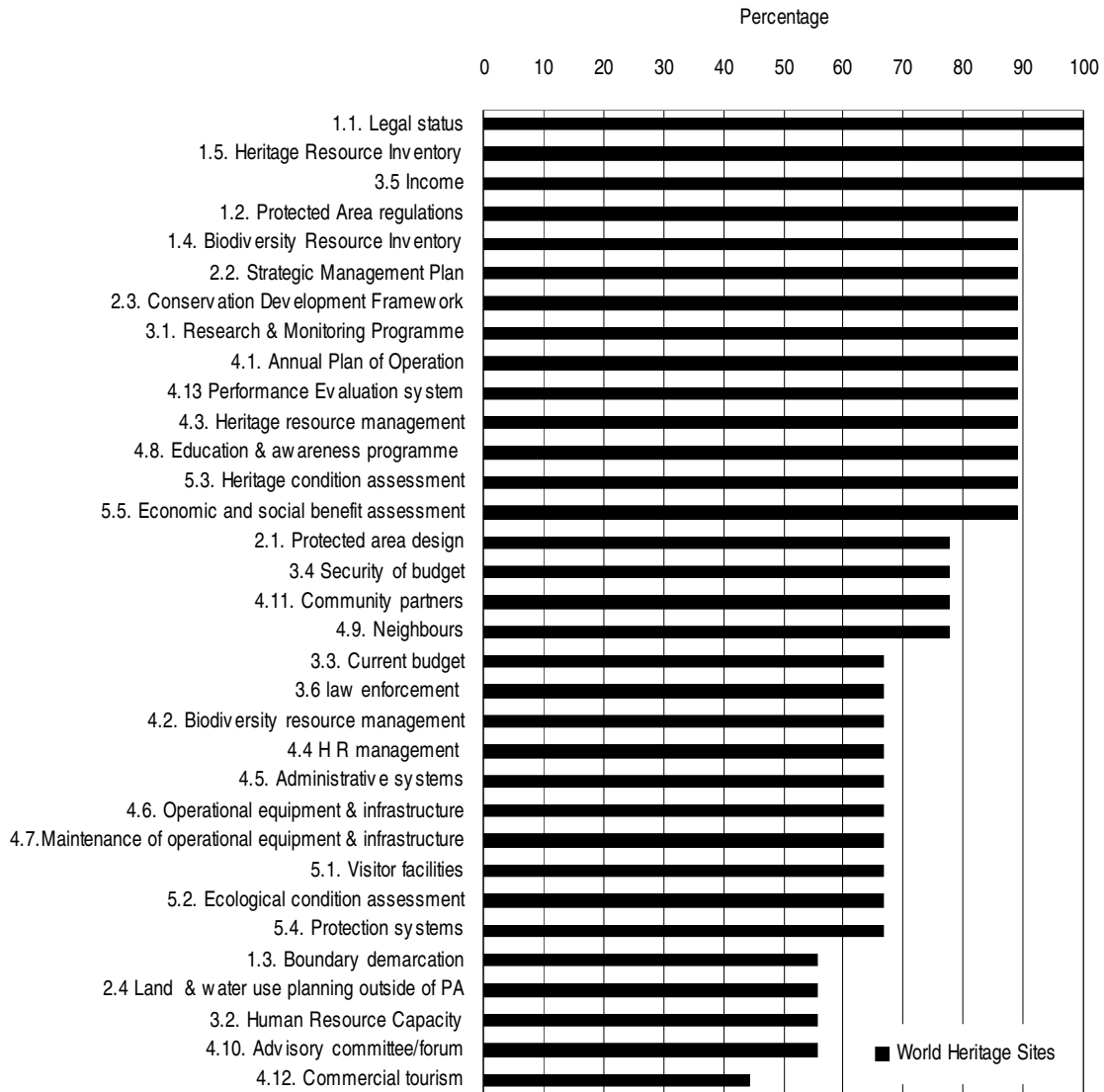


Figure 9: World Heritage sites, average percentage score for each indicator (excluding supplementary items).

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 are considered priorities in order of the ranking as per the guidelines in Table 2.

**Ranking
as per
Table 2.**

1	4.6 & 4.7 Maintenance and adequacy of operational equipment and infrastructure
3	5.4 Protection systems
3	5.2 Ecological condition assessment
4	2.4 Land and water use planning outside of protected area
9	5.1 Visitor facilities
10.	4.12 Commercial tourism
10	4.10 Advisory committee/ forum

4.4.3 Overall Comment

All World Heritage sites are soundly managed. A strategy for each World Heritage site should be put in place to improve on lower ranking scores.

4.5 NATURE RESERVES

The 193 provincial nature reserves assessed are managed by 9 different authorities (Table 1). 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 managed by CapeNature was removed from the data base as it is totally different from any other protected area in the country. For full details of scores per authority please refer to Appendix 3.

The total average score of 47% (range 9-79%) for all nature reserves is slightly below the national average of 49%. Note that as nature reserves comprise 83% of the 229 protected areas assessed, the averages for nature reserves will be close to the national average. Thus initial decision of the CEO's Forum Working Group to compare performance against the national mean was not followed.

Table 8: Distribution of scores for nature reserves

Number of nature reserves assessed	National mean percentage score	Percentage mean for nature reserves (Range 9-79%)	Percentage of nature reserves below national mean (n= 100)	Percentage of nature reserves above national mean (n= 93)	Percentage nature reserves above 67% (n= 16)
193	49	47	52	48	9

As the management of nature reserves is clearly below the national mean and as only 9% of nature reserves achieved the “soundly managed” level of 67%, a full breakdown by authority is given in section 5.

4.5.1 Scores for elements of adaptive management

Although most nature reserves are reasonably well established (Context =60%) (Figure 10) clearly urgent attention required is to examine the factors influencing the low scoring of Inputs, Process and Planning for each authority.

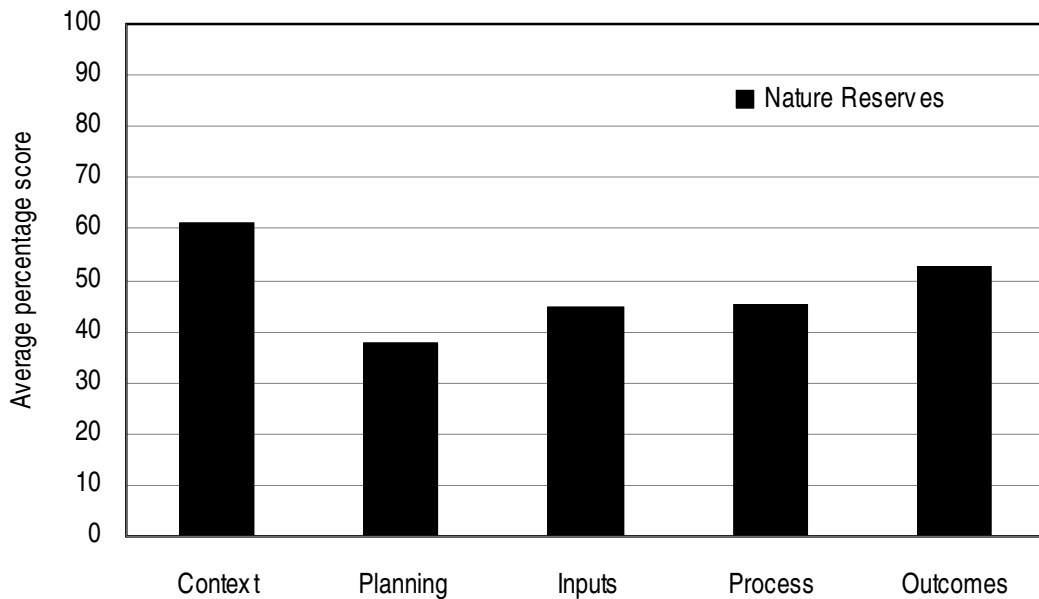


Figure 10: All nature reserves: percentage score for adaptive management elements

4.5.2 Indicators

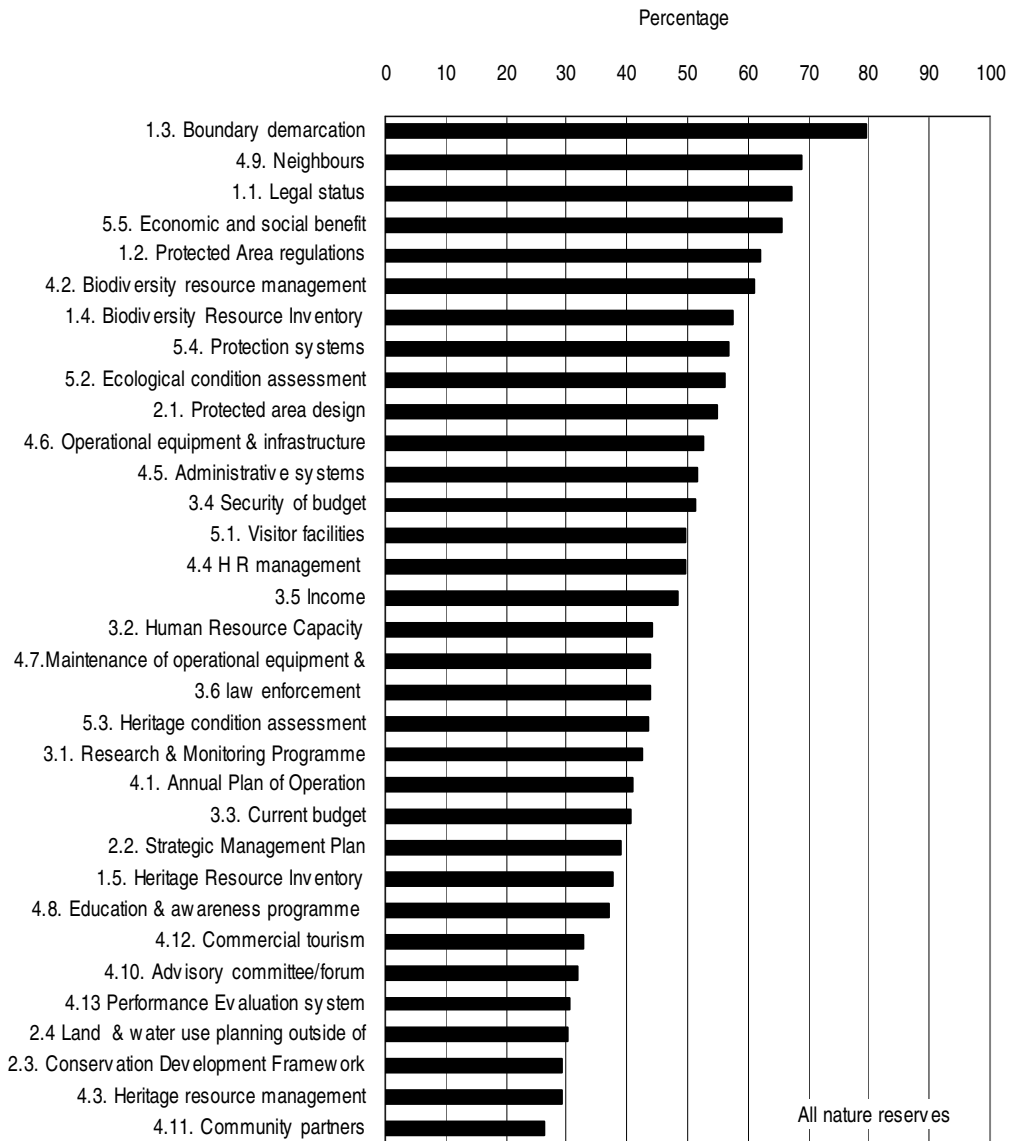


Figure 11: All nature reserves: average percentage score for each indicator (excluding supplementary items).

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 Overall Comment

On average the management of nature reserves is clearly not effective and a strategy for each authority to improve management effectiveness is urgently required. Further breakdown per authority is given in Table 12 in section 5.

4.6 FOREST RESERVES

Forest reserves are protected areas declared in terms of the National Forests Act. The 14 assessed in this study (listed Table 13) are managed by four provincial authorities. 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 ranged from 10-67% with an average of 45%. Tables 9 & 10 indicate that the results for forest reserves are slightly below the national average and the average for all nature reserves.

Table 9: Distribution of scores for forest reserves

Number of forest reserves assessed	National mean percentage score	Forest reserves mean percentage score (Range: 10-67)	Percentage of forest reserves below national mean (n= 8)	Percentage of forest reserves above the national mean (n= 6)	Percentage of forest reserves above 67% (n= 1)
14	49	47	58	42	7

As the forest reserves are managed by four different authorities these scores are further broken down in Table 13 in section 5.

4.6.1 Scores for elements of adaptive management

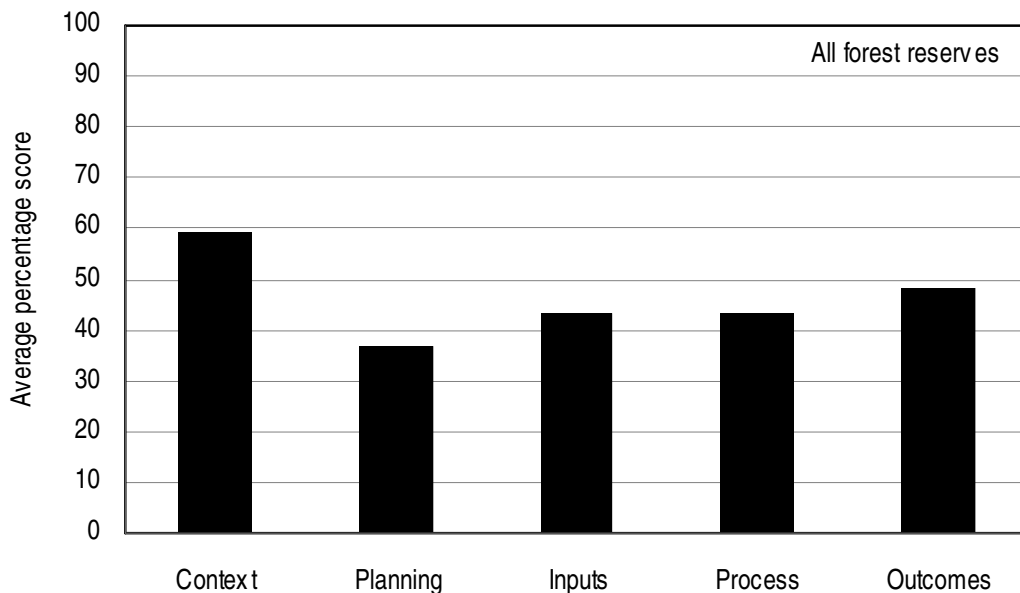


Figure 12: All forest reserves: percentage scores for adaptive management elements.

An analysis of the scores for forest reserves (Fig 12) for the elements of adaptive management compared to those of nature reserves (Fig 10) showed that the scores are very similar. No discernable difference could be found between the two protected area types.

4.6.2 Indicators

When the average scores for individual indicators are compared (Figs 11 & 13) there are indications that there are different management priorities between the two. These differences however showed no discernable statistical significance.

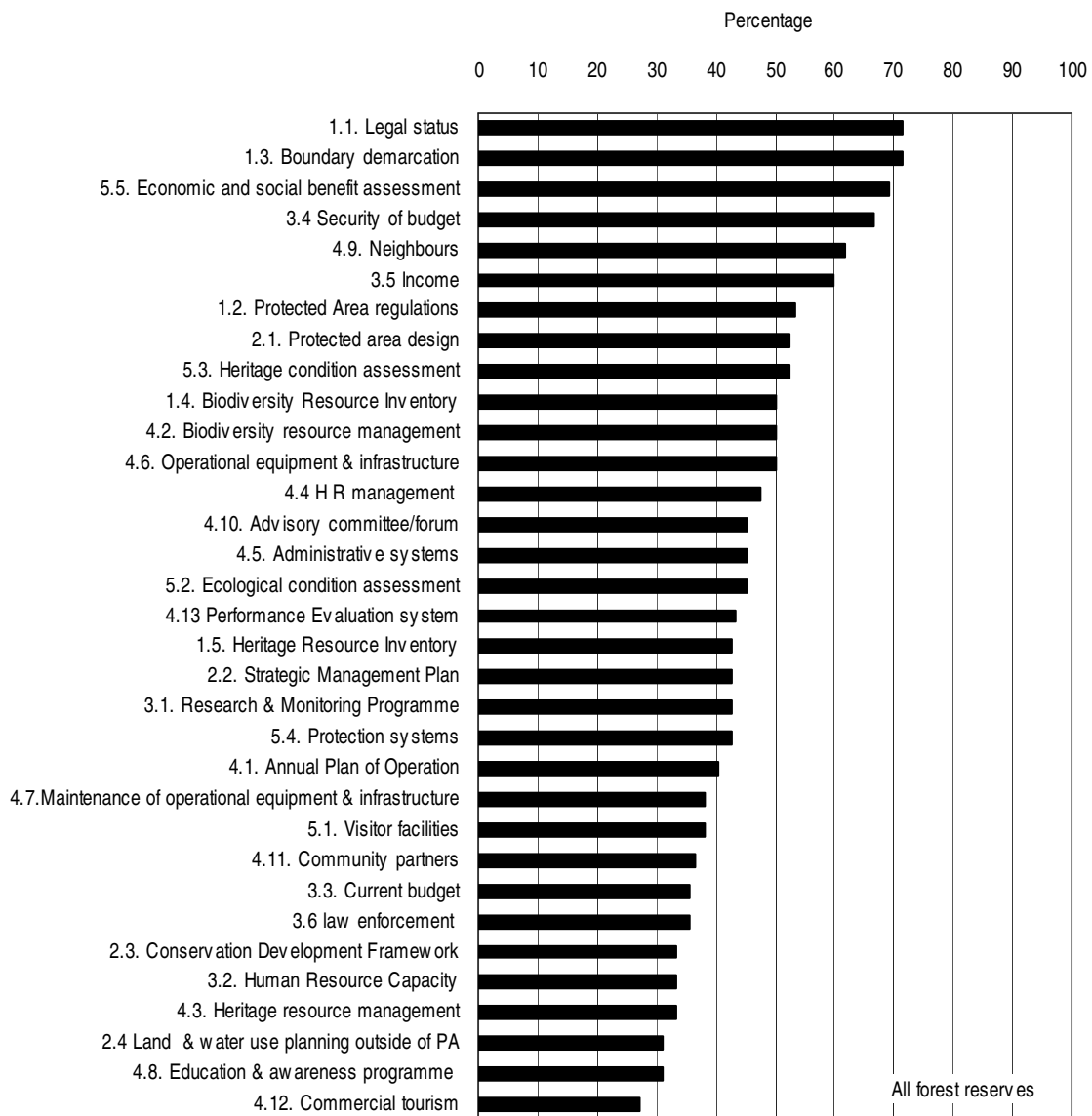


Figure 13: All forest reserves: average percentage score for each indicator (excluding supplementary items).

4.6.3 Overall Comment

Although forest reserves are the least effectively managed of all protected areas there is no appreciable difference to that of nature reserves. A review of the data has shown that there is little indication that the overall scores of provincial 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.

4.7 OVERALL SUMMARY OF SCORES FOR PROTECTED AREA TYPE

Table 10: 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 only one was assessed.

As nature and forest reserves are clearly performing below average, a further breakdown by authority is provided in Tables 12 & 13 in section 5 of this report. .

5. MANAGEMENT AUTHORITY OVERVIEW

In this section, all types of the 229 protected areas assessed, are compared for each of the 11 authorities. It must again be emphasized as set out in section 3.4, that the METT-SA is not intended to make comparisons and the following information is presented to identify any trends that may be apparent.

5.1 Overall average score

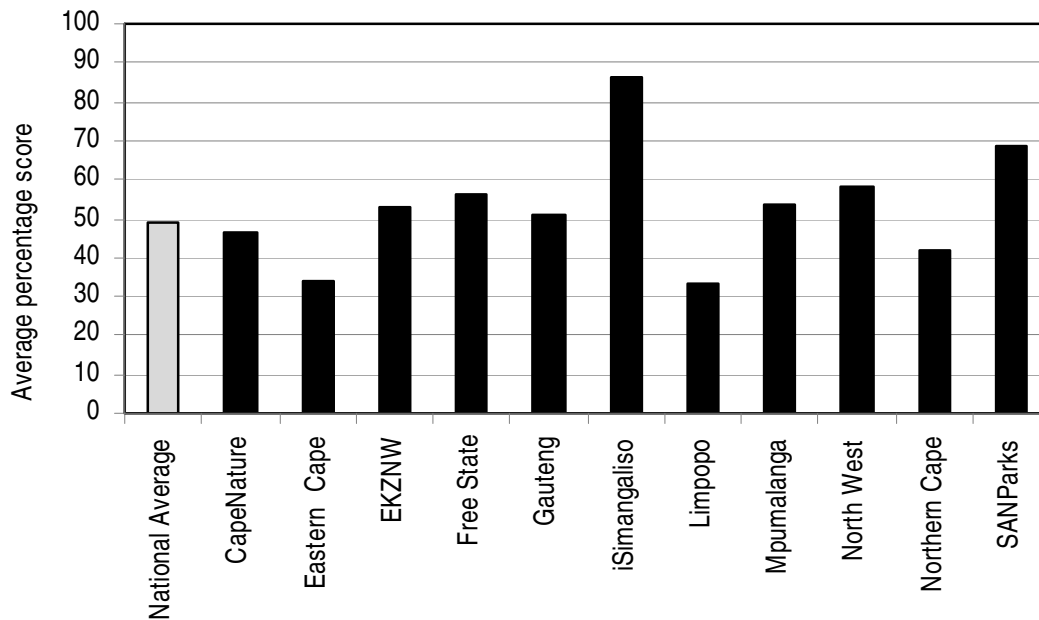


Figure 14: Comparison of all authorities (all types of protected areas) for overall average score

Figure 14 illustrates that several authorities score below the national mean of 49%. The performance of the authorities in relation to the national average and scores above 67% are set out in Table 11.

Table 11: Average of total scores of all protected areas managed by each authority ranked from lowest to highest

Authority	Mean percentage	Above or below national mean of 49%	Difference	Percentage of protected areas scoring above 67%
Limpopo	33	Below	-16	0
Eastern Cape	34	Below	-15	0
Northern Cape	42	Below	-7	0
CapeNature	47	Below	-2	3
Gauteng	51	Above	2	0
EKZNW	53	Above	4	18
Mpumalanga	54	Above	5	17
Free State	56	Above	7	0
North West	58	Above	9	18
SANParks	69	Above	20	63
iSimangaliso	86	Above	37	100

5.2 Nature reserves

As the management effectiveness of nature and forest reserves is clearly below other protected areas, a further breakdown of scores is given in Tables 12 & 13 below.

Table 12. Distribution of total percentage score for nature reserves arranged by authority compared to the national mean (49%) and the threshold for sound management (67%)

Authority	Number of nature reserves assessed	Percentage of protected areas scoring below national mean (49%)	n	Percentage of protected areas scoring above national mean (49%)	n	Percentage of protected areas scoring greater than 67%	n
CapeNature	32	59	19	41	13	3	1
Eastern Cape	13	100	13	0	0	0	0
EKZNW	62	35	22	65	40	16	10
Free State	14	7	1	93	13	0	0
Gauteng	4	50	2	50	2	0	0
Limpopo	33	94	31	6	2	0	0
Mpumalanga	18	22	4	78	14	17	3
North West	11	18	2	82	9	18	2
Northern Cape	6	100	6	0	0	0	0

The Limpopo, Eastern Cape, Northern Cape and CapeNature provincial authorities are performing below the national average (Tables 11 & 12) and an intervention by the Minister could be considered. This intervention should be preceded by a detailed examination of areas where each authority is underperforming. Each authority should then be requested to provide a strategy of how scores can be improved. This may involve funding from national level to assist in making up for shortfalls. Alternately the authorities should be informed of their scores and be requested to supply the Minister with a strategy of how they intend improving their overall rating.

Although the average score for CapeNature is lower than the national average, they are currently addressing the various problems that have been identified. They are also the only provincial authority performing below average to have a reserve score over 67%. It is also to their credit that they had decided to apply the METT-SA to all their reserves before the national decision was taken. In fact version 1 of the METT-SA was tested and developed in active interaction with CapeNature. It may be advisable to approach CapeNature for an explanation of their strategy to address shortcomings.

Gauteng is slightly above average, but as only four of their six reserves were assessed, and as none of the reserves scored over 67%, further investigation may be required.

EKZNW as previously mentioned have a set an achievement score of 77% and have a strategy in place to improve scores of less effective areas.

5.3 Forest reserves

As the scores for forest reserves may have influenced the overall performance of authorities a further analysis of the scores for forest reserves per authority was conducted. This is set out in Table 13.

Table 13: Forest Reserves by authority compared to the national average in order of score difference to the national average.

Authority	Protected Area name	Total average percentage score	Difference from national average	Above or below national average (49%)	Above, equal or below 67%
EKZNW	Qudeni	10	-39	Below	Below
Eastern Cape	Groendal	31	-18	Below	Below
CapeNature	Groot Winterhoek	36	-13	Below	Below
CapeNature	Hottentots Holland	39	-10	Below	Below
CapeNature	Geelkrans	43	-6	Below	Below
CapeNature	Cederberg	44	-5	Below	Below
CapeNature	Anysberg	45	-4	Below	Below
Eastern Cape	Baviaanskloof	46	-3	Below	Below
Limpopo	Wolkberg	51	2	Above	Below
EKZNW	Nkandla	52	3	Above	Below
CapeNature	Marloth	54	5	Above	Below
CapeNature	De Mond	56	7	Above	Below
EKZNW	Ncandu	60	11	Above	Below
EKZNW	Hlatikulu	67	18	Above	Equal

Although Table 13 shows that there are eight forest reserves which score below the national average, there are three nature reserves managed by CapeNature [Soetendalsvlei (21%), Verlorenvlei (26%) and Waterval (27%)] that score lower than the second lowest score (Groendal 31%) for forest reserves. Thus it can hardly be argued that the scores for forest reserves are lowering the average scores for CapeNature.

Although Qudeni Nature Reserve managed by EKZNW is the second lowest score (10%) recorded for all protected areas in the study, this is countered by the above average scores for the other forest reserves managed by EKZNW.

From the above it would be difficult to conclude that the overall averages for CapeNature and EKZNW are negatively influenced by the scores of forest reserves. However a comparison of the scores for indicators clearly illustrates that there are different management priorities between the two categories of protected areas.

5.3 Indicators

Table 14 summarizes the scores for indicators for each authority, scores in bold are above the national average for that indicator. The cells of scores below 45% at a national and authority area are shaded.

Table 14: 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	Eastern Cape	EKZNW	Free State	Gauteng	iSimangaliso	Limpopo	Mpumalanga	North West	Northern 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 14 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 may be useful to give indications for setting priorities.

5.5 Supplementary items

Table 15 below is supplied for information only and should be read in conjunction with section 4.1.

Table 15 Supplementary items: % occurrence of full scores for each authority compared to the national average for each indicator.

Scores in **bold** are above the average for that indicator

Shaded cells indicate scores are lower than 45%

No.	Supplementary item	National average for indicator	CapeNature	Eastern Cape	EKZNW	Free State	Gauteng	iSimangaliso	Limpopo	Mpumalanga	Northern Cape	North West	SANParks
2a.	The planning process allows adequate consultation with key stakeholders in the compilation of the management plan	53	65	0	100	100	25	100	21	61	33	55	95
2b.	There is an established schedule and process for periodic review and updating of the management plan	46	50	7	40	100	100	100	3	67	67	36	95
2c.	The results of monitoring, research and evaluation are routinely incorporated into planning	46	28	20	67	100	25	100	0	72	33	36	68
2d	There is a programme for the implementation of the SMP and its costing.	36	18	7	37	100	0	100	0	89	0	45	79
2e	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.	27	25	7	21	0	25	100	0	89	67	18	68
4a.	There are management guidelines for the sustainable use of biodiversity resources	60	48	33	100	100	0	100	68	76	33	50	71
4b.	There is open communication and trust between local stakeholders and PA managers	51	68	7	55	79	0	100	0	72	83	82	79
4c	There is active participation in peripheral activities that may influence the PA.	40	55	7	100	0	0	100	0	67	100	73	89
5a	There are active programmes for restoration of degraded areas in the PA and/or associated buffer zone, resultant from visitor use.	34	28	13	79	14	25	100	12	39	60	27	50
5b	Where applicable, is the impact of extractive use of biological resources being monitored?	48	41	13	100	100	25	100	18	93	50	50	80

5.6 Overall Comment

Of the 11 authorities assessed there are four provincial authorities that are performing below the national average. Of these CapeNature is already compiling a strategy to improve their overall performance. Urgent intervention is recommended for interaction with Limpopo, Eastern and Northern Cape. All other authorities should be requested to compile a strategy on how they intend improving areas of concern.

6. 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 (Table 16). This was applied to the remaining protected areas. At the workshop held in Pretoria on 24th & 25th February, 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 17.

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 16: Standard list of Pressures and Threats

No.	Pressure/Threat	Definition
1	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.
2	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.
3	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.
4	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.
5	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.
6	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.
7	Mining & Mining rights. Extraction of non renewable resources	Mining and Mining rights. Issue of prospecting permits. Sand extraction-gravel pits within protected area
8	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.
9	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.
10	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.

Table 16: Standard list of Pressures and Threats

No.	Pressure/Threat	Definition
11	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.
2	Farming practices on boundaries	Herbicide and insecticide spraying, genetic contamination e.g. from <i>Protea</i> orchards and Canola fields.
13	Boundary integrity	The open access system makes control over illegal access and activities very difficult to apply. Land invasions and disturbances.
14	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 spread of alien organisms and diseases. Also poses increased security risks (poachers have easy access into PA).
15	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
16	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.
17	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.
18	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.
19	Land claims/disputes	Land claims within protected area may make the reserve unsustainable.
20	Vandalism & Crime	Wanton destruction of assets and/or collection of artifacts; poor management practices resulting in inadequate protection of facilities, infrastructure and heritage assets
21	Pollution	Pollution from outside of protected area-smoke-water-light pollution (excluding impacts of farming see 21)
22	Purposeful species eradication	This refers to the deliberate attempt to eradicate an indigenous species, e.g. tsetse fly, mosquito, red billed quella and jackal.
23	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.
24	Water provision for wildlife	The impact of providing water points for animals as demanded by tourism authorities. Overgrazing -loss of biodiversity
25	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.

Table 17: Summary of the percentage occurrence of combined threats expressed as a percentage for 214* protected areas ranked from highest to lowest incidence

Threat number (Table 16)	Threat	Percentage Occurrence
16	Invasive plants	72
9	Illegal extraction of resources (poaching)	65
17	Inappropriate fire regime	53
13	Boundary integrity	42
5	Climate change	41
10	Land use changes on boundaries	40
15	Alien animals	37
4	Historical land use (erosion)	36
2	Water resource management outside of protected area.	36
11	Protected area isolation & fragmentation	34
1	Habitat shifting and alteration	31
21	Pollution	30
23	Tourism & recreation impacts	30
8	Unsustainable use of resources	23
6	Disease: Indigenous and exotic	21
14	Servitudes	21
25	Waste disposal	18
18	Socio-economic levels in adjoining areas	17
20	Vandalism & crime	17
7	Mining and Mining rights. Extraction of non renewable resources	17
12	Farming practices on boundaries	14
3	Water extraction in protected area	14
19	Land claims/disputes	11
22	Purposeful species eradication	6
24	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, 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 18: 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 number (Table 16)	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%
9	Illegal extraction of resources (poaching)	100	79	50	100	50	75	65	77	34	67	9
16	Invasive plants	50	92	0	100	100	75	72	59	84	33	8
5	Climate change	50	75	50	50	50	50	39	34	32	67	7
17	Inappropriate fire regime	50	63	0	75	50	0	57	45	64	0	7
1	Habitat shifting and alteration	50	67	50	50	50	50	26	38	2	0	6
2	Water resource management outside of protected area.	50	46	50	25	50	50	35	33	34	0	5
11	Protected area isolation & fragmentation	0	67	50	75	50	25	43	22	25	0	5
13	Boundary integrity	50	54	50	50	25	50	61	26	39	0	5
4	Historical land use	0	54	0	50	0	0	46	45	11	0	4
10	Land use changes on boundaries	100	42	0	25	50	25	31	34	64	0	4
23	Tourism & recreation impacts	50	42	100	50	0	0	22	32	32	33	4
8	Unsustainable use of resources	50	29	50	50	0	0	31	23	9	33	3
15	Alien animals	50	71	0	50	25	0	44	30	25	33	3
14	Servitudes	50	33	50	75	25	0	20	25	7	0	3
21	Pollution	0	54	0	75	50	25	24	37	11	33	3
3	Water extraction in protected area	50	0	0	25	25	50	7	15	20	0	2
18	Socio-economic levels in adjoining areas	50	13	50	25	25	0	15	23	11	0	2
6	Disease: Indigenous and exotic	0	42	0	0	50	0	19	30	2	33	2
12	Farming practices on boundaries	50	4	50	0	0	25	9	11	27	0	2
7	Mining and Mining rights. Extraction of non renewable resources	0	13	100	25	0	50	17	23	5	0	2
20	Vandalism & crime	50	21	0	0	0	0	24	22	5	0	2
25	Waste disposal	0	33	0	50	0	0	26	19	0	0	2
24	Water provision for wildlife	0	0	0	0	0	0	0	16	0	0	0
22	Purposeful species eradication	0	13	0	0	0	25	7	7	0	0	0
19	Land claims/disputes	0	8	0	0	25	0	7	21	5	0	0

As highlighted in the text, Tables 17 & 18 above should only be used as an indication of trends. For example, Threat # 1: 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.

7. METT-SA Version 2 (2010)

As mentioned above, Ezemvelo KZN Wildlife had already applied an adapted version of the METT to all protected areas under their management. This version had improved on various aspects and had been tested and improved on in a series of workshops. This adaptation was then used to inform the compilation of version 2. Further feedback was obtained during the various training sessions held with the different authorities. Also any problems and errors identified during training workshops were recorded and the METT-SA was amended as required to rectify the issues. As the project progressed, all improvements and corrections were incorporated into a rough draft of version 2.

On the 24 and 25th February 2010 a formal workshop was held in Pretoria with the CEO's forum working group and invited representatives from the various authorities. At this workshop, principles for the revision of version 1 of the METT-SA were compiled. The rough draft of version 2 was then actively and intensely debated to create the first draft of version 2. This draft was then circulated to all authorities for further input and comment). After receipt of comments (only two responded as detailed below), the final edition of version 2 was then compiled. The METT-SA Version 2 (2010) is attached as Appendix 6.

During the development of the METT-SA in an Excel format, it became apparent that the 2007 and 2003 editions of Excel were not entirely compatible and that a version was required for each edition. For instance if the METT-SA had been completed in Excel 2003 and was sent via email to a computer with Excel 2007, various corruptions of scores occurred and formulae did not always operate correctly.

Also during the process of applying the METT-SA to all protected areas it became apparent that there was a seriously low level of computer literacy in some organizations. This resulted in the need to compile an explanatory sheet to accompany the CD to assist assessors with the loading and operating of the system. Also during most workshops, some considerable time was spent assisting staff in understanding fundamental computer operations. Thus, the Excel system which was intended to assist assessors in the conducting the METT-SA, become a liability.

Thus at the outset (as described in the phase 1 report) the CEO's forum agreed that it was essential that the METT-SA Version 2 (2010) be developed in a format independent of Excel. The production of this version is intended to take place in the next phase of this project with the intention of using the system to conduct the second assessment of all protected areas. It is recommended that the most suitable operating system be thoroughly investigated before embarking on such a project.

- Although the compilation of the METT-SA version 2 went through a participatory process, this was not always fully representative. Also when the final draft of the METT-SA Version 2 was sent out for comment, only two authorities (CapeNature and EKZNW) responded. It is thus recommended that before the METT-SA version 2 is converted to a system based model, that a further round of consultation takes place with all authorities. It may also be necessary to

review version 2 in the light of the results achieved in the first national assessment.

8. RECOMMENDATIONS

The following is a summary grouped according to similarity of the recommendations made in this report:

METT-SA Version 2

- That the METT-SA version 2 be tested and amended as required for application to Marine Protected Areas and World Heritage sites
- That the METT-SA Version 2 not be produced in Excel and that the most suitable systems based format be investigated before version 2 is finalised.
- The METT-SA Version 2 should be tested in a series of participative interactions with all authorities to ensure that it meets all needs and as a training exercise.
- That the data required be determined so that only data required is requested. Also the data required for collection, needs to be clearly defined to ensure that the data collected can be analysed to produce reliable results.
- That a scoring system for pressures and threats be introduced. The draft version 2 recommends the use of the RAPPAM system. Training in the concept needs to be given to ensure managers that managers fully understand the concept.
- That a core team be trained in the application of the METT-SA Version 2 to ensure that the application is consistent throughout the country.

Setting standards

- That the Minister set standards for all authorities by following a participative and defensible system. These standards must **not** be based on the METT-SA which is a self evaluation tool to measure trends.
- Alternately that the Minister request that each authority compile a strategy of how they intend to improve areas of underperformance

Reporting period

- That a national assessment period of three years be applied.
- All authorities should be encouraged to apply the METT-SA or another evaluation system on a more regular basis.

Other assessments

- Where authorities are underperforming in terms of indicator 4.3: Law enforcement, the application of an additional assessment such as PAIME or SoAIM should be considered.

9. REFERENCES

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APPENDICES

Appendix 1. Score sheet for Prince Edward Islands

PROTECTED AREA	Prince Edward Islands		
1: CONTEXT	VALUE	SCORE	% SCORE
1.1. Legal status	3	3	
1.2. Protected Area regulations	3	3	
1.3. Boundary demarcation	3	3	
1.4. Biodiversity Resource Inventory	3	3	
1.5. Heritage Resource Inventory	3	3	
Subtotal	15	15	100%
2: PLANNING			
2.1. Protected area design	3	3	
2.2. Strategic Management Plan (SMP)	3	2	
2.3. Conservation Development Framework	3	3	
2.4. Land & water use planning outside PA	3	3	
Supplementary items	4	4	
Subtotal	16	15	94%
3: INPUTS			
3.1. Research & Monitoring programme	3	3	
3.2. Human Resource capacity	3	3	
3.3. Current budget	3	0	
3.4. Security of budget	3	3	
3.5. Income	0	0	
3.5. Law enforcement	3	2	
Subtotal	15	11	73%
4: PROCESS			
4.1. Annual Plan of Operation	3	3	
4.2. Biodiversity resource management	3	3	
4.3. Heritage resource management	3	2	
4.4. H R management	3	2	
4.5. Administrative systems	3	2	
4.6. Operational equipment & infrastructure	3	2	
4.7. Maintenance of equipment & infrastructure	3	2	
4.8. Education & awareness programme	3	1	
4.9. Neighbours	3	0	
4.10. Advisory committee/Forum	3	3	
4.11. Community partners	3	0	
4.12. Commercial Tourism	0	0	
4.13. Performance Evaluation system	3	2	
Supplementary items	3	0	
Subtotal	30	22	73%
5: OUTPUTS/OUTCOMES	3		
5.1. Visitor facilities	0	0	
5.2. Ecological condition assessment	3	3	
5.3. Heritage condition assessment	3	2	
5.4. Protection systems	3	3	
5.5. Economic and social benefit assessment	3	3	
Supplementary items	1	1	
Subtotal	13	12	92%
TOTAL SCORE	89	75	84%

Appendix 2. Scores for national parks compared to the national average

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

Appendix 3. Scores for provincial nature reserves compared to the national average per authority

Appendix 3a: All Cape nature reserves compared to the national average

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 3b: All Eastern Cape nature reserves compared to the national average

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

Appendix 3c: All EKZNW nature reserves compared to the national average

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	Erf 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
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

Appendix 3c: All EKZNW nature reserves compared to the national average

Authority	Protected Area	Total Percentage score	Difference from national average	Above or Below National Average (49 %)	Above or Below 67%
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	Hluluwe 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

Appendix 3d: All Free State nature reserves compared to the national average

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

Appendix 3e: All Gauteng nature reserves compared to the national average

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

Appendix 3f: All Limpopo nature reserves compared to the national average

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
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

Appendix 3g: All Mpumalanga nature reserves compared to the national average

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

Appendix 3h: All North West nature reserves compared to the national average

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

Appendix 3i: All Northern Cape nature reserves compared to the national average

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

Appendix 4 Ranking of 24 indicators with strong correlations to improving score and outcomes

Rank to improve overall score	Indicator Indicators highlighted apply to both "overall score" and "outcomes" top 10 rankings	Rank to improve outcomes	METT-SA equivalents					
1	Adequacy of infrastructure, equipment and facilities	15	4.6	4.7				
2	Communication program	4	4.8					
3	Results and outputs have been produced	1	5.2	5.3	5.4	4.1		
4	Natural resources and cultural protection	3	1.1		3.5	4.2	4.3	2.4
5	Management Plan	17	2.2	2.3				
6	Adequacy of relevant and available information	12	1.4	1.5				
7	Research and monitoring	2	3.1					
8	Effectiveness of governance high level management and leadership	18	n/a					
9	Visitors catered for and impacts management appropriately	18	5.1					
10	Involvement of communities and stakeholders	5	4.9	4.1	4.1	4.1		
11	Effectiveness of administration, work programmes, internal organisation		1.2	4.1	4.5			
12	Proportion of stated objectives achieved		n/a					
13	Management effectiveness evaluation undertaken	11	4.1	3				
14	Adequacy of staff training	14						
15	Security/reliability of funding		3.4					
16	Achievement of set work programme	8	n/a					
17	Adequacy of staff numbers	7	3.2					
18	Adequacy of HR policies and procedures		4.4					
19	Appropriate programme of community benefit/assistance	6	5.5					
20	Adequacy of current funding	16	3.3	3.5				
21	Staff / other management partners skill level	9						
22	Level of significance	10						
23	Staff morale	19						
24	Appropriate of design	20	2.1					

Adapted from Leverington et al. (University of Queensland) in a workshop with CapeNature

Notes: Staff training is included under 4.4

Appendix 5

Management Effectiveness Tracking Tool-South Africa METT-SA Version 1 (2008)

**A rapid site level system for reporting progress in
protected areas.**

**A SANBI adaptation of the World Bank/ WWF
Management Effectiveness Tracking Tool.**

This tool was first adapted from the World Bank/WWF METT through the C.A.P.E. programme with support from GEF, UNDP and the World Bank. In its first phase of implementation it was applied by CapeNature and the City of Cape Town.

The role of the Management Effectiveness Tracking Tool - South Africa METT-SA Version 1 (2008)

The METT-SA is a rapid site-level assessment tool adapted from the World Bank & WWF's system (second edition 2007). The system is based on the idea that good protected area management follows a process that has six distinct stages or elements:

- 1 It begins with understanding the **context** (where are we now?) of existing values and threats,
- 2 progress through **planning** (where do we want to be?) , and
- 3 allocation of resources (**inputs**) (what do we need?) and
- 4 as a result of management action (**processes**) how do we go about it?),
- 5 eventually produces products and services (**outputs**) (what were the results?),
- 6 that result in impacts or (**outcomes**) (what did we achieve?).

Note that this version combines outputs and outcomes

This version has been compiled so that it can be applied to the full range of protected areas managed by all C.A.P.E. partners. It is also applicable to protected areas in other regions and with minor adaptations could be applied outside of South Africa. It may also be applied to MPA's and islands, but in the long run it may be necessary to amend the system to be more specific to these areas. It may be necessary to develop a system for "off reserve" conservation areas such as conservancies or stewardships.

When applying the METT - SA is important that the following be kept in mind:

- The METT - SA is intended to report on progress. Thus the score is the baseline against which future assessments are made to see if there has been improvement.
- It is site specific and must thus not be used to compare scores between different protected areas.
- It is a useful tool to give indications of trends in management. In this version the six groups (5& 6 are combined) of elements of the management process as defined in the original version are scored as subsets of the total. This gives an indication of where improvement in management needs to focus.
- It is not intended to replace more detailed assessments as part of adaptive management systems.
- The METT has limitations in the quantitative measurement of Outcomes and these should be measured by more objective and quantitative systems.

- This version adjusts the total score where questions are not relevant.
- Often low scores in some questions can be a reflection on the organisation and are out of the control of the protected area manager. **Thus under no circumstances should the performance of managers be measured against the results of the METT - SA.**

Frequency of application. Tracking the trends in management effectiveness is a long term process and instant improvements are unlikely to be obtained. Generally the METT is applied at three year intervals, but an annual application is acceptable if it is understood that changes may only be slight.

GUIDELINES FOR USING THE TRACKING TOOL

The Management Effectiveness Tracking Tool - South Africa (METT - SA) can be completed preferably by a team of protected/project staff, with input from other protected areas or support services staff. The tracking tool has been designed to be easily answered by those managing the protected area without any additional research. Best results are obtained if a staff team from the protected area completes the METT -SA in an open discussion.

All sections of the tracking tool should be completed. There are two sections:

1. Datasheet: This details key information on the site, its characteristics and management objectives and includes an overview of externally funded projects. If space is limited a separate sheet can be used.

2. Assessment Form: This includes three distinct components, all of which should be completed.

2.1 Questions and scores: the main part of the assessment form is a series of questions (grouped into the five elements of protected area management) that can be answered by assigning a single score ranging between 0 (poor) to 3 (excellent). A series of four alternative answers are provided against each question to help assessors make judgments as to the level of score given. Choose the appropriate answer and enter the score into the score column. Note that a score is given for each of the supplementary items. Scoring is inevitably an approximate process and there will be situations in which none of the four alternative answers precisely fit conditions in the protected area. It is however important that you choose the answer that is nearest or allocate a half point and use the comments section to elaborate. Although the automatic scoring system in this Excel version adjusts the score for non relevant questions, it is essential to use the Comment box to explain why it is not relevant. In addition, there are supplementary questions which elaborate on key themes in previous questions or provide additional information.

2.2 Comments: a box next to each question allows for qualitative judgments to be justified by explaining why they were made (this could range from personal opinion, a reference document, monitoring results or external studies and assessments – the point being to give anyone reading the report an idea of why the assessment was made). In this section we also suggest that respondents comment on the role/influence of WWF/ World Bank/C.A.P.E. or other externally funded projects if appropriate. In some instances suggestions are made about what might be covered in the comments column. **Comments are vital to ensure that when successive assessments are carried out, the assessors are able to understand the reason for the score allocated.**

2.3 Next Steps: for each question respondents are asked to identify a long-term management need to further adaptive management at the site, if this is relevant. This is essential to identify actions needed and to identify potential projects for funding.

Final Score: The final score out of 109 (adjusted for non applicable items), is automatically expressed as a percentage. As the METT - SA is a tool to assist in assessing progress in a the specific protected area to which it has been applied, it is vital to remember that there is no "pass or fail". The final score is a bench mark against which future evaluations will be made to see if there have been improvements. It is also vital that scores are not compared with that of other areas. More important than the total score, are the totals in the five sections. These give an indication of where priorities for remedial action should be set.

Disclaimer: The whole concept of "scoring" progress is fraught with difficulties and possibilities for distortion. The current system assumes, for example, that all the questions cover issues of equal weight, whereas this is not necessarily the case. Accuracy might be improved by weighting the various scores although this would provide additional challenges in deciding different weightings. In the current version a simple scoring system is maintained, but the limitations of this approach should be recognised.

1: Context : Where are we now?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments (Justify your selection and or comment on current situation)	Next steps (Identify actions to improve score by next evaluation)
1.1 Legal status Does the PA have secure permanent conservation legal status in terms of the PAA?	The PA's conservation status is not secured by its current legal status eg Public Open Space, State Forest, Private Nature Reserve, etc..	0			
	There is a formal agreement that the PA should be afforded the highest possible legal protection relevant to the authority, but the process has not yet begun.	1			
	The PA is in the process of being afforded the highest possible relevant legal protection.	2			
	All properties managed as part of the PA have been listed in the National Protected Areas Register in terms of the PAA.	3			
1.2. Protected Area regulations Are there legal mechanisms in place to control inappropriate activities?	There are no legal mechanisms for controlling inappropriate land use and activities in the PA	0			
	Legal mechanisms for controlling inappropriate land use activities in the PA exist but are not being implemented.	1			
	Legal mechanisms for controlling inappropriate land use and activities in the PA exist but there are some problems in effectively implementing them	2			
	Legal mechanisms for controlling inappropriate land use & activities in the PA exist and are being effectively implemented	3			

1.3. Protected Area boundary demarcation Is the boundary known and appropriately demarcated (e.g. fenced or marked with bollards/posts and sign posted?)	The boundary of the PA is not known by the management authority or local residents/neighbouring land users	0			
	The boundary of the PA is known by the management authority but is not known by local residents/neighbouring land users	1			
	The boundary of the PA is known by both the management authority and local residents but is not appropriately demarcated	2			
	The boundary of the PA is known by the management authority and local residents and is appropriately demarcated	3			
1.4. Biodiversity Resource inventory Do you have enough information to manage the biodiversity?	There is little or no information available on critical habitats, species of the PA	0			
	Information on critical habitats, species is not sufficient to support planning and decision making	1			
	Information on critical habitats, species is sufficient for planning/decision making but the necessary survey work is not being maintained	2			
	Information concerning critical habitats, species of the PA is sufficient to support planning and decision making and is being maintained	3			

1.5. Heritage Resource inventory Do you have enough information to manage the area?	There is little or no information available on heritage and cultural values of the PA	0			
	Information on heritage resources and cultural values is not sufficient to support planning and decision making	1			
	Information on heritage resources and cultural values is sufficient for planning/decision making but the necessary survey work is not being maintained	2			
	Information concerning heritage resources and cultural values of the PA is sufficient to support planning and decision making and is being maintained	3			
Subtotal: Context		15	0		

2: Planning: Where do we want to be?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments (Justify your selection and or comment on current situation)	Next steps (Identify actions to improve score by next evaluation)
2.1. Protected area design Is the size and shape of the protected area adequate to achieve the conservation objectives?	Inadequacies in design mean that achieving major management objectives is impossible. No expansion is possible.	0			
	Inadequacies in design mean that achievement of major objectives is constrained to some extent. No expansion is possible.	1			
	Design is not significantly constraining achievement of major objectives, but there is a strategy to improve the design.	2			
	Reserve design features are particularly aiding achievement of major objectives of the PA	3			
2.2 Strategic Management plan (SMP) Is there an approved management plan (compliant with Protected Areas Act) and is it being implemented?	There is no Strategic Management Plan for the PA	0			
	A Strategic Management Plan is being prepared or has been prepared, but is not yet approved.	1			
	An approved Strategic Management Plan exists and is being implemented, but has not been updated/reviewed during the past five years.	2			
	A Strategic Management Plan approved by the Minister/MEC exists, is being implemented & has been updated/reviewed during the past five years	3			

2.3. Conservation Development Framework (CDF) Is there a visitor use zoning system indicating position and nature of operation & visitor infrastructure?	There is no CDF for the PA	0			
	A CDF is being prepared or has been prepared but is not being implemented	1			
	An approved CDF exists but it is only being partially implemented because of funding constraints or other problems	2			
	An approved CDF exists and is being implemented	3			
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?	Adjacent land & water use planning do not take into account the needs of the protected area and is detrimental to the protected area.	0			
	Adjacent land & water use planning do not take into account the needs of the protected area , but activities are not detrimental to the protected area.	1			
	Adjacent land & water use planning partially take into account the long term needs of the protected area.	2			
	Adjacent land & water use planning fully take into account the long term needs of the protected area.	3			
2a. Supplementary item	The planning process allows adequate consultation with key stakeholders in the compilation of the management plan	1			
2b. Supplementary item	There is an established schedule and process for periodic review and updating of the management plan	1			
2c. Supplementary item	The results of monitoring, research and evaluation are routinely incorporated into planning	1			
2d. Supplementary item	There is a programme for the implementation of the SMP and its costing.	1			

2e Supplementary item	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.	1			
Subtotal: Planning		17	0		

3: Inputs: What do we need?	Criteria <i>(Select & score one of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments <i>(Justify your selection and or comment on current situation)</i>	Next steps <i>(Identify actions to improve score by next evaluation)</i>
3.1. Research & Monitoring Programme Is there a programme of management-orientated research & monitoring that assists managers to manage better?	Research needs have not been identified nor is any research work taking place in the PA	0			
	Research needs have been identified, but other than for ad hoc research, no management orientated research is being done.	1			
	There is considerable research work but only limited "management" orientated research is being done.	2			
	There is considerable research work being undertaken, which is relevant to management needs and monitors the results of management actions.	3			
3.2. Human Resource capacity Does the PA have sufficient HR capacity to manage the protected area?	The PA has no HR capacity	0			
	HR capacity is inadequate for critical management activities	1			
	HR capacity is sufficient, but there are deficiencies in necessary skills for critical management activities	2			
	HR capacity and expertise is adequate for management needs	3			

3.3. Current budget Is the current budget sufficient?	There is no dedicated budget for the PA	0			
	The available budget is inadequate for basic management needs with a reliance on external funding for essential activities	1			
	The available budget is acceptable, but external funding is required to fully achieve effective management	2			
	The available budget is sufficient and meets the full management needs of the PA without external funding.	3			
3.4. Security of budget Is the budget secure?	There is no secure budget	0			
	There is a budget, but it is only available on an ad hoc basis	1			
	The budget is secure and is guaranteed on an annual cycle	2			
	The budget is secure and is guaranteed on a 3-5 year cycle	3			
3.5. Income Is income from various sources applied to the management of the protected area?	Although fees are theoretically applied there is no collection	0			
	Income is derived, but it goes to a budget outside of the organisation and is not used for protected area management	1			
	Income is derived, but it goes to a central budget inside of the organisation and is not used directly for protected area management	2			
	Income is N/A ed within the organisation and is used for the management of protected areas.	3			

3.6. Law enforcement Has the PA the capacity/resources to enforce regulations & bylaws well enough?	PA has no capacity/resources/support to enforce (arrest & prosecute) regulations & bylaws	0			
	There are major deficiencies in capacity/resources to enforce regulations & bylaws (e.g. lack of skills, no patrol budget)	1			
	PA has acceptable capacity/resources/support to enforce regulations & bylaws but some deficiencies are evident	2			
	PA has excellent capacity/resources/support to enforce regulations & bylaws	3			
Subtotal: Inputs		18	0		

4: Process: How do we go about it?	Criteria <i>(Select & score one of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments <i>(Justify your selection and or comment on current situation)</i>	Next steps <i>(Identify actions to improve score by next evaluation)</i>
4.1. Annual Plan of Operation (APO) Is there an annual work plan/APO that is approved by the organisation?	No approved/standardised APO exists	0			
	An APO exists but activities are not linked to the PA's Strategic Management Plan's targets	1			
	An APO exists and actions are linked to the PA's Strategic Management Plans targets.	2			
	An <u>approved</u> APO exists and actions are linked to the PA's Strategic Management Plans targets.	3			
4.2. Biodiversity Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching, sustainable use)?	Management interventions required to maintain biodiversity resources are not known	0			
	Management interventions for active management required to maintain biodiversity resources are known but are not being implemented	1			
	Management interventions for active management required to maintain biodiversity resources are known but are not being fully implemented	2			
	Management interventions for active management required to maintain biodiversity resources are known and are being substantially or fully implemented	3			
4a. Supplementary item	There are management guidelines for the sustainable use of N/A diversity resources	1			

4.3 Heritage Resource management Are Heritage resources adequately managed (e.g. maintenance of monuments, cultural sites)?	Requirements for active management of heritage resources have not been assessed	0			
	Requirements for active management of heritage resources are known but are not being addressed	1			
	Requirements for active management of heritage resources are only being partially addressed	2			
	Requirements for active management of heritage resources are substantially or fully addressed.	3			
4.4 HR Management Is there an effective staff management programme in place?	Staff are demotivated. Daily tasks are rarely completed and standard is unacceptable.	0			
	Staff morale is low. Work is carried out to reasonable standards, but constant supervision is required.	1			
	Staff motivation is satisfactory but could be further improved to fully achieve the objectives of management	2			
	Staff morale is high N/A well equipped for current and anticipated future management needs	3			
4.5. Administrative systems Are the administrative systems supportive of effective management?	Administration systems are poor and significantly undermine effectiveness	0			
	Administration systems are poor and constrain effectiveness	1			
	Administration systems are adequate but could be improved	2			
	Administration systems are excellent and fully support effectiveness	3			

4.6. Operational equipment & infrastructure (as required for operational management purposes, but excluding tourism/visitor facilities)	There is little or no operational equipment & infrastructure	0			
	There is some equipment & infrastructure but these are wholly inadequate	1			
	There is equipment and infrastructure, but still some major gaps that constrain management	2			
	There is adequate operational equipment and infrastructure	3			
4.7 Maintenance of equipment & infrastructure Is equipment & infrastructure (including tourism/visitor facilities) adequately maintained?	There is no maintenance taking place	0			
	There is a Maintenance schedule, but not all maintenance is being carried out.	1			
	There is a Maintenance Schedule and most maintenance is being carried.	2			
	There is an approved Maintenance Schedule that is being fully implemented to a high standard.	3			
4.8. Education and awareness programme Is there a planned education programme?	There is no education and awareness programme	0			
	There is a limited and <i>ad hoc</i> education and awareness programme, but no overall planning for this	1			
	There is a planned education and awareness programme but there are still serious gaps	2			
	There is a planned N/A effective education & awareness programme fully linked to the objectives and needs of the PA	3			

4.9. Neighbours Is there co-operation with adjacent land users?	There is no contact between managers and neighbours	0			
	There is limited contact between managers and neighbours	1			
	There is contact between managers and neighbours, but there is only limited cooperation.	2			
	There is regular contact between managers and neighbours with substantial co-operative management	3			
4.10. Advisory committee/forum An Advisory Committee of local representatives and specialists advises on PA management & development issues.	There is no Advisory Committee/forum	0			
	An Advisory Committee/forum is in the process of being established communities	1			
	An Advisory Committee/forum exists, but does not contribute significantly to the management/development of the PA.	2			
	A well represented and formalised Advisory Committee/forum contributes significantly to the proper management/development of the PA.	3			
4.11. Community partners Do community partners have input to management decision via the Advisory Committee?	Community partners have no input into decisions relating to the management of the PA	0			
	Community partners have limited input into the PA's management decisions via local governance structures	1			
	Community partners contribute to some decisions relating to management via the PA's Advisory Committee	2			
	Community partners are fully representative on the PA's Advisory Committee and directly participate in decision making.	3			

4.12. Commercial tourism Do commercial tour operators contribute to protected area management?	There is little or no contact between managers and tourism operators using the PA	0			
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1			
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain conservation values	2			
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3			
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?	There is no performance evaluation in the PA	0			
	There is some <i>ad hoc</i> evaluation, but no overall strategy and/ or no regular collection of results	1			
	There is an agreed and implemented evaluation system but results are not systematically used for management	2			
	A performance evaluation system is well implemented and applied in adaptive management	3			
4b. Supplementary item	There is open communication and trust between local stakeholders and PA managers	1			
4c. Supplementary item	There is active participation in peripheral activities that may influence the PA.	1			
Subtotal: Process		42	0		

5: Outputs/Outcomes: What were the results/achievements?	Criteria <i>(Select & score one of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments <i>(Justify your selection and or comment on current situation)</i>	Next steps <i>(Identify actions to improve score by next evaluation)</i>
5.1. Visitor facilities Are visitor/tourism facilities good enough and sufficient to prevent damage to the PA? <div style="text-align: center; border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">N/A</div>	There are no visitor facilities and services	0			
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1			
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2			
	Visitor facilities and services are excellent for current levels of visitation or the nature (sensitivity) of the PA prohibits the development of any visitor services.	3			
5a. Supplementary item	There are active programmes for restoration of degraded areas in the PA and/or associated buffer zone, resultant from visitor use.	1			

5.2 Ecological condition assessment Are the biodiversity assets and values being managed consistent to objectives?		Important biodiversity and ecological values are being severely degraded	0			
		Some biodiversity, ecological values are being severely degraded	1			
		Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2			
		The management of Biodiversity and ecological values are meeting the set objectives.	3			
5b. Supplementary item	N/A	Where applicable is the impact of legal and illegal extractive use of biological resources being monitored?	1			
5.3 Heritage condition assessment Are the Heritage assets and values being managed consistent to objectives?		No heritage assessment has been done	0			
		Some heritage assets and values are being severely degraded	1			
		Some heritage assets and values are being partially degraded but the most important values have not been significantly impacted	2			
	N/A	The management of Heritage assets and values is meeting the set objectives.	3			

5.4. Protection systems Are the available management mechanisms working to control both illegal and legitimate access or use?	Access systems (patrols, permits entry gates etc) are ineffective in controlling access or use of the PA in accordance with designated objectives	0			
	Access systems are only partially effective in controlling access or use of the PA in accordance with designated objectives	1			
	Access systems are moderately effective in controlling access or use of the PA in accordance with designated objectives	2			
	Access systems are largely or wholly effective in controlling access or use of the PA in accordance with designated objectives	3			

5.5. Economic and Social benefit assessment Is the Protected Area providing economic and social benefits to local communities? <div style="text-align: center; border: 1px solid black; padding: 2px;">N/A</div>	The existence of the PA has reduced the options for economic or social benefits to the local communities	0			
	The existence of the PA has neither damaged nor benefited the local economy or communities	1			
	There is some flow of economic and social benefits to local communities from the existence of the PA but this is of minor significance to the regional economy	2			
	The PA delivers considerable quantifiable long term community benefits that make a real difference to the lives of local communities	3			
		17	0		

Appendix 6

Management Effectiveness Tracking Tool-South Africa METT-SA Version 2 (2010)

A rapid site level system for reporting progress in protected areas.

A South African adaptation of the World Bank/ WWF Management Effectiveness Tracking Tool

This assessment is not a scorecard of the Protected Area Manager's performance, but it is rather a reflection on the organisation's proficiency in PA management

Insert official name and legal designation of PA
(As declared)

Version1 of this tool was first adapted from the World Bank/WWF METT through the C.A.P.E. programme with support from GEF, UNDP and the World Bank. It was further adapted during 2009/10 when it was applied to all protected areas in South Africa by the Department of Environmental Affairs to produce the current version 2

The role of the Management Effectiveness Tracking Tool - South Africa METT-SA Version 2 (2010)

The METT-SA is a rapid site-level assessment tool adapted from the World Bank & WWF's system (second edition 2007). The system is based on the idea that good protected area management follows a process that has six distinct stages or elements:

- 1 It begins with understanding the **context** (where are we now?) of existing values and threats,
- 2 progress through **planning** (where do we want to be?) , and
- 3 allocation of resources (**inputs**) (what do we need?) and
- 4 as a result of management action (**processes**) how do we go about it?),
- 5 eventually produces products and services (**outputs**) (what were the results?),
- 6 that result in impacts or (**outcomes**) (what did we achieve?).

This version has been compiled so that it can be applied to the full range of protected areas managed at national, provincial and local government levels in South Africa. It is also applicable to protected areas in other regions and with minor adaptations could be applied outside of South Africa. It may also be applied to MPA's and islands, but in the long run it may be necessary to amend the system to be more specific to these areas. It is intended through the C.A.P.E. programme to develop a METT specifically for "off reserve" conservation areas such as conservancies and stewardships.

When applying the METT - SA is important that the following be kept in mind:

The assessment is not a scorecard of the Protected Area Manager's performance, but it is rather a reflection on the organisation's proficiency in PA management

- The METT - SA is intended to report on progress. Thus the score is the baseline against which future assessments are made to see if there has been improvement.
- It is site specific and must thus not be used to compare scores between different protected areas.
- It is a useful tool to give indications of trends in management. In this version the six groups of elements of the adaptive management process as defined in the original version are scored as subsets of the total. This gives an indication of where improvement in management needs to focus.
- It is not intended to replace more detailed assessments as part of adaptive management systems and it may give an indication of where more specific systems are required. .
- The METT has limitations in the quantitative measurement of Outcomes and these should be measured by more objective and quantitative systems.
- This version adjusts the total score where questions are not relevant.
- Often low scores in some questions can be a reflection on the organisation and are out of the control of the protected area manager. **Thus under no circumstances should the performance of managers be measured against the results of the METT - SA.**
- As this is an on site evaluation, it is important that all information required to verify scores (e.g. status of declaration) is available on site.

Frequency of application. Tracking the trends in management effectiveness is a long term process and instant improvements are unlikely to be obtained. Generally the METT is applied at three year intervals, but an annual application is acceptable if it is understood that changes may only be slight.

GUIDELINES FOR USING THE TRACKING TOOL

The Management Effectiveness Tracking Tool - South Africa (METT - SA) should preferably be completed by a team of protected area staff with input from other protected areas or support services staff in an open discussion. The involvement of project staff such as Working for Water and tourism operators is also recommended. The tracking tool has been designed to be easily answered by those managing the protected area without any additional research. It is emphasised that best results are obtained if the METT -SA is completed in an open forum with active debate on the scores to be allocated.

All sections of the tracking tool should be completed. There are three sections:

- 1. Datasheet:** This details key information on the site, its characteristics, and management objectives.
- 2 Pressures and threats.** The pressures and threats influencing the protected area are listed and given a weighted ranking.
- 3. Assessment Form:** This includes three distinct components, all of which should be completed.

3.1 Questions and scores: the main part of the assessment form is a series of indicators (grouped into the five elements of protected area management) that can be answered by assigning a single score ranging between 0 (poor) to 3 (excellent). A series of four alternative answers are provided against each indicator to help assessors make judgments as to the level of score given. Choose the appropriate answer and enter the score into the score columns. Note that a score is given for each of the supplementary items. Scoring is inevitably an approximate process and there will be situations in which none of the four alternative answers precisely fit conditions in the protected area. It is however important that you choose the answer that is nearest and use the comments section to elaborate. Although the automatic scoring system in this Excel version adjusts the score for non relevant questions, it is essential to use the Comment box to explain why it is not relevant. In addition, there are supplementary indicators which elaborate on key themes in previous questions or provide additional information. Allocate only 1 or 0 (zero) to supplementary items.

3.3 Comments and Verification: a box next to each question allows for qualitative judgments to be justified by explaining why they were made (this could range from personal opinion, a reference document, monitoring results or external studies and assessments – the point being to give anyone reading the report an idea of why the assessment was made). In this section we also suggest that respondents comment on the role/influence of WWF/ World Bank/C.A.P.E. or other externally funded projects if appropriate. In some instances suggestions are made about what might be covered in the comments column. Comments are vital to ensure that when successive assessments are carried out, the assessors are able to understand the reason for the score allocated. Also provide verification of your answer. e.g. for 1.1 Legal Status provide the official declaration details or the PA register listing.

3.4 Next Steps: for each question respondents are asked to identify a long-term management need to further adaptive management at the site, if this is relevant. This is essential to identify actions needed and to identify potential projects for funding.

Final Score: The final score out of 168 (adjusted for non applicable items), is automatically expressed as a percentage. As the METT - SA is a tool to assist in assessing progress in a specific protected area to which it has been applied, it is vital to remember that there is no "pass or fail". The final score is a bench mark against which future evaluations will be made to see if there have been improvements. It is also vital that scores are not compared with that of other areas. More important than the total score are the scores for the elements of adaptive management and more importantly individual indicators. These give an indication of where priorities for remedial action should be set.

Disclaimer: The whole concept of "scoring" progress is fraught with difficulties and possibilities for distortion. The current system assumes, for example, that all the questions cover issues of equal weight, whereas this is not necessarily the case. Accuracy might be improved by weighting the various scores although this would provide additional challenges in deciding different weightings. In the current version a simple scoring system is maintained, but the limitations of this approach should be recognised.

METT - SA Version 2 (2010): DATA SHEET. Attach separate sheet if space is too limited.

Official name of PA (as declared)		Area (ha)	
Management Authority		PAA Legal designation	
Name and designation of person responsible for assessment			
Names of team involved			
Date of Assessment			
Location of protected area (Province and nearest town)		Biome	
Any additional designation e.g., World Heritage, RAMSAR etc			
List four primary attributes (values) which underlie the purpose of the protection of the area.			
Value 1			
Value 2			
Value 3			
Value 4			

List main PA objectives as listed in the management plan			
Objective 1		Objective 6	
Objective 2		Objective 7	
Objective 3		Objective 8	
Objective 4		Objective 9	
Objective 5		Objective 10	
List critical PA management activities. See standard list			
Activity 1		Activity 6	
Activity 2		Activity 7	
Activity 3		Activity 8	
Activity 4		Activity 9	
Activity 5		Activity 10	

Management Activities	
General management	Manning office Monthly planning Management meetings
Financial management	Budget Financial control
Faunal management	Anti poaching activities Population control Disease prevention Disease treatment Herd animal monitoring Seal monitoring Game census Alien fauna control
Fire	Pre fire prevention Fire standby Fire suppression Fire preparedness Fire mapping and reports
Veld management	Alien vegetation removal Restoration of degraded areas Erosion rehabilitation Controlled burns
Law enforcement	Patrolling Law enforcement Actions Maintenance of boundary fences Environmental Control Officer activities Law enforcement Administration
Environmental education	Environmental Education general Eco-schools
Administration	General admin (incl. logbooks, overtime, leave, S&T forms) Staff management Stores Monthly reports (including activity records)
Equipment	Maintenance of operational equipment Vehicle maintenance

Infrastructure	Maintenance of tourism infrastructure Maintenance of operational infrastructure Maintenance of roads and footpaths
Project management	Management of externally funded projects
Monitoring	Alien monitoring Alien fauna monitoring Post fire monitoring Alien mapping Baseline data collection Fixed point recreation monitoring River mouth monitoring Weather stations Water quality monitoring Rare and endangered plant monitoring Fixed point vegetation monitoring Cultural, historical and paleontological activities

Definitions.

The METT-SA uses the following:

Pressures and threats are extrinsic to the system of protected area management. They are often outside of the protected area, but can be inside a protected area where inappropriate activities are managed by a different authority.

Pressures are forces, activities or events that have already had a detrimental effect on the integrity of the protected area. Pressure include both legal and illegal activities, and may result from direct or indirect impacts of an activity or an external influence. These have occurred in the last 5 years and management should take mitigating measures to eliminate or reduce the impact.

Threats are potential or impending pressures in which a detrimental impact is likely to occur or continue to occur in the future. They are likely to occur in the next 5 years. Management should be taking pre-emptive measures

Threats and pressures are usually external to the protected area. For example invasive species that have been cleared from the protected area remain as a threat due to the presence on adjoining properties. The management of dams by water authorities within protected areas can cause serious problems for biodiversity conservation. Internal or organisational issues such as deficient budget are dealt with in the METT-SA.

#	Pressure/Threat	Description
1	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 due to external influences.
2	Water resource management	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.
3	Water extraction in protected area	Water extraction for management and tourism facilities-water rights for adjoining properties and municipalities.
4	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.

5	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.
6	Disease (Indigenous and exotic)	Plant and animal disease both indigenous and exotic.
7	Mining and Mining rights Extraction of non renewable resources	Mining and Mining rights on the boundary and in the protected area. Mining rights issued by other authorities without consideration of the protected area. Sand extraction and gravel pits within protected area
8	Illegal extraction or use of resources (poaching) both internal and external	Poaching -illegal removal of plants, animals and non biotic resources. It also refers to illegal hunting of birds outside of the protected area.
9	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.
10	Protected Area Isolation & fragmentaion	The protected area is isolated from other natural areas and the lack of corridors makes the long term sustainability difficult. Edge effect.
11	Farming practices on boundaries	Herbicide and insecticide spraying, genetic contamination e.g. from protea orchards and Canola fields.
12	Socio-economic levels in adjoining areas	The low levels of socio-economic conditions is such that the local population places great pressure on the legal and illegal use of resources. There are unrealistic expectations of benefits from protected areas.
13	Pressure on 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.
14	Boundary integrity	The open access system or the nature of the boundary makes control over illegal access and activities very difficult to apply. Land invasions and activites such as illegal cattle grazing is difficult to manage. This is linked to low socio economic levels in the surrounding areas.
15	Servitudes	Impact of public road infrastructure, rail, power line service corridors and servitudes that traverse the PA resulting in road-kills and also facilitates the spread of alien organisms and diseases. Also poses increased security risks (poachers have easy access into PA).

16	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
17	Invasive plants	Non-indigenous and indigenous plants which establish and advance aggressively and out-compete natural indigenous vegetation, resulting in dense infestations.
18	Inappropriate fire regime	Too frequent fires which could be as 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.
19	Crime & Vandalism	Wanton destruction of assets and/or collection of artefacts; poor management practices resulting in inadequate protection of facilities, infrastructure and heritage assets
21	Pollution	Pollution from outside of protected area-smoke-water pollution.Industrial fall out and water enrichment. Includes light and noise pollution.
22	Purposeful species eradication	This refers to the deliberate attempt to eradicate an indigenous species, e.g. tsetse fly, mosquito, red billed quella and jackal. Also includes removal of plants (e.g. ploegbreker <i>Erythrina zeyherii</i>) that may influence processes in the protected area.
23	Unsustainable tourism & recreation	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. Overcrowding is destroying the intended visitor experience. Recreational uses of coastal zone and beaches adjoining protected area. Investor expectations. Political favours give unsustainable rights over carrying capacity.
24	Water provision for wildlife	The impact of providing water points for animals as demanded by tourism authorities leading to overgrazing and thus loss of biodiversity

Quantifying pressures							
Trend		Extent		Impact		Permanence	
Description	Score	Description	Score	Description	Score	Description	Score
Increased sharply	5	Throughout (> 50%)	4	Severe	4	Permanent (> 100 years)	4
Increased slightly	4	Widespread (15 - 50%)	3	High	3	Long term (20 - 100 years)	3
Remained constant	3	Scattered (5 - 15%)	2	Moderate	2	Medium term (5 - 20 years)	2
Decreased slightly	2	Localized (< 5%)	1	Mild	1	Short term (< 5 years)	1
Decreased sharply	1						
Score for pressure = extent x impact x permanence (maximum score = 4 x 4 x 4 = 64; minimum score = 1 x 1 x 1 = 1)							
Degree of pressure (total) = sum (Σ) of all scores of individual pressures identified for the PA							

Quantifying threats							
Probability		Extent		Impact		Permanence	
Description	Score	Description	Score	Description	Score	Description	Score
Very high	5	Throughout (> 50%)	4	Severe	4	Permanent (> 100 years)	4
High	4	Widespread (15 - 50%)	3	High	3	Long term (20 - 100 years)	3
Medium	3	Scattered (5 - 15%)	2	Moderate	2	Medium term (5 - 20 years)	2
Low	2	Localized (< 5%)	1	Mild	1	Short term (< 5 years)	1
Very low	1						
Score for threat = extent x impact x permanence (maximum score = 4 x 4 x 4 = 64; minimum score = 1 x 1 x 1 = 1)							
Degree of threat (total) = sum (Σ) of all scores of individual threats identified for the PA							

Pressures/Threats		Pressures (last 5 years)					Threats (up to the next five years)								
		Occurs. in past 5 years	Trend	Extent	Impact	Permanence.	Comments	Degree	Will/wont be in next 5 years	Probability.	Extent	Impact	Perm.	Comments	Degree
1	Habitat shifting and alteration							0							0
2	Water resource management							0							0
3	Water extraction in protected area							0							0
4	Historical land use							0							0
5	Climate change							0							0
6	Natural disasters							0							0
7	Disease (Indigenous and exotic)							0							0
8	Mining and Mining rights Extraction of non renewable resources							0							0
9	Illegal extraction or use of resources (poaching) both internal and external							0							0
10	Land use changes on boundaries							0							0
11	Protected Area Isolation & fragmentaion							0							0
12	Farming practices on boundaries							0							0
13	Socio-economic levels in adjoining areas							0							0
14	Pressure on resources							0							0
15	Boundary integrity							0							0
16	Servitudes							0							0
17	Alien animals							0							0
18	Invasive plants							0							0
19	Inappropriate fire regime							0							0

Pressures/Threats		Pressures (last 5 years)					Threats (up to the next five years)								
		Occurs. in past 5 years	Trend	Extent	Impact	Permanence.	Comments	Degree	Will/wont be in next 5 years	Probability.	Extent	Impact	Perm.	Comments	Degree
20	Crime & Vandalism							0							0
21	Legal status							0							0
22	Pollution							0							0
23	Purposeful species eradication							0							0
24	Tourism & recreation							0							0
25	Water provision for wildlife							0							0
26	Waste disposal							0							0

1: Context: Where are we now?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments & Verification (Justify your selection and or comment on current situation. Also make a note of the assumptions made. Where necessary provide verification for your score)	Next steps (Identify actions to improve score by next evaluation)
1.1 Legal status Does the PA have secure permanent conservation legal status in terms of the NEM:PAA?	The PA's conservation status is not secured by its current legal status e.g. Public Open Space, State Forest, Private Reserve, etc.	0			
	There is a formal agreement in the organisation that the PA should be afforded the highest possible legal protection relevant to the authority, but the legal process to achieve this has not been commenced by the management authority.	1			
	The PA is in the process of being afforded the highest possible relevant legal protection.	2			
	All properties managed as part of the PA have been declared and listed in the National Protected Areas Register in terms of the PAA.	3			

1.2. Protected Area regulations Are there legal mechanisms in place to control inappropriate activities?	There are no legal mechanisms for controlling inappropriate land use and activities in the PA	0			
	Legal mechanisms for controlling inappropriate land use activities in the PA exist but are not being implemented.	1			
	Legal mechanisms for controlling inappropriate land use and activities in the PA exist but there are some problems in effectively implementing them	2			
	Legal mechanisms for controlling inappropriate land use & activities in the PA exist and are being effectively implemented	3			
1.3. Protected Area boundary demarcation Is the boundary known and appropriately demarcated (e.g. fenced or marked with bollards/posts and sign posted?)	The boundary of the PA is not known by the management authority or local residents/neighbouring land users	0			
	The boundary of the PA is known by the management authority but is not known by local residents/neighbouring land users	1			
	The boundary of the PA is known by both the management authority and local residents and is appropriately demarcated	2			
	The boundary of the PA has been surveyed and is known by the management authority and local residents and is appropriately demarcated. Any deviations have been recorded in a legally binding document.	3			

1.4. Biodiversity knowledge and understanding. Do you have enough information and understanding to manage the biodiversity?	There is little or no information available on critical habitats, species and ecosystems of the PA	0			
	Information on critical habitats, species and ecosystems is not sufficient to support planning and decision making	1			
	Information on critical habitats, species and ecosystems is sufficient for planning/decision making, but additional information is required	2			
	Information concerning critical habitats, species and ecosystems of the PA is sufficient to support planning and decision making and is being maintained	3			
1.5. Heritage knowledge and understanding Do you have enough information and understanding of heritage to manage the heritage resources?	There is little or no information available on heritage resources and cultural values of the PA	0			
	Information on heritage resources and cultural values is not sufficient to support planning and decision making	1			
	Information on heritage resources and cultural values is sufficient for planning/decision making but the necessary survey work is not being maintained	2			
	Information concerning heritage resources and cultural values of the PA is sufficient to support planning and decision making and is being maintained	3			
Subtotal: Context		15	0		

2: Planning: Where do we want to be?	<p align="center">Criteria</p> <p align="center"><i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i></p>	Value	Score	Comments & Verification (Justify your selection and or comment on current situation. Also make a note of the assumptions made. Where necessary provide verification for your score)	Next steps (Identify actions to improve score by next evaluation)
2.1. Protected area design Is the size and shape of the protected area adequate to achieve the conservation objectives?	Inadequacies in design mean that achieving major management objectives is impossible. No expansion is possible.	0			
	Inadequacies in design mean that achievement of major objectives are constrained to some extent. No expansion is possible.	1			
	Inadequacies in design mean that achievement of major objectives are constrained to some extent. Expansion is possible by acquisition, contracts and stewardship and there is an official strategy to achieve this.	2			
	Although there are some inadequacies in design this is being actively and aggressively addressed by the implementation of the expansion plan.	3			

2.2 Management Plan Is there an approved management plan (compliant with NEM: Protected Areas Act) ?	There is no Management Plan for the PA	0			
	A Management Plan is being prepared or has been prepared.	1			
	An approved Management Plan exists, but has not been updated/reviewed during the past five years.	2			
	A Management Plan approved by the Minister/MEC exists and has updated/reviewed during the past five years	3			
2.3. Conservation Development Framework (CDF) Is there a zoning system in place indicating visitor use zones, and positioning and nature of operational & visitor infrastructure.	There is no CDF for the PA	0			
	A CDF is being prepared or has been prepared but is not being implemented	1			
	An approved CDF exists but it is only being partially implemented because of funding constraints or other problems	2			
	An approved CDF exists and is being implemented	3			
2.4. Land use planning outside of the protected area Is management actively participating in	No participation is taking place in adjacent land use planning exercises to the detriment of the protected area.	0			
	No participation is taking place in adjacent land use planning exercises, but activities are not detrimental to the protected area.	1			

land use planning exercises that may have influences on protected area and the achievement of the PA objectives?	Some participation in adjacent land use planning has taken place to address the long term needs of the protected area.	2			
	Full and active participation in adjacent land use planning is being undertaken to ensure that the long term needs of the protected area are fully taken into account.	3			
2.4.1 Water use planning influencing the protected area Is management actively participating in water use planning and Catchment Management Agencies activities to ensure that these take cognisance of the protected area and the achievement of the PA objectives?	There is no participation water use planning influencing the protected area to the detriment of the protected area.	0			
	There is no participation water use planning influencing the protected area, but activities are not detrimental to the protected area.	1			
	Participation is taking place and the long term needs of the protected area are partially taken into account.	2			
	Participation is taking place and the long term needs of the protected area are fully taken into account.	3			

2.5 Heritage Management Plan Is there a Heritage Management Plan to ensure that Heritage assets and values being managed to set objectives?	No Heritage Management plan is in place	0			
	A Management Plan is being prepared or has been prepared, but is not yet approved.	1			
	An approved Management Plan exists and is being implemented, but has not been updated/reviewed during the past five years.	2			
	A Management Plan approved by SAHRA exists, is being implemented & has been updated/reviewed during the past five years	3			
2a Supplementary item	The planning process allows adequate consultation with key stakeholders in the compilation of the management plan	1			
2b Supplementary item	There is an established schedule and process for periodic review and updating of the management plan	1			
2c Supplementary item	The results of monitoring, research and evaluation are routinely incorporated into planning	1			
2e Supplementary item	There is a bilateral relationship between any relevant Biodiversity plan and/or the applicable aspects of the IDP of the local municipality and the planning and management of the protected area	1			
2f Supplementary item	Management planning sets explicit biodiversity targets for relevant priority biodiversity elements	1			
2g Supplementary item	Management planning addresses the management of specific priority species and habitats	1			

2f Supplementary item	A planning domain has been defined around the protected area.	1			
2g Supplementary item	The management plan has been compiled following the principles of adaptive management and is adjusted according changing circumstances	1			
Subtotal: Planning		26	0		

3: Inputs: What do we need?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments & Verification (Justify your selection and or comment on current situation. Also make a note of the assumptions made. Where necessary provide verification for your score)	Next steps (Identify actions to improve score by next evaluation)
3.1. Research Programme Are research projects relevant to the management of the protected Area?	Research needs have not been identified nor is any research work taking place in the PA	0			
	Research needs have been identified, but other than for ad hoc research, no management orientated research is being done.	1			
	There is considerable research work but only limited "management" orientated research is being done.	2			
	There is considerable research work being undertaken, which is relevant to management needs and monitors the results of management actions.	3			

3.1.1 Monitoring Programme Is there an active long term monitoring programme?	Monitoring needs have not been identified nor is any monitoring work taking place in the PA	0			
	Monitoring needs have been identified, but other than for ad hoc observation, no monitoring is carried out.	1			
	There is considerable research work but only limited "management" orientated research is being done.	2			
	There is considerable monitoring being undertaken, which measures the results of management actions.	3			
3.2. Human Resource capacity Does the PA have sufficient HR capacity to manage the protected area?	The PA has no HR capacity	0			
	HR capacity is inadequate for critical management activities	1			
	HR capacity is sufficient, but there are some deficiencies for critical management activities	2			
	HR capacity meets with approved staffing levels and is adequate for management needs	3			
3.2.1 Staff development programmes Is there an effective staff development programme in place?	There is no training programme	0			
	Training is not relevant to job requirements	1			
	There is a training programme that focuses on the needs of the individual staff members to make them more effective	2			
	Training equips the staff their tasks and an individual career path has been determine for each staff member.	3			

3.3. Operational budget Is the operational budget sufficient?	There is no operational budget for the PA	0			
	The available budget is inadequate for basic management needs with a reliance on external funding for essential activities	1			
	The available budget is acceptable, but external funding is required to fully achieve effective management	2			
	The available budget is sufficient and meets the full management needs of the PA without external funding.	3			
3.4. Security of budget Is there a secure budget?	There is no secure budget	0			
	There is a budget, but it is only available on an ad hoc basis or the budget is not specific to the PA which must depend on an allocation of funds from a centralised budget	1			
	A budget, specific to the PA, is secure and guaranteed on an annual cycle	2			
	A budget, specific to the PA, is secure and is guaranteed on a 3-5 year cycle	3			
3.5. Income Is income from various sources applied to all aspects of management of the protected area?	Although fees are theoretically applied there is no collection	0			
	Income is derived, but it goes to a budget outside of the organisation and is not used for protected area management	1			
	Income is derived, but it goes to a central budget inside of the organisation and is not directly used for protected area management	2			
	Income is retained within the organisation and is used for all aspects the management of the protected areas.	3			

3.6. Law enforcement Has the PA the capacity/resources to enforce regulations & bylaws well enough?	PA has no capacity/resources/support to enforce (arrest & prosecute) regulations & bylaws	0			
	There are major deficiencies in capacity/resources to enforce regulations & bylaws (e.g. lack of skills, no patrol budget)	1			
	PA has acceptable capacity/resources/support to enforce regulations & bylaws but some deficiencies are evident	2			
	PA has excellent capacity/resources/support to enforce regulations & bylaws	3			
3.7 Operational equipment Is equipment required for operational management purposes optimal and functional?	There is little or no operational equipment	0			
	There is some equipment but it is wholly inadequate	1			
	There is adequate equipment , but still some major gaps that constrain management	2			
	There is optimal operational equipment	3			

3.8 Operational infrastructure Is infrastructure required for operational management purposes (excluding tourism/visitor facilities) optimal and functional?	There is little or no operational infrastructure	0			
	There is some infrastructure but it is wholly inadequate	1			
	There is adequate infrastructure, but still some major gaps that constrain management	2			
	There is optimal operational infrastructure	3			
3.9 Health and safety Are all stipulations of the Occupational Health and Safety Act complied with?	PA management is not aware of the Occupational Health and Safety Act	0			
	PA management is aware of the Occupational Health and Safety Act but it is not being complied with	1			
	PA management is aware of the Occupational Health and Safety Act but it is not being fully complied with.	2			
	PA management effectively complies with and implements the Occupational Health and Safety Act.	3			
4a Supplementary item	Do you or your organisation have the skills and ability to raise external sources of funding?	1			
Subtotal: Inputs		34	0		

4: Process: How do we go about it?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments & Verification (Justify your selection and or comment on current situation. Also make a note of the assumptions made. Where necessary provide verification for your score)	Next steps (Identify actions to improve score by next evaluation)
4.1. Annual Plan of Operation (APO) Is there an annual work plan/APO that is approved at the relevant level in the organisation?	No approved/standardised APO exists	0			
	An APO exists but activities are not linked the to PA's Strategic Management Plan's targets	1			
	An APO exists and actions are linked to the PA's Strategic Management Plans targets.	2			
	An <u>approved</u> APO exists and actions are linked to the PA's Strategic Management Plans targets.	3			

4.1.1 Standard operating procedures Are there standard operating procedures that are regularly updated to define best practice methods for management activities?	There are no standard operating procedures	0			
	Some operating procedures are in place and are being implemented.	1			
	Most relevant operating procedures are in place and are being implemented and updated. Other procedures are being designed	2			
	All standard operating procedures are in place and are regularly updated.	3			
4.2 (4.5). Administrative support systems Are the administrative systems supportive of effective management?	Administration support systems are poor and significantly undermine effectiveness	0			
	Administration support systems are poor and constrain effectiveness	1			
	Administration support systems are adequate but could be improved	2			
	Administration support systems are excellent and fully support effectiveness	3			

4.3. Information management systems Do the information management systems support effective PA management?	Information management systems are not in place and significantly undermine management effectiveness	0			
	Information management systems are poor and limit management effectiveness	1			
	Information management systems are adequate but could be improved	2			
	Information management systems are excellent and contribute significantly to management effectiveness	3			
4.4 (4.6). Maintenance and functionality of operational equipment (as required for operational management purposes)	There is no maintenance taking place	0			
	There is a Maintenance schedule, but not all maintenance is taking place.	1			
	There is a Maintenance Schedule and maintenance and most is taking place.	2			
	There is an approved Maintenance Schedule that is being fully implemented.	3			

4.5 (4.6) Maintenance and functionality of infrastructure Is infrastructure (including tourism/visitor facilities) adequately maintained?	There is no maintenance taking place	0			
	There is a Maintenance schedule, but not all maintenance is taking place.	1			
	There is a Maintenance Schedule and maintenance and most is taking place.	2			
	There is an approved Maintenance Schedule that is being fully implemented.	3			
4.6 (4.8).Public education, awareness and communication programme Is there a planned education, awareness and communication programme?	There is no education, awareness and communication programme	0			
	There is a limited and <i>ad hoc</i> education awareness and communication programme, but no overall planning for this	1			
	There is a planned education, awareness and communication programme but there are still serious gaps	2			
	There is a planned & effective education, awareness and communication programme fully linked to the objectives and needs of the PA	3			

4.7 Internal Communication processes Is there a well defined programme for regular and focussed communication with internal stakeholders?	There is no internal communication programme	0			
	Internal communication is ad hoc to reacts to crises or special events only	1			
	Internal communication is being carried out but it is not on a regular basis and only reaches some stakeholders	2			
	There is an effective communication programme addressing all internal stakeholders	3			
4.8 (4.9). Neighbours Is there interaction with adjacent land users?	There is no contact between managers and neighbours	0			
	There is limited contact between managers and neighbours	1			
	There is contact between managers and neighbours, but there is only limited cooperation.	2			
	There is regular contact between managers and neighbours with substantial co-operative management	3			
4.9 (4.10). Advisory committee/forum An Advisory Committee of local representatives and specialists advises on PA management & development issues.	There is no Advisory Committee/forum	0			
	An Advisory Committee/forum is in the process of being established communities	1			
	An Advisory Committee/forum exists, but does not contribute significant advice to the management/development of the PA.	2			
	A well represented and formalised Advisory Committee/forum contributes significant advice to the proper management/development of the PA.	3			

4.10 (4.11). Community partners Do community partners have input to management decision via the Advisory Committee?	Community partners have no input into decisions relating to the management of the PA	0			
	Community partners have limited input into the PA's management decisions via local governance structures	1			
	Community partners contribute to some decisions relating to management via the PA's Advisory Committee	2			
	Community partners are fully representative on the PA's Advisory Committee and directly participate decisions making.	3			
4.11 (4.12). Commercial tourism Is there an appropriate level of interaction and cooperation with tour operators and concessionaires?	There is little or no contact between managers and tourism operators/concessionaires using the PA	0			
	There is contact between managers and tourism operators/concessionaires but this is largely confined to administrative or regulatory matters	1			
	There is limited contact and co-operation between managers and tourism operators/concessionaires to enhance visitor experiences and maintain conservation values	2			
	There is excellent contact and co-operation between managers and tourism operators/concessionaires to enhance visitor experiences, protect values and resolve conflicts	3			

4a Supplementary item	There are management guidelines for the sustainable use of biodiversity resources	1			
4b. Supplementary item	There is open communication between local stakeholders and PA managers	1			
4c Supplementary item	All electronic data are backed up on routine basis, stored according to organisational standards and are easy to access.	1			
4d. Supplementary item	There is an efficient staff hand over system and new staff are promptly made aware of relevant aspects of the Protected Area management	1			
4e. Supplementary item.	Over and above the METT is there an additional more detailed performance evaluation system?	1			
4f. Waste disposal	Are all waste disposal systems compliant with the relevant legislation?	1			
4g. Recycling programme	Is there a process for recycling which all staff and visitors participate in?	1			
4h. Green standards for accommodation	Has accommodation been accredited with a green standard such as the "Green Leaf Award"?	1			
Subtotal: Process		44	0		

5: Outcomes: What did we achieve?	Criteria <i>(Select & score <u>one</u> of the following criteria in each section that most closely fits your protected area)</i>	Value	Score	Comments (Justify your selection and or comment on current situation. Also make a note of the assumptio ns made.)	Next steps (Identify actions to improve score by next evaluation)
6.1. (5.5) Economic benefit assessment	The existence of the PA has not influenced the local or regional economy.	0			
	The existence of the PA has neither damaged nor benefited the local or regional economy	1			

Is the protected area influencing the local or regional economy?	There is some flow of economic benefits to local communities from the existence of the PA but this is of minor significance to the regional economy	2			
	The PA delivers considerable quantifiable long term stimulus to the regional (and possibly the national) economy.	3			
6.1.1 Social benefit assessment	The existence of the PA has reduced the options for social benefits to the local communities	0			
Is the protected area providing economic and social benefits to local communities?	The existence of the PA has neither damaged nor benefited the local communities	1			
	There is some flow of social benefits to local communities from the existence of the PA.	2			
	The PA delivers considerable quantifiable long term community benefits that make a real difference to the lives of local communities.	3			
6.2 Achievement of biodiversity targets	Biodiversity and ecological targets are not being met.	0			
Are the biodiversity assets and values being	Some biodiversity, ecological values targets are being met.	1			
	Biodiversity targets are being partially met and the best available knowledge has influenced the management techniques in a learning environment.	2			

managed as best possible to set objectives using the latest available	The management of Biodiversity and ecological values are meeting the set objectives. Management techniques are constantly being adapted to changing environments and new knowledge.	3			
6.3 Ecological processes	Ecological processes are not being maintained with the result that ecological integrity and biodiversity are being compromised	0			
Does PA management effectively maintain the ecological processes critical for the achievement of biodiversity targets?	Ecological processes are only partially maintained with the result that ecological integrity and biodiversity are being partially compromised	1			
	Ecological processes are being adequately maintained through process simulation, requiring further management interventions to improve ecological integrity and biodiversity	2			
	Ecological processes are being effectively maintained with the result that ecological integrity and biodiversity are not being compromised	3			
6.4. Land Use Management outside of the protected area	Adjacent land use planning does not take into account the needs of the protected area and is detrimental to the protected area.	0			
Do the land management practices of surrounding areas (within planning domain) support biodiversity	Adjacent land use planning does not take into account the needs of the protected area , but activities are not detrimental to the protected area.	1			
	Adjacent land use planning partially takes into account the long term needs of the protected area.	2			
	Adjacent land use planning fully takes the long term needs of the protected area into account.	3			

objectives of the protected area?					
6.4.1 Water use management influencing the protected area	Adjacent water use planning does not take into account the needs of the protected area and is detrimental to the protected area.	0			
	Adjacent water use planning does not take into account the needs of the protected area, but activities are not detrimental to the protected area.	1			
	Does water use planning take cognisance of the protected area and the achievement of the PA objectives?	2			
	Adjacent water use planning fully takes the long term needs of the protected area into account .	3			
6.4 Ecosystem services	Ecosystem services are not being maintained resulting in little or no benefits to the PA and neighbouring land-users	0			
	Is the protected area management maintaining critical ecological processes that deliver services such as water to surrounding communities?	1			
	Ecosystem services are only partially maintained resulting in limited benefits to the PA and neighbouring land-users	2			
	Ecosystem services are being maintained but further management interventions are required to improve ecosystem service delivery to the PA and neighbouring land-users	3			
6a Supplementary item	Are the scores allocated to 6.1 & 6.1.1 based on a formal external audit?	1			
6b Supplementary item	Is the score allocated to 6.2 informed by a structured and scientific system such as the Eco Audit or State of Biodiversity?	1			

		23	0		
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PROTECTED AREA (enter name)			
1: CONTEXT	VALUE	SCORE	% SCORE
1.1. Legal status	3		
1.2. Protected Area regulations	3		
1.3. Boundary demarcation	3		
1.4. Biodiversity knowledge and understanding	3		
1.5. Heritage knowledge and understanding	3		
Subtotal	15		
2: PLANNING			
2.1. Protected area design	3		
2.2. Management Plan	3		
2.3. Conservation Development Framework	3		
2.4. 1 Land use planning outside PA	3		
2.4.2 Water use planning outside PA	3		
2.5 Heritage Management Plan	3		
Supplementary items	8		
Subtotal	26		
3: INPUTS			
3.1. Research programme	3		
3.1.1 Monitoring programme	3		
3.2. Human Resource Capacity	3		
3.2.1 Staff development programmes	3		
3.3. Operational budget	3		
3.4. Security of budget	3		
3.5. Income	3		
3.6 Law enforcement	3		
3.7 Operational equipment	3		
3.8 Operational infrastructure	3		
3.9 Health and Safety	3		
Supplementary items	1		
Subtotal	34		
4: PROCESS			
4.1. Annual Plan of Operation	3		
4.1.1 Standard Operating Procedures	3		
4.2. (4.5) Administrative support systems	3		
4.3. Information management systems/	3		
4.4. (4.6) Maintenance and functionality of operational equipment	3		
4.5. (4.6) Maintenance and functionality of infrastructure	3		
4.6. (4.8) Public education, awareness and communication programme	3		
4.7. Internal communication process	3		
4.8 (4.9) Neighbours	3		
4.9 (4.10) Advisory committee/Forum	3		
4.10 (4.11) Community partners	3		
4.10 (4.12) Commercial Tourism	3		
Supplementary items	8		

Subtotal	44		
5: OUTPUTS			
5.1. Visitor facilities	3		
5.2 Identification for critical biodiversity features	3		
5.3. Heritage condition assessment	3		
5.4. Protection systems	3		
5.5 Rehabilitation of degraded areas	3		
5.6 Critical management activities	3		
5.7 Staff productivity	3		
5.8 Implementation of management plan	3		
Supplementary items	2		
Subtotal	26		
6: OUTCOMES			
6.1 (5.5) Economic benefit assessment	3		
6.1.1 Social benefit assessment	3		
6.2. Achievement of biodiversity targets	3		
6.3. Ecological processes	3		
6.4 Land use management outside of protected area	3		
6.4.1 Water use management influencing the protected area	3		
6.5 Ecosystem services	3		
Supplementary items	2		
Subtotal	23		
TOTAL SCORE	168		

This assessment is not a scorecard of the Protected Area Manager's performance, but it is rather a reflection on the organisation's proficiency in PA management

The end result is not about the score, it is an indication of where improvements have made from the previous assessment and where further improvements are required.

