Protected Area Management Effectiveness Assessment:

Thanda Private Game Reserve & Mduna Royal Reserve

June 2012
Map 1. Location of Thanda Private Game Reserve and Mduna Royal Reserve.
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Assessment Date: 29th February 2012

Background and Introduction

Protected areas are amongst the most efficient and cost-effective ways of conserving biodiversity (Balmford, Leader-Williams & Green 1995) and are therefore central to most conservation strategies (Hockings 2003). The global protected area estate has increased significantly over the past decade, numbering c. 114,000 and covering some 12% of the Earth’s surface (or almost 20 million km²), making protected areas the world’s largest planned form of land use (The Nature Conservancy 2008; CBD 2010; Dudley et al. 2010). Despite this major conservation success story, the current system of protected areas is not representative of all biomes and species requiring protection. Furthermore, protected areas are facing a barrage of increasing pressures and threats such as habitat loss, fragmentation, isolation, poverty, unsustainable exploitation, invasive species, lack of capacity, inappropriate policies and incentives, the inequitable distribution of costs and benefits, globalization, security and global change. This suite of external and internal pressures is impacting significantly on the conservation community’s ability to effectively manage their conservation estate thereby undermining its overall contribution to biodiversity conservation (CBD 2010).

Management effectiveness is defined by the IUCN’s World Commission on Protected Areas (WCPAs) as the assessment of how well a protected area is being managed - primarily the extent to which it is protecting values and achieving goals and objectives (Hockings, Stolton & Dudley 2000; Hockings et al. 2006). Such assessments have generally looked at four areas: protected area design (both individual sites and systems), appropriateness of management systems and processes, delivery of objectives (Ervin 2003a; Hockings 2003) and ecological integrity (Ervin 2003b; Parrish, Braun & Unnasch 2003). If applied broadly across an entire organization, protected area management effectiveness assessments can enable policymakers to refine their conservation strategies, re-allocate budget expenditures, and develop strategic, system-wide responses to the most pervasive threats and management...
weaknesses (Ervin 2003b). Protected area management effectiveness assessments are therefore not performance assessments of an individual; rather they serve to reflect a conservation authority’s proficiency for protected area management as a whole (Carbutt & Goodman 2010).

**Aims**

The management team of the privately owned Thanda Private Game Reserve (TPGR) and Mduna Royal Reserve (MRR) requested that TPGR and MRR be assessed for its management effectiveness, which is a diagnostic assessment that will highlight areas relating to PA management that require improving.

- To ensure that TPGR and MRR are effectively managed.

Management of the Thanda Group (Pty) Ltd may wish to compare their effectiveness score against a *minimum standard* of management effectiveness; the provincial (State-adopted) minimum standard score is 72% effectiveness, whilst alternatively the national (State-adopted) minimum standard score is 68% effectiveness set thought the Outcomes 10 strategic reporting framework.

**Methods**

**Management Effectiveness Tracking Tool**

The assessment tool used was essentially a refinement (for the KZN context) of the Management Effectiveness Tracking Tool (METT) developed by WWF and the World Bank in 2007 (see Hockings *et al.* 2000; Hockings *et al.* 2006). The METT is a rapid, site-level, qualitative assessment tool based on an expert scoring approach (Hockings *et al.* 2006) that assesses all six elements of PA management identified in the WCPA framework (see Hockings *et al.* 2000; Hockings 2003), namely establishing the *context* of existing values and threats, followed by adequate *planning* and the allocation of adequate resources (*inputs*), and as a result of management actions (*processes*), eventually produces products (*outputs*) that result in impacts that can be measured against set objectives (*outcomes*).

The assessment was carried out as a mini-workshop on the 29th February 2012. The assessment was interactive and was subject to peer review and moderation. The workshop commenced with a briefing (broad introduction, overview of aims and methodologies) and ended with a debriefing on the way forward. The workshop comprised three components: (1) a cover sheet which captured details of the PA
such as size (area), number of staff, annual operational budget, primary management objectives, PA values etc.; (2) the assessment form proper; and (3) an analysis of pressures and threats.

**Pressures and threats assessment**

Given that the METT is weak in its assessment of pressures and threats, use was made of the WWF Rapid Assessment and Prioritization of PA Management (RAPPAM) tool’s pressure and threats assessment (Ervin 2003c), which effectively quantifies the total pressures and threats faced by the PA under assessment.

Pressures are extrinsic forces, activities, or events that have already had a detrimental impact on the integrity of the management or protected area over the past five years (i.e. that have diminished biological diversity, inhibited regenerative capacity, and/or impoverished the area’s natural resources). Pressures include both legal and illegal activities, and may result from direct and indirect impacts of an activity. Threats are potential or impending extrinsic pressures in which a detrimental impact is likely to occur or continue to occur in the future, over the next five years (Ervin 2003c). Both pressures and threats were quantified for TPGR and MRR. This entailed a qualitative assessment of up to a maximum of 22 pre-identified (‘generic’) pressures and threats.

To quantify each relevant pressure and threat, Thanda management had to assign a value ranging from 4 (highest) to 1 (lowest) that best reflects the extent, impact and permanence of each identified pressure and threat. The degree of pressure and threat was determined by calculating extent x impact x permanence; the maximum degree of pressure/threat for each identified pressure/threat is therefore 64 (i.e. 4 x 4 x 4), which is rated as being ‘severe’ whilst the minimum degree of pressure/threat is one, which is rated as being ‘mild’. The total degree of pressure and the total degree of threat was determined by summing all individual pressure and threat scores respectively. The maximum potential score is this regard is 1408 (i.e. 22 pressures/threats x 64), whilst the minimum score is zero. It is important to note that any pressures and threats assessment is perception-based.

**Results and Discussion**

The effectiveness score for TPGR and MRR determined through this assessment cycle is **66% effectiveness**, which is some 6% short of the provincial minimum standard and some 2% short of the national minimum standard (Figure 1).
It appears that only one previous assessment was undertaken for TPGR (in 2011), with the result being 71% effectiveness (Figure 1). Possible reasons for the disparity in scores include: the assessment tools are not completely aligned (the METT used in this assessment is more comprehensive and detailed, offering a far wider range of questions than the previous assessment employed); and the peer review dynamic was applied with greater effectiveness in this assessment.

The score for TPGR and MRR (66% effectiveness) is greater than the mean score (53% effectiveness) for 66 state-managed terrestrial PAs in KZN assessed in 2009 (Carbutt & Goodman 2010) as well as greater than the mean score of 53% effectiveness for the 2384 PAs assessed in a global study by Leverington et al. (2008). However, Leverington et al. (2008) regard ‘sound protected area management’ when PAs score 68% or more effectiveness. Anything less is regarded as ‘basic management with significant deficiencies’.

Figure 1. Management effectiveness scores for TPGR and MRR for the current (2012) and previous (2011) management effectiveness assessments. The solid black denotes the provincial minimum standard of 72% and the dotted black line denotes the national standard of 68% effectiveness.

TPGR and MRR are well resourced; the PAME score is not linked to budget constraints. In terms of this assessment, the ‘context’ aspects of protected area
management (legal status; boundary demarcation; biodiversity and cultural heritage knowledge and understanding) scored poorly (Figure 2). However, the lowest scoring aspect of protected area management in this assessment was ‘planning’ (Figure 2). The planning component incorporates protected area design (size and shape), buffers, management and education plans, and land- and water-use planning in collaboration with the relevant authorities, municipalities and stakeholders. Protected area planning in the context of TPGR and MRR should continue to seek opportunities for the development of buffers around, and linkages to, other protected areas. The interventions required to address shortcomings in such categories are often difficult and long-term in nature, and are often out of the hands of day-to-day management. This means that while ongoing and daily PA management practices are being undertaken with good proficiency (see the relatively higher scores under ‘inputs’, ‘processes’ and ‘outputs’), the context in which these activities are taking place is not well defined.

![Figure 2](image_url)

**Figure 2.** Management effectiveness scores for TPGR and MRR for the current (2012) management effectiveness assessment broken down per PA management category.

**Pressures and threats assessment**

Some 22 pressures and/or threats were identified as activities or events that either are, or may in the future, have a detrimental impact on the ecological integrity of TPGR and MRR. The ‘top eight’ pressures in TPGR and MRR (many of which are also the most significant threats) are climate change; dam building; natural resource use;
poaching; purposeful species eradication; transportation corridors; alien plants and land-use change which collectively account for c. 91% of the total pressures experienced (Figure 3). It is important to note that invasion of alien organisms and climate change is inextricably linked. The total pressures faced by TPGR and MRR amount to 238. The threats analysis is more difficult to interpret as many of the individual threats were evaluated as ‘unknowns’. In light of this, the (low) total threat count of 111 should be viewed with caution.

Figure 3. The pressures and threats perceived by Thanda management. The lack of a threat score adjacent to a pressure score is due to the ‘unknown’ factor associated with the threat.

Threats to protected areas remain numerous and serious according to the global assessment of management effectiveness, and should receive adequate attention if the values of the protected areas are to be conserved (Leverington et al. 2008). The pressures and threats assessment undertaken in this study affirms the global sentiment. The most pervasive and widespread threats identified globally are alien plant invasion, poaching of animals and non-timber forest products, encroachment of adjacent lands, tourism (recreational activities) and logging (Ervin 2003b; Leverington et al. 2008).
Conclusion: the value of management effectiveness assessments

Protected area management effectiveness assessments are being used with an ever increasing frequency by conservation management in an attempt to improve the level of protected area management effectiveness, and by so doing increase the likelihood of conserving the biodiversity features for which the protected areas were established and the values for which they exist (Ervin 2003b; Parrish et al. 2003; Leverington et al. 2008). Protected area management effectiveness assessments can also provide useful information for assessing and tracking change in both protected areas and the wider environment, and can provide information to serve as an early warning system for environmental challenges, to recognize and replicate conservation successes, and to enable effective responses to this change. Furthermore, protected area management effectiveness assessments increase the transparency and accountability of protected area management, thus assisting in cooperative management and enhancing community support. It can also provide a more logical and transparent basis for planning and for allocating resources. At the same time there is increasing interest by governments, management agencies, non-governmental organizations and others to develop and apply systems to assess management effectiveness in protected areas (IUCN 2004). Assessing management effectiveness is a vital component of adaptive and cooperative management, where managers are stakeholders work together and learn from experience (IUCN 2004). Increasingly, the results of such assessments are being used as lobbying and advocacy tools to increase government funding and public support for protected areas (Lemos de Sá, Bensusan & Ferreira 2000), revise budget allocations and spending priorities (Goodman 2003a; Goodman 2003b), and promote governmental transparency and accountability (Tsering 2003). Such steps may ultimately be as important for the long-term success of protected areas as improving management practices on the ground (Ervin 2003b).

Recommendations

The main interventions required to improve management effectiveness lie in the categories of PA context and planning:

- Proclamation of TPGR and MRR as a nature reserve (such security under the Protected Areas Act may help mitigate threats such as mining);
• Gathering more critical information on priority biodiversity elements;
• Updating the outdated management plan to include biodiversity targets, action projects, zonation plan, staff establishment, annual work plan and goal setting exercise; a schedule for the periodic review of the management plan; improving the maintenance of ecological processes; and documenting all cultural heritage assets;
• External (beyond the PA boundary) engagements with the authorities responsible for land- and water-use planning (e.g. Department of Water Affairs; Local and District Municipalities);
• The main aim of protected area management effectiveness (PAME) is to reassess management effectiveness on an annual basis to try and achieve a steady improvement (upward trajectory) in PAME. This assessment should therefore become the baseline against which all other assessments should be compared using the current assessment tool as the standard reference.

These should become ‘action projects’ which should be captured in the (pending) management plan for further attention.

References


