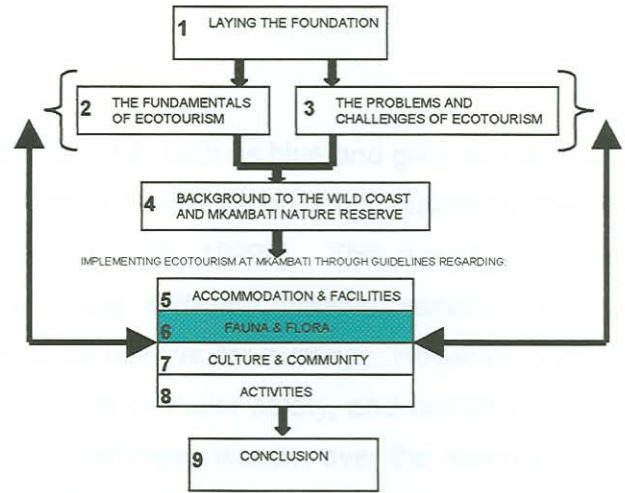


## Chapter 6

# Implementing ecotourism: fauna and flora



### 6.1 Introduction

This chapter continues the implementation of the theoretical base by proposing guidelines for the fauna and flora management of the reserve. It deals mainly with the fundamental of the natural resource base, although the fundamentals of the ecotourism industry, local community, and tourists are also involved due to their influence on the resource base.

There is currently much pressure, for the sake of tourism, to introduce the 'Big Five', even into small areas (Prinsloo, 1999b). The Wild Coast Tourism Development Policy suggests that the coastal area be developed using its natural scenery as a basis, rather than artificially creating 'Big Five' reserves or recreation-based tourism (Futter *et al*, 1998). The proposed guidelines aim towards achieving this. This chapter reveals the suggestions made for the management of fauna and flora, so that it complies with the fundamentals of ecotourism and is appropriate to the environment at Mkambati. This is in keeping with the mission statement and goals of the reserve (Section 4.3), which deal primarily with the fundamental that the natural resource base should be sustainably used at an appropriate level. However, the community, tourists, and industry (including Eastern Cape Nature Conservation) have a role to play in this. Conservation of fauna and flora is a major part of implementing ecotourism, and already receives commendable attention at Mkambati in spite of the constraints faced. Certain recommendations are made which support existing proposals concerning the conservation aspects, namely, numbers and introduction of game, reserve expansion, and invasive species. Recommendations regarding other aspects which link with the fauna and flora, are also given in this chapter, namely, hunting and the use of Geographical Information Systems.

## 6.2 Game

As far as possible, species occurring originally in the reserve, such as blue and grey duiker, must be re-established. As mentioned in Section 4.3, Nature Conservation are considering the re-introduction of Cape buffalo, oribi, and klipspringer (Prinsloo, 1999b). This would, however, involve close monitoring and management to maintain sufficient genetic variation among populations. The introduction of Cape buffalo would be positive for hunting. However, such a decision would have to be carefully considered in the light of visitor safety, and considering that the proposed activities (Chapter 8) require that visitors can freely wander over the reserve. The impacts on the grassland ecosystem, as well as on the surrounding communities who collect thatch grass within the reserve are further considerations.

Excess blesbok, blue wildebeest, and impala should be removed from the reserve until the correct number of units is attained. This can be done through hunting or game capturing. These animals can then be replaced with target viewing species. Swap-out arrangements could be promoted between neighbouring parks and reserves, which would enable Mkambati to obtain these target viewing species more easily.

## 6.3 Reserve expansion

Eastern Cape Nature Conservation would like to reincorporate the TRACOR land (described in Section 4.4) as part of the nature reserve (Prinsloo, 1999a; <sup>15</sup>). This is highly recommended as it will produce a more dynamic and stable unit. A larger reserve may also allow for more animals, which can attract more tourists, ultimately adding to the monetary benefit of the reserve. The management of catchment areas will also improve. In this regard, reserve management should come to an arrangement with communities living around the area to ensure a healthy water supply to the reserve.

## 6.4 Invasive species

There are a number of invasive species in the reserve. To date, ten different invasive species have been identified (Prinsloo, 1999b). The problem is regarded as serious. Species such as eucalyptus and acacia mearnsii (Prinsloo, 1999b) spread vast quantities of reproductive units (seeds) every season. With the windy conditions of Mkambati, this will become an expensive

15. Personal communication with Mr. V. Mapiya, manager of Mkambati Nature Reserve, Mkambati Nature Reserve, 18 July 2000.



problem. At present the problem is manageable, since only some of the invasives have grown into substantial tracts, which are easy to spot and eradicate. These must be removed as quickly as possible to avoid further spread. The reserve should develop and implement a sound management plan to detect new infestations, especially in and around watercourses, so that they can be removed prior to unnecessary environmental damage.

The reserve should start an aggressive replanting of indigenous and endemic plant communities around the disturbed areas. These communities will provide sufficient shade for tourists in 10 to 15 years time.

Eucalyptus is the predominant invasive specie at present (Prinsloo, 1999b). Measures have been taken to systematically remove them from the reserve. Some of these plantations will remain to serve as woodlots for firewood and building material (Prinsloo, 1999b). Although eucalyptus is not well suited for firewood, it is suggested that the reserve use it for this purpose to aid in removing it. Eucalyptus, however, has definite construction capabilities and can be used for bridges, wooden decks, jetties, shade structures, stables, walkways, chalets etc. With regard to timber that the reserve cannot use, a contract for removal can be signed with a private party, which would allow them to sell the wood once they have removed it.

Pioneer grasses on the roads, propagating due to continual disturbance, must be monitored on an annual basis. These grasses are usually aggressive and spread quickly (Liddle, 1997). It creates an excellent opportunity for a community arrangement – the removal of the pioneer grass in exchange for cutting thatch. Biological control can also play an important role here and should be explored as a possible management tool.

## 6.5 Hunting

Hunting at Mkambati was very successful in the past. Although the reserve is small (7720 Ha), hunting has the potential to be a major income generator, also involving local communities as wildlife custodians. Sport hunters are often prepared to spend large sums of money and travel long distances for the opportunity to shoot a highly valued animal. According to Baker (1997), *the total cost of a hunting safari is approximately US\$ 50 000. The area proposed for hunting was indicated in Figure 4.5. If the proposed expansion into TRACOR land occurs, this will allow for a larger tract of land to be used for hunting.*

At Mkambati, animals currently overstocking the reserve should be hunted first, which would create initial funds for further planning and development. This is also important to prevent further overgrazing, which is particularly noticeable close to the coastline.

Sport hunting should be mainly limited to male animals, with an emphasis on the quality of the trophy. Specimens taken should be older males who contribute little to breeding. If hunting quotas are a fraction of natural population growth rates, controlled hunting will have a negligible impact on overall population sizes. In order to attract trophy hunters to Mkambati Nature Reserve, there must be a sufficient choice of wildlife. The introduction of Cape buffalo has been mentioned. Trophy hunters pay between US\$ 5 300.00 and US\$ 5 500.00 for buffalo<sup>16</sup>.

To keep large and valuable animals within the reserve, fences would have to be upgraded. This will cost approximately R18 000.00 per kilometre for conventional fencing, and R46 000.00 per kilometre for electric fencing. The energiser for the latter costs R2 200.00<sup>17</sup>. Natural boundaries such as deep ravines do not need to be fenced. The airstrip will also need to be repaired, so that hunters can be flown in on an organised basis during the hunting season.

Social considerations include the surrounding community and the impacts of sport hunting on them. By allowing locals to benefit economically from hunting, a positive attitude towards conservation will be ensured. Specialised outfitters selling hunting packages, will make most of the logistical arrangements for the trip, including acquisition of the necessary permits and providing a professional hunter to accompany the tourist. Hunters may be charged a range of fees by the host government, including a conservation fee, firearms and ammunition, permit fees, trophy export fees, etc. Governments may also charge a fee for each animal shot. The outfitter collects the money and then allocates the funds to management staff, who in turn pay the government and local communities their fair share. All conservation, permit, and trophy handling fees can be divided and deposited in a nature reserve fund for administration and other conservation activities, and into community funds. Communities can decide whether to divide the proceeds equally among village heads of households, or to finance community projects such as schools and clinics.

16. Telephonic communication with Mr. C. Hoogkamer, involved in professional hunting in the Northern Province, South Africa, 12 November 2000.

17. Telephonic communication with a consultant from Sinoville Fencing, 12 November 2000.



Non-hunting tourists must also be considered. Visitors currently enjoy a wide variety of activities all over the reserve, including hiking, mountain biking, swimming, fishing, etc. There is insufficient space for simultaneous sport hunting; there is a risk element as well as the annoyance factor when shots are heard. It is therefore suggested that hunting only be allowed during part of the hunting season, which extends from May to September. During the designated period, no tourists other than hunters should be allowed in the reserve, unless they are willing to accept restricted activities and range of territory.

## 6.6 Using Geographical Information Systems

The responsibilities of Eastern Cape Nature Conservation management staff include not only conservation, but also the sustainable usage of the resources at Mkambati, for example, grass harvesting and recreational use. This also forms part of the reserve's mission statement. Assessing the compatibility of multiple uses and trading-off competing values are difficult planning processes that can be greatly aided by using GIS (Geographical Information System) techniques (Davis, 1996).

A GIS for Mkambati may include maps of vegetation associations (plant communities, land types, and zones, including sensitive areas such as the Superbowl and dune forests); land ownership; the drainage network with important catchment areas; topography; and hydrology. To obtain this data, interpreters have to identify stand boundaries and enter information into the GIS such as: species composition and structure; the location of invader species, soil types, drainage systems and road networks; and historical information relating to each stand, for example, burning blocks, and harvesting and regeneration of grasses. Technicon students could be used to collect this data as part of their practical projects. The GIS can then be used for analyses such as harvest planning (for example, timber and thatch); critical wildlife habitat protection; planning routes for roads, activities, and hunting; and modeling the spread of veld fires (Davis, 1996).

To find the most suitable site for a specific activity, route, construction, etc., ecological sites that may be damaged by a proposed project or activity should be mapped and given a certain weighting (extent of sensitivity). The different maps relating to information on each parameter (for example, topography, hydrology, and vegetation cover) are then overlaid to deliver a final map revealing the most suitable site for a specific structure or activity. Plans can be progressively refined and re-evaluated to optimise a solution. Another useful capability of GIS is the determination of zones, including buffer zones.

## 6.7 Conclusion

In order for the reserve not to be stretched to its limits, as has occurred in other reserves in South Africa, an overall recommendation would be to conduct further studies. These should focus on the influence of the proposed activities and facilities on Mkambati's natural resource base (Ehlers, 1999). As mentioned in Section 2.2 and illustrated in Figure 2.1, it is essential to approach ecotourism from a scientific and ecological perspective.

To achieve the above guidelines, Mkambati Nature Reserve must strive to build partnerships with non-governmental stakeholders such as Pondocrop, TRACOR, and the Triple Trust Organisation, and conservation bodies such as WWF and Nedbank's Green Trust.

Returning to Figure 2.3 on the objectives of ecotourism, this form of tourism should move the resource base from a passive state, where environmental disturbance is minimised, to a point where there is active contribution to the health of the environment. All three of the other fundamentals, namely the tourist, industry, and local community are key to achieving this.

Mkambati has a special and unique environment. Rich diversity is present among the flora and fauna, and in order to preserve this uniqueness, tourists should play a role. The reserve management and all staff must therefore encourage tourists to comply with the code of conduct of the reserve, and must build on this by providing adequate interpretation. If tourists are sufficiently informed and enlightened, they will utilize the resource base wisely.

The local community also has a vital role to play. If they do not receive tangible short-term benefits, such as income through sport hunting, building, guiding, and harvesting resources within the reserve, they will be unlikely to support conservation at Mkambati. Frustration on the part of locals can lead to problems such as poaching and crime. Although long-term objectives are also essential to sustainability (Section 2.6), attention must be paid to ensuring short-term benefits. Once communities view themselves as custodians of the resource, it will be easier for the ecotourism industry to progress along the continuum.

The ecotourism industry plays a key role in ensuring that the tourists and local communities care for and appreciate the environment. A heavy onus lies also on the industry as it plans, zones, designs, and builds, to ensure that every action contributes to sustainability. Continual monitoring and evaluation is another important function. In keeping with the Wild Coast Tourism Development Policy, monitoring from an external source is also recommended.