

# **TOWARDS A CONSERVATION POLICY FOR THE EASTERN CAPE: THE FUNCTION AND MANAGEMENT OF PROTECTED AREAS**

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## PREAMBLE

The issue of the role and function of Protected Areas (PAs) in South Africa should be approached within the context of the current land-use patterns, as they relate to the national estate. Presently, well over 90% of this estate is given to consumptive land-use types such as cultivation, pastoralism, commercial forestry and mining. The long-term sustainability of many of these land-use types, in terms of biodiversity conservation, productivity and economics, is currently being seriously questioned. PAs were, and continue to be, established as a key part of the nation's attempt to maintain a representative suite of natural resources, including biodiversity, in the face of increasingly unsustainable patterns of land-use. One of the main reasons why increasing attention is now being focused on the extraction of resources from PAs is because so many other areas are now too degraded to support the growing human population and natural resource-based economic activity, e.g agriculture, tourism.

South Africa, like many other developing nations with growing populations and ever-diminishing resources, has reached a crossroads with regard to the future of its PAs. The function and management of these areas will need to be such that their status and integrity is assured, and that irreversible changes are not permitted to occur within them. The importance of this issue is demonstrated by the South African Government's signing of the international Convention on Biodiversity and its implementation in South Africa. Clearly some wise and firm decisions have to be taken by government, on behalf of present and future generations of South Africans. As a contribution to the debate, this document presents our views on some of the key issues.

*Note: In this document we classify Protected Areas (PAs) as those parcels of State-owned land that enjoy statutory protection as national parks or provincial nature reserves.*

## THE FUNCTION OF PROTECTED AREAS

In overall terms, the functions of PAs have been well documented. In South Africa these functions are well described in the *White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity* (Government Gazette Vol. 385, 1997), a document titled *A bioregional approach to South Africa's protected areas* (DEAT, Pretoria, 2001), and draft versions of the impending national legislation (Biodiversity Bill and Protected Areas Bill). The Eastern Cape Environmental Conservation Bill (Provincial Gazette Vol. 8, 2001) clearly sets out the province's policy regarding the function and management of its provincial nature reserves and wilderness areas.

We wish to highlight the following **primary** functions of PAs in the Eastern Cape Province (and elsewhere):

- To protect biodiversity (species, communities, landscapes and ecosystems) that is of regional, national and even international significance and importance.
- To act as long-term refugia for biota for the later recolonisation (after rehabilitation) of areas degraded by injudicious land-use.
- To preserve the genetic diversity necessary to ensure that sufficient options remain for the future identification and utilisation of species for food and medicines for the human race.
- To provide bench-marks against which the nature and rate of changes caused by other land-uses can be measured and evaluated.
- To protect key water catchments and reduce soil loss, thereby providing a sustained yield of high quality water for the benefit of the plant, animal and human communities that depend on them.
- To provide opportunities for environment-related experiences, to promote an appreciation and enjoyment of nature, and to motivate people to care for the environment.
- To provide sites for scientific research.

We consider that a **secondary**, but also important, function of PAs includes the enhancement of the living standards and well-being of communities by providing opportunities for socio-economic development, for example by stimulating the local, regional and national economies through appropriate nature-based tourism developments and other forms of non-consumptive use on and adjacent to PAs.

## A REGIONAL PLANNING PRIORITY FOR PROTECTED AREAS

With PAs currently forming only 3.5% of the surface area of the Eastern Cape, a major priority must be to make progress towards achieving the 10%<sup>1</sup> level recommended by the IUCN and the International Convention on Biodiversity, and supported by the South African government. Towards meeting this goal, the Minister of Environmental Affairs & Tourism announced in 2001 that South Africa is planning to increase its national PA estate to 8%.

This must, however, be preceded by a systematic and objective evaluation of the role of extant PAs in the Protected Area Network, followed by the selection of areas for additional or expanded PAs, based on the outcomes of a strategic, systematic and flexible conservation planning exercise. This analysis, and the recommendations that emanate from it, must be based on good information, and must be carried out within a regional, national and international context. In this regard, the planning outcomes, and implementation frameworks and strategies emanating from projects dealing with the Cape Floristic Region (=fynbos) (CAPE – Cape Action for People and the Environment), Succulent Karoo (SKEP - Succulent Karoo Ecosystem Planning project) and STEP (Subtropical Thicket Ecosystem Planning project) are particularly pertinent. Current thinking and norms (e.g. the IUCN classification system) on the selection and categorization of protected areas must be applied.

The above process will also allow recommendations to be made regarding the function and management of **extant** PAs that are not considered to be an essential component of a national or regional PA Network, e.g. the possibility of full or part privatisation.

The real economic contribution of PAs in the Eastern Cape to the regional economy needs to be assessed in terms of income, employment opportunities, ripple effects and sustainability. It is strongly suggested that these contributions are currently underestimated.

## TOURISM DEVELOPMENT ON AND ADJACENT TO PROTECTED AREAS

- We contend that the development and management (i.e. ecological and commercial) of those PAs that are essential components of a national Protected Area Network by private developers on long-term leases, with the primary aim being the taking of profits, is unacceptable. Such schemes may be based on short-term profit horizons, and there is no successful model to follow.
- With PAs forming less than 6% of South Africa's land surface area, there is ample suitable land that can be acquired by the private sector for profit-making tourism developments. Consequently, there is no reason for key components of the national PA network to be managed, in their entirety, by private developers.
- The wise purchase and development of land, over and above the network of state-owned PAs, by the private sector for responsible nature conservation, nature-oriented tourism and game farming purposes should be encouraged, supported and assisted by the Eastern

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<sup>1</sup> 10% is an arbitrary figure and the most recent research suggests that between 40 and 70% of areas subjected to systematic bioregional planning is required, under some form of conservation management, in order to achieve modest conservation targets.

Cape government. However, all game farms do not necessarily qualify as nature reserves, *per se*, and in this regard extra-limital (i.e. non indigenous) herbivores are equivalent to domestic herbivores.

- Large and high impact tourism developments associated with PAs (e.g. lodges, hotels and convention centres) should be located outside the borders of PAs and in locations which will not close future planning options for the PAs (e.g. expansion). These developments could be funded entirely by the private sector.
- Low impact developments such as bush camps, tented camps and overnight trail stops can be considered in PAs. These could be developed by the conservation authority, possibly in partnership with the private sector (including neighbouring communities, where appropriate).
- Tourism developments on or adjacent to PAs must not be permitted to erode the ecological and aesthetic integrity of these reserves, and they must therefore be subject to stringent EIA procedures.
- Not all PAs are suitable for tourism development programmes. For example, a PA may be too small, or too ecologically sensitive.

We do not subscribe to the view that PAs can exist only if they can pay their own way. Income from tourism development can make a very useful contribution, but the State has an obligation to subsidise the outstanding development and running costs.

## **THE MANAGEMENT OF PROTECTED AREAS**

Each PA must be managed according to a comprehensive **Master Plan**, that is guided by the PA's vision and goals, and that should comprise a set of strategies and actions to achieve these goals. An appropriate zonation scheme should form the basis for the Master Plan. A Master Plan may vary between PAs, depending on individual circumstances, but the overall function of PAs (see earlier) must not be compromised in any way.

We are concerned about the potential introduction of extra-limital (i.e. non indigenous) herbivores (game species) into provincial nature reserves, in the event of extensive commercialisation and privatisation of these reserves. The Eastern Cape Tourism Board already operates three important reserves (Double Drift, Mpofu, Tsolwana) that each carry a high proportion of extra-limital species. The carrying of extra-limital species is not consistent with the conservation goals of national and provincial reserves.

Scientific, and indeed even anecdotal, evidence indicates that the introduction of extra-limital species can have negative ecological impacts. Such introductions are known to have the potential to cause extinctions of indigenous species, and many attempts to introduce extra-limital species, both in public PAs and on private land, have proved to be (presumably costly) failures (witness the deaths of seven white rhinos, worth some R3million, at Tsolwana during September 2002). There is evidence that extra-limital species compete, for both forage and space, with indigenous species, and that they can impact on indigenous

vegetation. There is also evidence of hybridisation between similar species – this could threaten the genetic integrity, and therefore the financial value, and tourism value, of indigenous species.

We predict that the carrying of extra-limital game species will ultimately harm the tourism potential of the PAs in question, and the Eastern Cape in general. Increasingly discerning national and international tourists visit the Eastern Cape to experience its unique assemblages of game species and landscapes and they may be deterred if “zoos in the wild” are created by the introduction of large numbers of extra-limital species.

### **THE ROLE OF, AND BENEFITS TO, NEIGHBOURING COMMUNITIES AND OTHER KEY STAKEHOLDERS**

- Special attention must be given to **formally** involving neighbouring communities and other key stakeholders in the PA Master Plan drafting process.
- As far as possible, neighbouring communities and formal and informal businesses should receive special attention with regard to direct or indirect access to benefits that accrue from the PAs, e.g. provision of materials, building contracts, provision of labour, training and employment opportunities, markets for curios and crafts.
- Where feasible and appropriate, a neighbouring community can have a meaningful stake in income derived from a PA, e.g. via a Community Trust.

### **RESOURCE UTILIZATION ON PROTECTED AREAS**

- Where the resource in question allows it, the consumptive utilization of certain natural resources (e.g. thatching grass, building materials, medicinal plants) on PAs could be permitted. This must be according to formal utilization programmes based on proper scientific information, and subject to monitoring programmes carried out **jointly** by the conservation authority and the user of the resources.
- With regard to allowing grazing and browsing by domestic stock on PAs, we would rather support a model whereby neighbouring communities have a meaningful stake in the income derived from the sale of game and game products from PAs.
- Current ecological and economic information indicates that a suite of indigenous herbivores will have a higher economic yield and longer term ecological sustainability than domestic herbivores. This suggests that neighbouring communities may benefit more from participating in game utilisation programmes in PAs, than from grazing their domestic stock in these reserves.
- A model which sees the hunting or culling, for profit, of selected species on small (<25 000 ha; where predation processes cannot always be maintained) PAs by professional hunters and/or accredited clients can be considered. This activity should be permitted only in a zoned portion of the PA, and a “source and sink” zonation model must be

adopted, via a formal game management plan. Any motivation to cull animals must have a sound scientific basis and this must address the following parameters – population structure, density, existing mortality patterns and habitat status. In addition, the effects of culling must be analysed.

- In large PAs (> 25 000 ha) natural predator-prey processes should be restored and maintained, thereby obviating the need for management intervention in the form of culling. This will fulfil ecological and evolutionary conservation principles and also increase tourism opportunities.
- The potential of allowing dispersing animals to move onto properties adjacent to PAs should be investigated. This would allow “volunteer” densities to be maintained within a PA, while providing a resource for neighbouring communities to harvest in a sustainable manner, in these neighbouring “wildlife utilisation” zones.

Any form of consumptive exploitation must be justified by adopting sound scientific principles, and must be rigorously monitored by the conservation authority.
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### **MANAGEMENT STRUCTURES FOR PROTECTED AREAS**

All protected areas in a provincial PA network (i.e. other than municipal and private nature reserves) should ideally be managed by a single parastatal authority - in the form of a Statutory Board, e.g. a Provincial Parks Board. A Provincial Parks Board will provide the flexibility necessary to manage PAs into the 21st century, by enabling key actions such as the retention of income, the payment of market-related salaries and the appointment of suitable and skilled specialist staff. It will also be in a position to enter into viable public-private partnerships.

For a Provincial Parks Board to effectively carry out its mandate, it must be suitably structured, adequately financed, and staffed by properly trained and, in certain key posts, experienced, personnel.

## **THE ULTIMATE RESPONSIBILITY FOR PROTECTED AREAS.**

We firmly believe that the State, acting in a democratic manner, and on behalf of the people of the country, must retain the ultimate and overall responsibility for ensuring that the integrity of South Africa's Protected Areas Network is protected. We do not believe that this responsibility can be devolved to the private sector. Notwithstanding this, we consider that the private sector has an important role to play in the development and utilisation of Protected Areas, but that this must take place under the custodianship of the State. In this regard, innovative public-private sector partnerships should be investigated.

It is absolutely critical that the Eastern Cape government develops the human, financial, technical and infrastructural capacity to oversee the overall management of the PAs that fall under its stewardship. Areas in which capacity must be developed are:

- policy and planning,
- research,
- monitoring,
- reserve management,
- tourism development and marketing,
- public-private sector partnerships.

Unless the development of adequate capacity by the Eastern Cape conservation authority is achieved, the primary functions and goals of the Eastern Cape's PA network, namely the conservation of biodiversity, could become overtaken by those of the commercial sector.

## TERRESTRIAL ECOLOGY RESEARCH UNIT (TERU) REPORT SERIES

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- Boshoff, A.F., Kerley, G.I.H., Cowling, R.M. & Wilson, S.L.** 2001. Conservation planning in the Greater Addo National Park: The potential distributions, and estimated spatial requirements and population sizes, of the medium- to large-sized mammals. *TERU Report 33*: 87 pp.\*
- Boshoff, A.F., Kerley, G.I.H., Cowling, R.M. & Wilson, S.L.** 2001. Conservation planning in the Greater Addo National Park: A review of the species-, population- and spatially-driven processes involving the medium- to large-sized mammals. . *TERU Report 34*: 13 pp.\*
- Kerley, G.I.H., Wilson, S.L & Massey, A.** 2002. Elephant conservation and management in the Eastern Cape. Workshop Proceedings. *TERU Report 35*: 88 pp.
- Cowling, R.M. & Kerley, G.I.H.** 2002. Subtropical Thicket Ecosystem Planning (STEP) project: Identity, spatial components, and estimation of irreplaceability of processes required, to sustain biodiversity. *TERU Report 36*: 17 pp.