

CHAPTER 3

MANAGEMENT OF NATIONAL PARKS AND PROTECTED AREAS IN SOUTH AFRICA

Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations.

~Steve Jobs~

3.1 INTRODUCTION

Heritage assets are increasingly being utilised as tourism products, which, according to Ho and McKersher (2004:255), is logical and reasonable. In practice it is often difficult to achieve a viable relationship between tourism and heritage, as they often have different management mandates and focuses. However, tourism can also be crucial to fostering economic and social support for protected areas (Goodwin, 2000:97; Staiff & Bushell, 2004:723). Management is seen as the core binding agents of the business activities that bring the organisation and its resources together and motivate all involved to move towards the same aim and objectives (Cook, Yale & Marqua, 2002:20; Robbins & Coulter, 2012:36).

Keeping the above in mind, the aim of this chapter will be to analyse the various management frameworks that govern SANParks as an organisation. The first section of this chapter will provide a detailed description of the policy and legislative environment of MNP. The second part of the chapter will contain an overview of the current management plan of MNP, and finally other management frameworks for protected areas and World Heritage Sites will be analysed.

3.2 LEGISLATIVE AND POLICY FRAMEWORKS FOR THE MANAGEMENT OF NATIONAL PARKS IN SOUTH AFRICA

SANParks, as a government organisation, is required to conduct its operations according to set legislative and policy frameworks laid down by the government. These policy frameworks include the Constitution of the Republic of South Africa, the National Parks Act, 1976 (Act No. 57 of 1976), the Environmental Conservation Act, 1989 (Act No. 73 of 1989), the National Environmental Management Act, 1998 (Act No. 107 of 1998), the Heritage Resources Act, 1999 (Act No. 25 of 1999), and the Tourism Act, 1993 (Act No. 71 of 1993). These legislative and policy frameworks provide a structure within which management decisions are bound. For this reason, it is essential for an overview of these frameworks to be provided.

3.2.1 South African Constitution

The Constitution is relevant to this study. Chapter 2, section 24, of the Constitution (1996) states that:

Everyone has the right;

- ✘ To an environment that is not harmful to their health or wellbeing; and
 - ✘ To have the environment protected, for the benefit of the present and future generations, through reasonable legislative and other measures that:
 - Prevent pollution and ecological degradation;
 - Promote conservation; and
 - Secure ecologically sustainable development and the use of natural resources while promoting justifiable economic and social development
- Constitution (1996).

This stipulation in the Constitution provides the foundation of human rights for all South Africans, and specifically the right to a healthy and protected environment. The following section will focus on the National Parks Act, which obliges SANParks to conserve the environment Constitution (1996).

3.2.2 National Parks Act

The National Parks Act was formulated to provide a legislative policy document on the management and operations of national parks within South Africa. Section 4 of the Act states that the objective of the establishment of a national park is “the establishment, preservation and study therein of wild animals, marine and plant life and objects of geological, archaeological, historical, ethnological, oceanographic, educational and other scientific interests and objects relating to the said life of the first-mentioned objects or to events in or the history of the park, in such a manner that the area which constitutes the park shall, as far as may be possible and for the benefit and enjoyment of visitors, be retained in its natural state”.

Section 2 of the Act also stipulates the duties of SANParks towards tourists, namely to:

- i. Construct and erect such roads, bridges, buildings, dams, fences, breakwaters, seawalls, boathouses, landing stages, mooring places, swimming pools, oceanariums and underground tunnels and carry out such other works as it may consider necessary for the control, management or maintenance of the park;
- ii. Take such steps as will ensure the security of visitors, animal and plant life in the park, and the preservation of the park and the animals and the vegetation therein in a natural state;
- iii. Reserve areas as breeding places for animals or as nurseries for trees, shrubs, plants and flowers;
- iv. Provide accommodation for visitors to the park and facilities in connection therewith;
- v. Provide meals and refreshments for visitors to the park;
- vi. Carry on any business or trade for the convenience of visitors to the park;
- vii. Supply any other service for the convenience of visitors to the park; and
- viii. Establish, erect, equip and maintain any building, structure, depot, or premises required in connection with any matter referred to in subparagraph (iv), (v), (vi), or (vii), or let any site required for such purpose (SA, 1976:10).

One of the challenges facing MNP is related to prospecting and the development of mining activities in the vicinity of the park. The National Parks Act also states that “no prospecting or mining of any nature shall be undertaken on land included in a national park”. This provision protects the area that constitutes a national park, but the Act does

not make provision for the areas surrounding the park. The details of mining in the vicinity of MNP are provided in part 2.6.3 of chapter 2.

3.2.3 Environmental Conservation Act

The Environmental Conservation Act makes provision for the Minister of Environmental Affairs to declare environmentally protected areas and to appoint a competent authority to manage such areas. In the case of MNP, SANParks would be considered the competent authority and it is guided by the National Parks Act, as indicated in par. 3.2.2.

The Environmental Conservation Act also allows the minister to identify those activities which, in his/her opinion, could have a substantial detrimental effect on the environment, whether in general or in certain areas. These effects are listed in section 21 of the Act. Section 22 prohibits the undertaking of an activity as identified in section 21 without written authorisation. This authorisation may be given after consideration of reports concerning the impact of the proposed activity in a prescribed manner. Section 26 of the Act indicates that the minister or the competent authority may formulate regulations to manage the effect of activities as identified in the reports on activities as identified in section 21.

Section 21 (item 2) of the Act (Act 73 of 1989) lists activities that require reporting (environmental impact assessment- EIA), some of which are related to tourism, namely:

- ☒ Item 2 (a): land use and transformation;
- ☒ Item 2 (b): water use and disposal;
- ☒ Item 2 (c): resource removal, including natural living resources;
- ☒ Item 2 (d): resource renewal;
- ☒ Item 2 (e): agricultural processes;
- ☒ Item 2 (f): industrial processes;
- ☒ Item 2 (g): transportation;
- ☒ Item 2 (h): energy generation and distribution;
- ☒ Item 2 (i): waste and sewage disposal;
- ☒ Item 2 (j): chemical treatment;
- ☒ Item 2 (k): recreation.

Although this study does not aim to formulate an environmental impact assessment for MNP, the framework envisaged may assist the future formulation of such assessments.

3.2.4 National Environmental Management Act

The purpose of the National Environmental Management Act is to “provide for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote cooperative governance and procedures for coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith”.

The Act makes specific reference to the promotion of sustainable development through the management of the environment as applicable to all organs of state. SANParks, as an organ of state, is required to fulfil these requirements. More specifically, section 2 of the Act makes provision for the principles of environmental management. These principles, as applicable to this study, are as follows:

- ✚ Section 2(2): Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
- ✚ Section 2(3): Development must be socially, environmentally and economically sustainable.
- ✚ Section 2(4) (a): Sustainable development requires the consideration of all relevant factors, including the following:
 - i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
 - ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
 - iii. that the disturbance of landscapes and sites that constitute the nation’s cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
 - iv. that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

- v. that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
 - vi. that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
 - vii. that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
 - viii. that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.
- ⊠ Section 2(4)(b): Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
 - ⊠ Section 2(4)(f): The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.
 - ⊠ Section 2(4)(i): The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
 - ⊠ Section 2(4)(o): The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.
 - ⊠ Section 2(4)(r): Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure (SA, 1998:12).

The principles as identified by the Act serve as guiding principles within the legal environment of protected areas and national parks in South Africa.

3.2.5 South African Heritage Resources Act

The South African Heritage Resources Act facilitates the protection and preservation of national estate (national heritage sites). The national estate inscribed by this act may be classified into the following:

- ❑ Places, buildings, structures and equipment of cultural significance;
- ❑ Places to which oral traditions are attached or which are associated with living heritage;
- ❑ Historical settlements and townscapes;
- ❑ Landscapes and natural features of cultural significance;
- ❑ Geological sites of scientific or cultural importance;
- ❑ Archaeological and paleontological sites;
- ❑ Graves and burial grounds;
- ❑ Sites of significance relating to the history of slavery in South Africa;
- ❑ Movable objects, which could include amongst others; military objects, artwork, books and records (SA, 1999:13).

The functions of this Act are managed by the South African Heritage Resources Agency (hereafter referred to as SAHRA). The Act strives to adopt an accountable and user-friendly management system which integrates an inclusive approach incorporating heritage resources and civil society in order to achieve the sustainable use of these resources (Uche-Okeke, 2008:51). In addition, the Act has been established to incorporate the principles of the World Heritage Convention of the United Nations.

Uche-Okeke (2008:51) questions the effectiveness of the guidelines stated by the act and SAHRA. In a study at MNP he found the role of SAHRA at MNP to be minimal, although that organisation is seen as the custodian of national heritage in South Africa. He notes that there are numerous conflicting relations between SAHRA, SANParks and the Department of Arts and Culture regarding the management and funding of heritage at MNP (Uche-Okeke, 2008:51; NDT, 2011:24). Although Uche-Okeke (2008:51) found that SAHRA plays hardly any practical role at MNP, it is still imperative for management

decisions to be based on the framework of SAHRA so that they are in line with the legal framework of the South African Heritage Resources Act.

3.2.6 South African Tourism Act

The South African Tourism Act, as amended, makes provision for the establishment of a public entity, namely the South African Tourism Board (SA Tourism) responsible for the quality assurance of tourism services in South Africa.

According to the Act, the primary objectives of the organisation are to:

- ✚ Promote the maintenance and enhancement of standards of facilities providing services to tourists;
- ✚ Coordinate and rationalise the activities of persons who are actively involved in the delivery of services in the tourism industry;
- ✚ Create and manage a grading scheme for tourism service providers in South Africa; and
- ✚ Register and manage of tourist guides in the country (SA, 1993:2).

This Act also makes provision for the establishment of the Tourism Grading Council of South Africa (TGCSA), a public entity that is the only officially recognised quality assurance body in South Africa for tourism service providers (TGCSA, 2012:1). The TGCSA uses a five-tiered star grading system to monitor the quality of tourism services, where five stars represent superior quality. The current grading system in South Africa caters for nine establishment categories, namely:

- ✚ Hotels;
- ✚ Lodges;
- ✚ Bed-and-breakfasts;
- ✚ Country houses;
- ✚ Guesthouses;
- ✚ Self-catering accommodation;
- ✚ Caravans and camping;
- ✚ Backpackers and hostels;
- ✚ Meetings, exhibitions and special events venues (TGCSA, 2012:1)

The TGCSA has graded the accommodation facilities at MNP as follows:

- ✚ Mazhou Camping Site – Two stars;
- ✚ Vhembe Wilderness Camp – Two stars;
- ✚ Tshugulu Lodge – Two stars;
- ✚ Leokwe Camp – No grading indicated (SA Tourism, 2012b:1).

SA Tourism and the TGCSA promote tourism establishments to potential markets both domestically and internationally. These markets include overnight visitors and day visitors to the park. For management decision-making it is vital to assess the market environment as well as internal management frameworks that influence the management of tourism in the park. For this reason, the following section will describe the market environment where SANParks finds itself and how the management plan of MNP has been structured within the overall management framework of SANParks to cater for tourism management.

3.3 THE MARKET ENVIRONMENT AND THE PARK MANAGEMENT PLAN

In the early stages of the establishment of national parks in South Africa and around the world, tourism was not considered of high importance (Carruthers, 2009:247), as there was a fear of the effects of mass tourism and the commercialisation of conservation. In the case of South African national parks, it was only in 1927 that the first tourists visited the Kruger National Park, 29 years after the park had been established (Carruthers, 2009:246). Today, wildlife-based tourism is considered one of the most important forms of tourism in South Africa (Carruthers, 2009:240).

Tourism to South African has seen tremendous growth, from around one million tourists in 1990 (Carruthers, 2009:260) to around 8.34 million in 2011 (SA Tourism, 2012a:2). The majority of tourists to South Africa in 2011 originated from Africa (5.8 million arrivals), followed by Europe (1.27 million arrivals) and North America (345 thousand arrivals) (SA Tourism, 2012a:18). In 2011, 58% of incoming tourists were classified as having visited the country for leisure purposes (SA Tourism, 2012a:23), generating around R74 billion in incoming revenue for the country (SA Tourism, 2012a:28). Asian and Australasian tourists proved to have the highest spending power per capita of all tourists visiting the country (SA Tourism, 2012a:32), spending on average around R14 700 per trip. A total of 26.4 million trips were undertaken by domestic travellers indicating a decrease of 1.5

million trips per annum over the last two years. Direct spending by domestic tourists contributed R20.3 billion to national GDP, which indicated a decrease of 6% from the previous year according to SA Tourism (2012a:2).

According to the SANParks strategic plan for 2012/2013, the target market for SANParks in terms of tourism is nature-based tourism and ecotourism. These markets constitute both domestic and international markets (SANParks, 2012c:19). These tourism markets generate much needed revenue for park operations and the strategic plan makes provision for a 35% growth in tourism-related revenues by 2016/2017 (SANParks, 2012c:42). These revenues should increase with a growth in tourism numbers and tourism spending. Taking the above into consideration, South Africa is considered to have a wealth of ecotourism appeal as it possesses over 400 ecotourism destinations on state-owned land alone.

De Witt (2011:3) notes the ambiguous nature of definitions relating to the concept of ecotourism. According to her, in order to classify tourism as ecotourism, four pillars or criteria need to be present, namely:

- ❑ Ecotourism is dependent on conservation and the enhancement of natural and cultural attractions;
- ❑ Ecotourism is differentiated from nature-based tourism by providing a critical learning aspect relating to environmental education;
- ❑ The management practices of ecotourism adhere to the principles of ecological, social-cultural and economic sustainability;
- ❑ The achievement of a satisfactory tourism experience is imperative.

The state-owned land that caters for ecotourism makes up about 5.8% or just over seven million hectares of the country (Hall-Martin & Van der Merwe, 2003:46). South Africa's protected areas are very attractive to tourists wishing to see the big five (lion, rhino, leopard, African elephant and buffalo) as well as for bird-watchers, and for other nature-based reasons (Carruthers, 2006:1). Although South African National Parks is responsible for a large part of protected areas in South Africa, there is an increasing growth of private conservation areas, catering for both wildlife tourism and the hunting industry. It is believed that private conservation areas constitute over 80% of the total conservation landscape in South Africa (Van der Merwe, Saayman & Krugell, 2004:106).

The major external environmental forces and the market forces as detailed above may influence the manner that an organisation aligns its internal management plans.

MNP as a national park falls under the jurisdiction of SANParks, that manages the national parks in the country. SANParks has identified three core pillars on which all management functions are based, as indicated in Figure 3.2. These core pillars include:

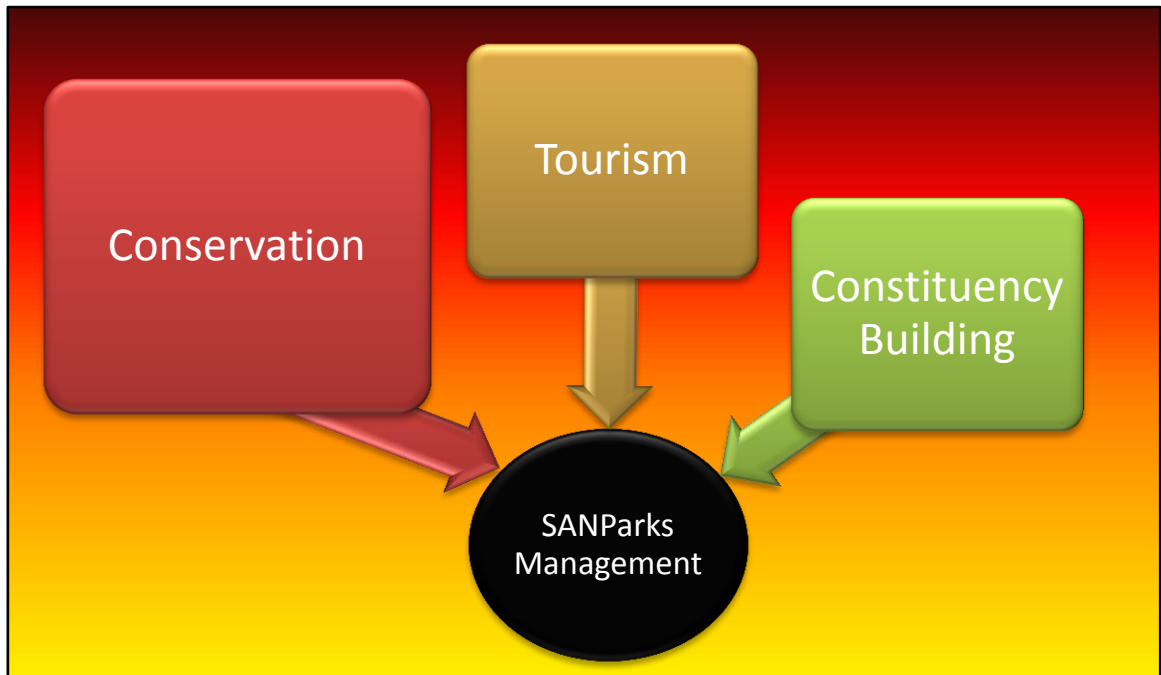


Figure 3.2: SANParks Management pillars

Adapted from SANParks (2012c:20)

- ✚ *Conservation* – This is the principal mandate of SANParks, and as can be seen in Figure 3.2, it comprises the largest part of its management activities. This conservation involves the preservation of biodiversity, natural landscapes and heritage assets.
- ✚ *Tourism* – SANParks strives to achieve the realisation of responsible tourism through the promotion of nature-based tourism, and more specifically ecotourism. Tourism also provides SANParks with an important source of commercial revenue that serves as a supplementary source of income to the organisation’s current funding from government. SANParks aims to expand tourism focusing both on domestic and international tourism.

- ❏ *Constituency building* – SANParks aims to build relationships with international, national and local constituencies. This process should enable SANParks to enable a broad base of participation and involvement of South Africans in biodiversity initiatives. This process also allows for greater synergy between the national parks and surrounding communities (SANParks, 2012c:19).

In addition, each national park in South Africa has its own individual management plan, which is aligned to the strategic management plan of SANParks. SANParks published its latest management plan for MNP in 2012. The plan starts with a brief description of the history and the founding of the park and then sets out the path of strategic adaptive management (as described in section 3.4). The management plan states that the overall mission of the desired park is as follows:

“Mapungubwe Cultural Landscape will be managed and developed to conserve its cultural heritage and biodiversity for all” (SANParks, 2012b:21).

This mission statement has been modified from the initial mission statement of the Vhembe-Dongola National Park, which primarily focused on park expansion and the TFCA.

The management plan of MNP identifies six core components of protected area management that the park should address:

- ❏ Cultural heritage and landscape values

This is associated with the cultural heritage located within the park.

- ❏ Biodiversity values

The geological and paleontological history of the landscape as well as the ecological values of wildlife, wetlands and riparian forest.

- ❏ Social and educational values

A platform for learning opportunities, outreach programmes for youth and publications that make available the results of research for the general public and research opportunities for universities.

☒ Cooperation, participation and communication

Development of relations with Southern African Development Community (SADC) countries in relation to the TFCA, communication with UNESCO and relations with the South African Heritage Resources Agency (SAHRA).

☒ Sustainable tourism

The creation of conservation awareness, appreciation of wildlife and scenery and living culture and cultural diversity. Local economic enterprise development through tourism (arts and crafts opportunities for locals), effective signage, interpretative materials and enhanced tourism experiences.

☒ Effective park operations and corporate support

Integration of corporate values and land ownership for MNP and the TFCA. Recognition of local, provincial and national objectives and public-private-community partnerships (SANParks, 2010a:17).

The MNP management plan makes significant reference to the management of biodiversity and ecosystems. Tourism is addressed in section 3.3 of this chapter. The main management technique for tourism in MNP is through the process of zonation together with limits of acceptable change (LAC) (see section 3.4.2 of this chapter). The zoning plan of MNP plays an essential role in the minimisation of conflict between different users of the park by separating potentially conflicting activities while ensuring that the activities that are not in conflict with the park's values can contribute in appropriate areas (SANParks, 2010a:56).

MNP is divided into three separate zones and a buffer zone surrounding the park. These zones are summarised in Table 3.1.

Table 3.1: Summary of tourism use zones at MNP

	Zone		
	Primitive	Low-Intensity	High Intensity
Characteristics	Retaining wilderness qualities, but with basic self-catering facilities. Access is controlled.	Motorised self-drive access with basic self-catering facilities. The numbers of visitors are higher than in the remote and primitive zones. Camps are without modern facilities such as shops and restaurants.	High-density tourist development with modern amenities where more concentrated human activities are allowed.
Interaction between users	Low	Moderate to high	High
Type of activities	Controlled access, accompanied or unaccompanied, on foot or 4x4 vehicles.	Motorised self-drive game viewing, picnicking, walking, cycling, rock climbing, hiking and adventure activities.	As above. Additional sophisticated infrastructure. Larger, organised adventure activities. Dining at restaurants.
Type of facilities	Small, basic, self-catering, or limited concessions with limited numbers; 4x4 trails; hiking trails.	Limited to basic self-catering picnic sites; ablution facilities, information/education centres, parking areas. Small to medium self-catering (incl. camping) rest camps with ablution facilities, but no shops or restaurants. Low spec access roads to provide a more wild experience.	High-density tourist camps with modern amenities. Footpaths, transport systems, accommodation, restaurants, curio and refreshment stalls, education centres. High-volume roads.
Conservation objective	Maintenance of the zone in a generally natural state with minimal impact on biodiversity processes, very limited and site-specific impacts on biodiversity pattern. Existing impacts on biodiversity either from historical	Reduce the biodiversity impacts of high levels of tourism activity and infrastructure that are accommodated in this zone through careful planning and active management, and ensure that both the negative effects of the activities and infrastructure are restricted to the zone.	Ensure that the high levels of tourism activity and infrastructure that are accommodated in this zone have a minimal effect on the surrounding natural environment.

	usage or originating from outside the zone should be minimised.	The zone should be maintained in a generally natural state.	
LAC biophysical	Deviation from a natural/ pristine state should be small and limited to restricted impact footprints. Existing impacts should be reduced.	Deviation from a natural/pristine state should be minimised and limited to restricted-impact footprints as far as possible. It is accepted that some damage to the biophysical environment associated with tourist activities and facilities will be inevitable.	The greatest level of deviation from a natural/pristine state is allowed in this zone, and it is accepted that damage to the biophysical environment associated with tourist activities and facilities will be inevitable.
LAC aesthetics and recreational	Activities which impact on the intrinsically wild appearance and character of the area should be restricted, and impacts limited to the site of the facility.	Although it is inevitable that activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area, these should be managed and limited to ensure that the area still provides a relatively natural outdoor experience.	It is inevitable that the high visitor numbers, activities and facilities will impact on the wild appearance and reduce the wilderness characteristics of the area, these should be managed and limited to ensure that the area generally still provides a relatively natural outdoor experience appropriate for a national park.

Source: SANParks (2010:85).

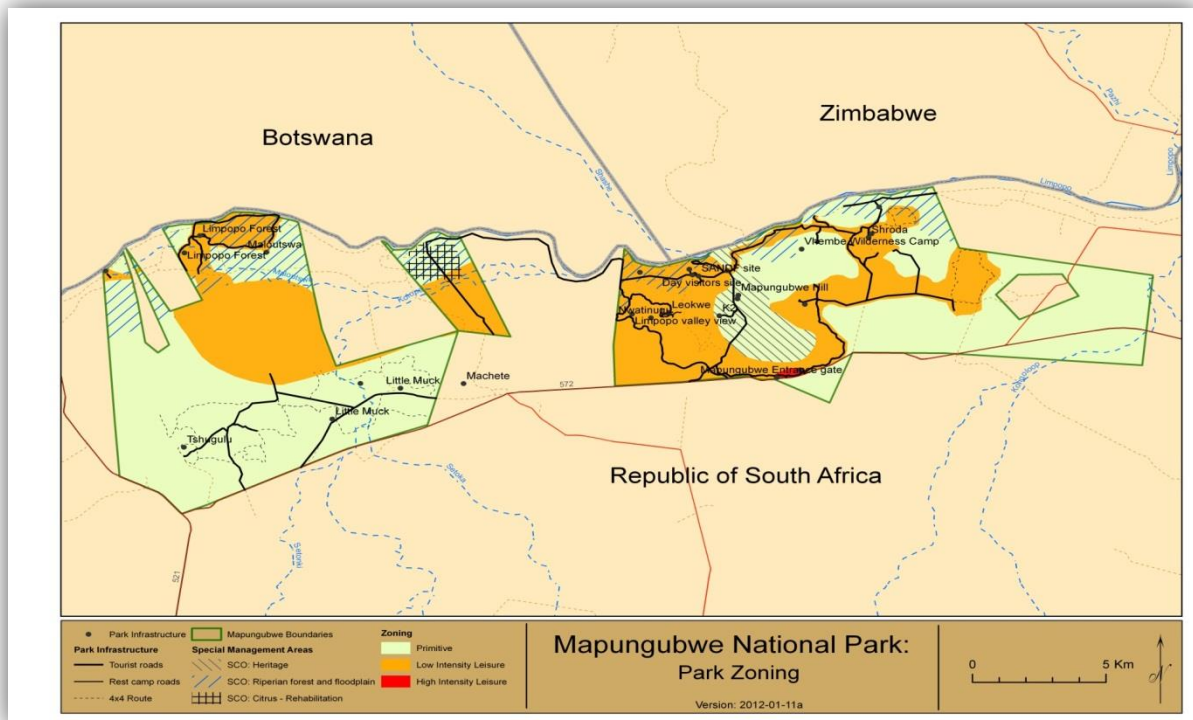


Figure 3.3: Land use zones of MNP

Source: SANParks (2010:94).

The zones described in Table 3.1 are also indicated graphically on the map (Figure 3.3). In order to manage these zones, SANParks uses a number of management frameworks that will be described in more detail in the next section (3.4).

3.4 MANAGEMENT FRAMEWORKS USED BY SANPARKS

SANParks develops all their management plans in the framework of adaptive management and strategic adaptive management.

3.4.1 Adaptive management

The concept of adaptive management has evolved as a management paradigm for the management of natural resources and ecosystems. Walters and Holling (1990:2060) give

an indication of the role of adaptive management. They state that ecosystems are affected to some degree by harvesting and can thus be seen as a resource. However, ecosystems are not static and are in a constant state of change. For that reason management frameworks for ecosystems should be adaptable to change. This brought into being the concept of adaptive management.

As early as in 1976, Walters and Hilborn (1976), in a study on the complex nature of ecological management, utilised adaptive management to refer to situations when the best solution to a problem is not fixed and cannot be determined beforehand, but should rather be established through chronological reassessment of the system state and the dynamic relationships that exist (Walters & Hilborn, 1976:173). To build on this definition, Nyberg (1998:1) included an element indicating that management should involve a component of learning. In a more contemporary context, Meffe *et al.* (2002:96) define adaptive management as “the process of treating natural resources management as an experiment such that the practicality of trial and error is added to the rigour and explicitness of the scientific experiment, producing learning that is both relevant and valid”.

Apart from the above, studies have also focused on the issue of adaptive capacity. Adaptive capacity is considered a critical aspect of resource management that reproduces learning and the ability to develop solutions to social and ecological problems that are ever changing in a dynamic environment (Dietz, Ostrom & Stern, 2003:1907).

Adaptive management progresses through six main steps, according to Nyberg (1998:1), as indicated in Figure 3.4 on the following page. The first step (problem assessment) includes determining the scope of the management problem, combining existing knowledge and exploring potential outcomes and solutions to the problem. The second step (design) is the creation of a management plan and monitoring programme to assess the effectiveness of the chosen solutions for the management problem as in step one. Step three involves the actual implementation of the management plan. Step four involves the use of indicators to monitor how effective the implemented actions are. Step five (evaluation) includes the comparing of actual outcomes to predictions and interpreting the reasons for possible differences. In the final step (adjustment) the outcomes, objectives and practices are adjusted to reflect a new understanding. This provides learning

for future reassessment of the problem in order to stimulate new questions and options so that a continued cycle of improvement can be developed.

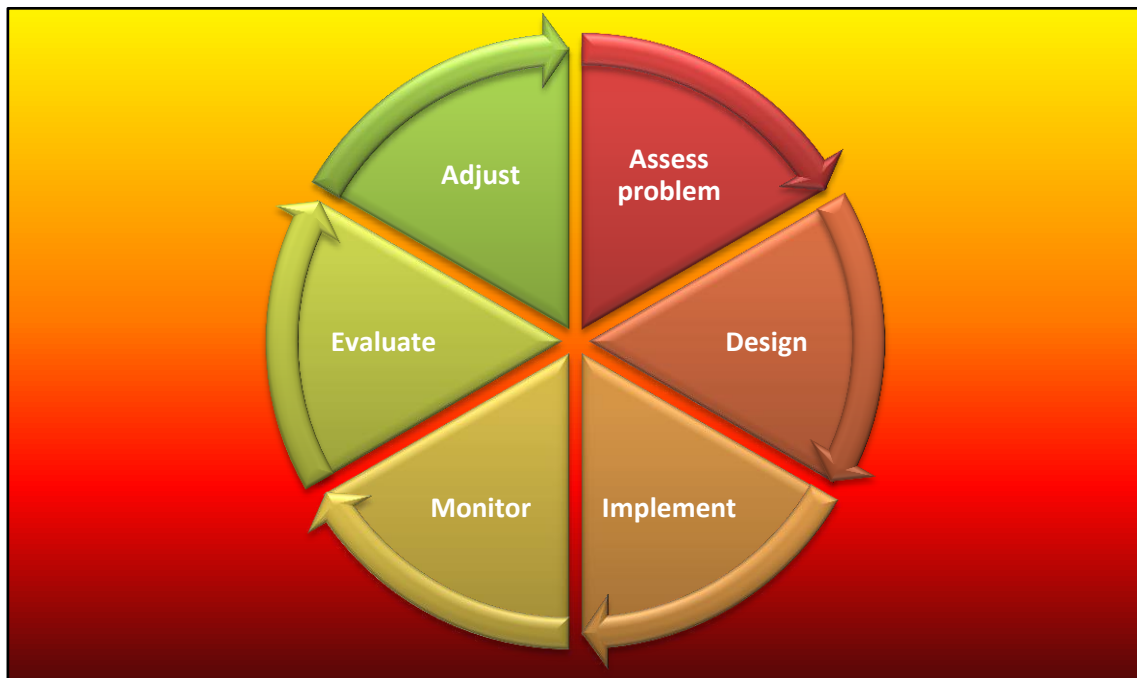


Figure 3.4: The process of adaptive management

Source: Nyberg (1998:1).

From the process above, Walters and Holling (1990:2060) identified three different structures to adaptive management, namely:

- ✚ **Active adaptive management.** In this form of adaptive management utilised data is explored each time in order to structure a range of alternative response models for the management problem.
- ✚ **Passive adaptive management.** This form of adaptive management utilises historical data each time to construct a single best model in response to the model. Data from the past is compared and applied to a new problem. Grant *et al.* (2008) note that this is the most commonly used form of adaptive management.
- ✚ **Evolutionary (trial and error) adaptive management.** This form of adaptive management makes use of random (haphazard) choices and later choices are made from these decisions in order to promote learning. This may be useful for new and unique problems.

3.4.2 Strategic adaptive management

According to Grant *et al.* (2008), the process of adaptive management is well documented in South Africa, but this process has its drawbacks. Although the method involves a process of learning through trial and error, this is not always the case and in practice the process is not very adaptive. For this purpose, the process of adaptive management was adjusted in the mid-1990s to what is known as strategic adaptive management (Rogers & Bestbier, 1997 as cited by Roux and Foxcroft, 2011:2).

Grant *et al.* (2008) indicate that the definition of 'ecosystem management' of Meffe *et al.* (2002) is very similar to the definition of strategic adaptive management: "Ecosystem management is an approach to maintaining and restoring the composition, structure and function of natural and modified ecosystems for the goal of long-term sustainability and which is based on a collectively developed vision of desired future conditions that integrates ecological, socioeconomic and institutional perspectives applied within a geographical framework defined primarily by natural ecological boundaries" (Meffe *et al.*, 2002).

Grant *et al.* (2008:1) broaden this definition of ecosystem management by including five aspects that differentiate it from strategic adaptive management:

- ❏ Involvement of stakeholder values in the definition of desired future conditions. This process is seen as an imperative part of the overall adaptive management process of protected areas and TFCAs, since multi-stakeholder involvement especially that of local residents, could result in long-term benefits for management. This may be attributed to lower data collection costs, decreased tensions and greater long-term information sources. Local residents and local stakeholders should thus not only be seen as resource users, but also as effective managers (Agrawal, 2000:327-331).
- ❏ Developing an "objectives-hierarchy" to transform a broad values-based vision into achievable science-based ecosystem outcomes.
- ❏ The inclusion of thresholds of potential concern (TPC) that indicate the top and lowest levels along a continuum of change in selected indicators that inform acceptable change in an ecosystem (limits of acceptable change).
- ❏ Utilising multiple modes and paths of scientific enquiry to improve understanding.
- ❏ The movement away from bureaucratic decision-making to improve adaptability and learning (Grant *et al.*, 2008).

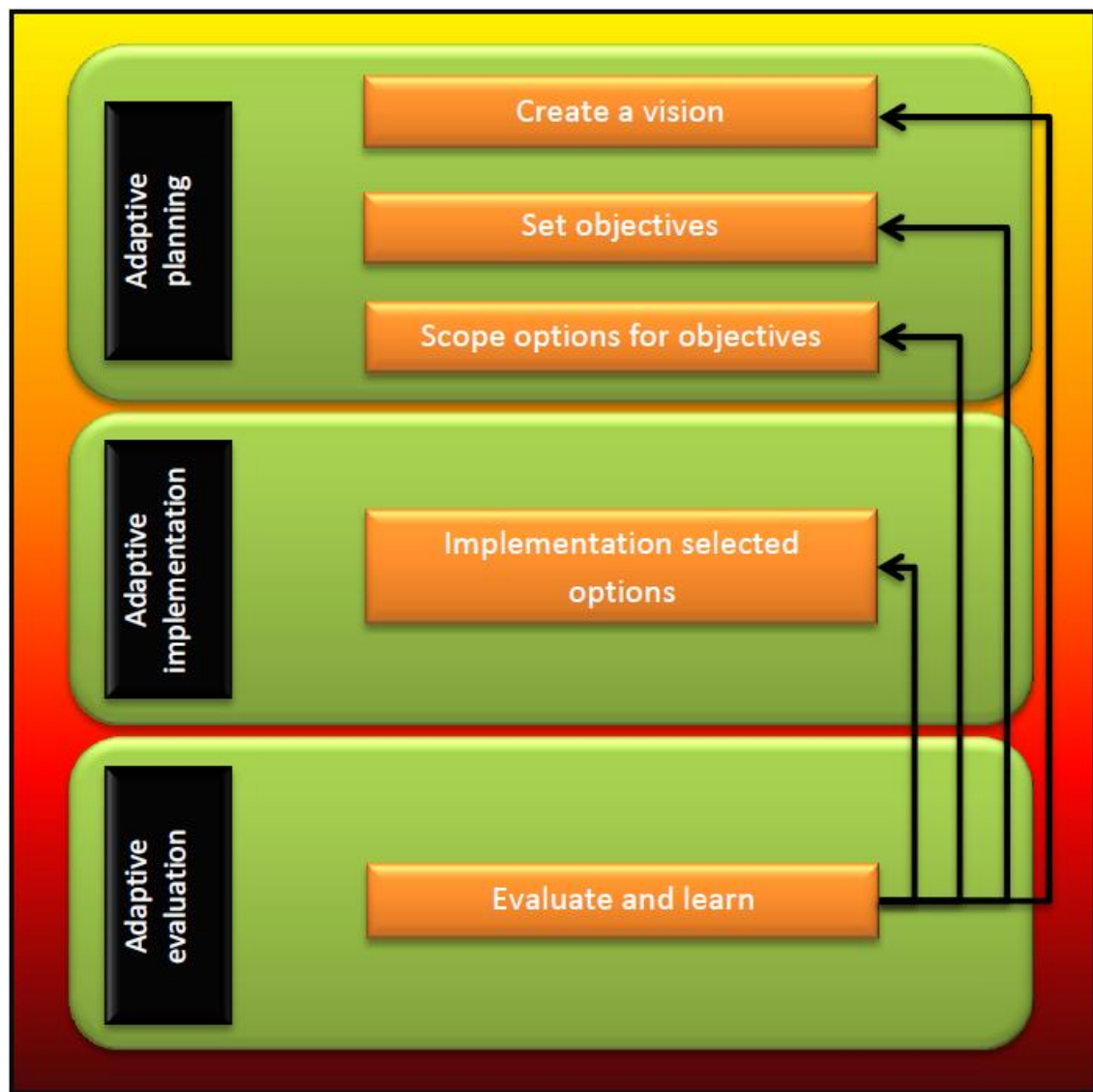


Figure 3.5: The process of strategic adaptive management

Source: Roux and Foxcroft (2011:2).

Roux and Foxcroft (2011:2) regard strategic adaptive management as a five-stage process, as depicted in Figure 3.5. These steps or stages are initiated through a managerial vision or desired state for the protected area that guide the protected area's objectives as well as a process of scoping the options for objectives. These three stages are referred to as adaptive planning (Roux & Foxcroft, 2011:2). During the next stage the management proceeds with the implementation of the management options. In the final stage, adaptive evaluation of the plan is implemented whereby the outcome of the management decision is assessed. The outcome of the management decision should then be utilised to inform the overall management process in order to facilitate learning

and the adaptation of management processes in order for improvements to take place (Roux & Foxcroft, 2011:3).

Stradas (2002:24) notes that the existing management frameworks for protected areas tend to focus exclusively on the conservation of biodiversity and often exclude other elements, such as tourism, finance, human resources and corporate governance. Uche-Okeke (2008:51) mentions that one of the problems facing SANParks is a lack of transformation to accommodate increased attention on the management of cultural heritage. That is the case with MNP, as an emerging sector in national parks, as the current focus of SANParks is principally on conservation and biodiversity protection and not that much on cultural heritage.

Stradas (2002:24) also criticises the existing management plans by stating that conservation agencies and park managers are usually not sufficiently qualified and experienced to manage tourism professionally. As far as national parks in South Africa are concerned, Mabunda (2004:xv) conducted a study on the Kruger National Park and found that the park did not possess an integrated tourism management framework for the delivery of tourism services. The results of this problem are twofold. Firstly, the park became over-dependent on diminishing and inflation-eroded subsidies, which affected the management of the park. Secondly, the park was unable to raise sufficient revenue from tourism businesses to adequately meet the park's conservation mandate, community maintenance and tourism facilities requirements. Mabunda (2004:xv) recommended that the park should adopt an integrated tourism management framework based on adaptive management to bring about conflict management and the management of social, economic and ecosystem changes in order to close the gap between conservation and tourism. This finding could be applicable to the situation at other national parks in South Africa, such as MNP. For this reason it may be necessary to investigate other management approaches that have been applied to tourism and that could be incorporated into strategic adaptive management at a later stage.

3.5 OTHER MANAGEMENT FRAMEWORKS FOR PROTECTED AREAS AND TOURISM

The frameworks discussed below provide insight into alternative and supportive management options for protected areas, which includes the involvement of tourism.

The involvement of tourism in protected areas poses a number of challenges to the management of such sites. Tourists may induce conflict between resource protection mandates of protected areas, tourism impacts may occur even at low levels of use, and some negative impacts are cumulative and may result in diminished visitation, economic benefits or resource protection (Farrell & Marion, 2002:32). For this reason, visitor impact management frameworks have been proposed, which include limits of acceptable change (LAC) and carrying capacity (Farrell & Marion, 2002:32).

Moore, Smith and Newsome (2003:349) indicate that there has been a marked increase in the utilisation of natural resources as a result of the continued development of leisure travel and tourism in these areas. They mention that this has resulted in numerous changes in frameworks utilised to report the impacts of tourism on the tourism-natural-resource relationship. The frameworks identified by Moore *et al.* (2003) include LAC and visitor impact management (VIM).

Eagles *et al.* (2002:80) identify a number of management frameworks that have been studied and applied in the tourism industry. These include LAC, VIM, visitor experience and resource protection (VERP), visitor activity management process (VAMP), the recreation opportunity spectrum (ROM) and the tourism optimisation model (TOMM). However, these frameworks involve a number of challenges, which often result in poor adoption:

- ❏ All the frameworks require skilled staffing, funding and time, which are not always available.
- ❏ There may be gaps in scientific knowledge about visitor impacts, so judgements need to be made subjectively.
- ❏ The required management actions that are identified through the use of these frameworks are not always implemented (Eagles *et al.*, 2002:81).

Each of the frameworks identified above will now be described briefly in chronological order.

3.5.1 Management through carrying capacity

Although tourism has many advantages for destinations, there are also associated negative effects, as discussed in Chapter 4. To facilitate the planning of tourism activities, the concept of carrying capacity was formulated. This management framework describes the maximum number of people who are able to utilise an area without generating an unacceptable alteration in the physical environment and an unacceptable decline in the quality of the recreational experience (Wearing & Neil, 2009:77).

Carrying capacity can be divided into three broad categories, as indicated by Cook *et al.* (2002:309):

- ✚ **Ecological carrying capacity:** This reflects the maximum number of users an area is able to accommodate before ecological damage occurs.
- ✚ **Physical carrying capacity:** This reflects the maximum number of users that can be accommodated in a region. It takes into account infrastructure such as roads and water.
- ✚ **Environmental carrying capacity:** This reflects the limit on the number of users that an area can accommodate before the area undergoes a perceived decline in desirability in the eyes of visitors.

Abernethy (2001:9) indicates that some authors have concluded that carrying capacity is mainly an ecological concept, as it details the relationship between a population and the natural environment.

The concept of carrying capacity faces a number of problems:

- ✚ The concept does not have a universal definition and is interpreted differently by different people (Cooper, Fletcher, Gilbert, Shepherd & Wanhill, 1998:192).
- ✚ Carrying capacity is a fluid concept and is dynamic. It is not fixed or static, and can depend on the speed of change (Garrigós-Simón, Narangajavana & Marqués, 2003:277).
- ✚ The concept is deficient in theory, unrealistic in implementation and impossible to measure (Papageorgiou & Brotherton, 1999:271).

- ❏ McCool and Lime (2001:372) suggest that carrying capacity is often associated with quantitative data in the form of “how many tourists are acceptable” and should rather focus on social and biophysical conditions desired for or appropriate to a destination.
- ❏ Literature on the topic of carrying capacity has not provided area managers with sufficient practical direction (Borrie, McCool & Stankey, 1998:133).
- ❏ Carrying capacity focuses mainly on “how many is too many?” when it should rather be focusing on “what are appropriate and acceptable conditions for visitation and how do we achieve them?” (Borrie *et al.*, 1998:134).

Cooper *et al.* (1998:189) note that the dynamic nature of carrying capacity, coupled with a lack of a universally acceptable definition, has resulted in some bodies adopting alternative frameworks. Additionally, although the concept of carrying capacity has been applied in a variety of circumstances, the model does not provide sufficient details to describe significance and what policies to adopt to manage impacts (Murphy & Price, 2005:181). Another reason for the development of other forms of managing tourism is that research into carrying capacity has been fixated on the terminology, resulting in a confused understanding of the concept (Grizāne, 2008:29). Limits of acceptable change essentially assist in decision-making by providing an indication of the kinds of conditions that may occur in an area and evaluates the costs and benefits of each management action (Garrigós-Simón *et al.*, 2003:277).

3.5.2 Limits of acceptable change

Limits of acceptable change (LAC) frameworks for visitor management entails assessing the probable impact of an activity, deciding in advance to what extent change will be tolerated, monitors what is happening and determines what actions are appropriate if standards are surpassed (Mbaiwa, Bernard & Orford, Sa: 1). In effect, this framework determines the acceptable conditions of an area by including social, economic and environmental dimensions. The LAC framework incorporates a set of indicators that represent the area's desirable conditions (Holden, 2008:191) in order to determine how much change is acceptable in order to maintain desirable conditions and manage them accordingly Eagles *et al.* (2002:81) note that this framework is often the most practical to apply as it is defensive and rational. In the MNP management plan LAC is applied to the

management of tourism through the use of zonation (as indicated in 2.8.5). These zones indicate the acceptable levels of change and the type of development acceptable in terms of tourism (SANParks: 2010: 86-89).

The framework of LAC consists of a nine-step process:

❏ Identify area issues and concerns

This involves determining what special features or qualities in the area require specific attention. This process involves both management and the public.

❏ Define and describe wilderness recreation opportunity classes

Any natural area contains a diversity of physical-biological features, levels of use, recreational and other human uses and type of wilderness experience. These features are not constant and differ from area to area. However, it is important to identify those features that are specific to the area under study.

❏ Select indicators of resource and social conditions

Indicators are resource elements and the social settings selected to represent the conditions that are deemed appropriate and acceptable for a specific area.

❏ Take inventory of existing resource and social conditions

Inventory should be taken of resources in the area. This inventory provides an indication of the indicator's existing condition in the area and assists with the formulation of standards for each indicator.

❏ Specify standards for resource and social conditions in each opportunity class

The range of appropriate and acceptable conditions for each indicator should be identified.

❏ Identify alternative opportunity class allocations

How well different opportunities address various interests, concerns and values should be explored.

❏ Identify management actions for each alternative

Both managers and the public should know what management actions will be needed to achieve the desired conditions for each alternative.

❏ Evaluation and selection of a preferred alternative

The various alternatives identified should be evaluated in order to determine whether they meet management requirements so that the appropriate alternative(s) is or are selected.

❏ Implementation of actions and monitoring of conditions

The monitoring process focuses on the indicators selected in the third step, and compares their condition with those identified in the standards (Stankey, McCool & Stokes, 1984:25-27).

3.5.3 Visitor impact management

Visitor impact management has evolved over the years and has been well documented (Farrell & Marion, 2001; Moore *et al.*, 2003; Cole, Hammond & McCool, 1997). Visitor impact management frameworks aim to identify unacceptable changes that may occur as a result of tourism activities and to develop management strategies to keep visitor impacts to acceptable levels (Wearing & Neil, 2009:238). Visitor impact management differs from LAC in that visitor impact management strives to identify the causes of visitor impacts whereas LAC places more emphasis on defining opportunity classes (Wearing & Neil, 2009:238). Visitor impact management frameworks have four common features as identified by Moore *et al.* (2003:355):

- ❏ Most rely on a management-by-objectives approach; they take place frequently and involve the public as well as managers (Cole *et al.*, 1997).
- ❏ Most of these frameworks start with the identification of management objectives and the desired conditions.
- ❏ The required indicators and standards of performance need to be identified.
- ❏ Monitoring requires constant comparison between desired and actual performance.

Farrell and Marion (2001:215) note that visitor impacts are especially notable in areas associated as ecotourism destinations in Central America. To elaborate the appropriateness of various management frameworks in the setting of ecotourism, they conducted a study involving various ecotourism destination managers. The findings of the study point out a number of visitor impacts, including soil erosion of walking paths, damaged trees, feeding of wildlife, wildlife disturbance and general vandalism. The management of these destinations indicated that their main challenge and the main reason for the problems was a lack of funding and appropriate staffing. To curb these

problems, Farrell and Marion (2001:224) propose that managers of such areas be familiarised with the management frameworks that are available in order to manage the sites appropriately.

Farrell and Marion have published a number of studies on visitor impact management, including Farrell and Marion (2001) and Farrell and Marion (2002). To build on their previous research, Farrell and Marion propose the Protected Area Visitor Impact Management Framework (PAVIM) (Farrell & Marion, 2002). The PAVIM framework takes into account those frameworks identified earlier, namely limits of acceptable change and carrying capacity. This framework identifies management opportunities and visitor impact problems, includes problem analysis (using an expert panel), monitoring and standards, and it results in the selection, implementation and evaluation of visitor impact management actions, as illustrated in Figure 3.6.



Figure 3.6: The PAVIM process

Adapted from Farrell and Marion (2002:41).

As in the case of the frameworks discussed previously, PAVIM actively incorporates the involvement and input from two broad groups of stakeholders, namely public and expert stakeholders. Public stakeholders could include local residents and visitors. Expert stakeholders could include local residents, agency representatives, researchers and non-

governmental organisation staff (Farrell & Marion, 2002:41). In the case of MNP and this study, both groups play an essential part in integrating local land owners, visitors (tourists) and agency representatives (SANParks). However, it should be noted that Haider (2006:17) indicates that this framework has been specifically designed for the United States Park Service and has never been successfully implemented. This framework thus requires modification to be successful.

The adaptive management process is somewhat similar to visitor impact management, including PAVIM. The differences lie in the last few processes of adaptive management, as the features of visitor impact management do not include a learning dimension, as is the case with adaptive management, through adjustment and refinement of the management process. To implement a visitor impact management framework such as PAVIM in a national park such as MNP would require adaptation to include an active learning component for the sustainable improvement of management processes.

Murphy and Price (2005:182) note that the management frameworks of carrying capacity, LAC and visitor impact management (including PAVIM) predominantly examine the issues relating to the supply side of tourism. However, in order to promote the sustainability of tourism, the demand side should not be ignored. For this reason, other frameworks that deal with visitor experience are proposed.

3.5.4 Visitor experience and resource protection

Carrying capacity provides an indication of the minimum acceptable condition of an indicator, while LAC and visitor impact management include an indication of the management actions to manage negative effects within a scope of minimum and maximum conditions. These approaches have been incorporated into the framework of Visitor experience and resource protection (VERP) in order to manage the carrying capacity in the national park system in the USA (Manning, 2001:93).

“VERP is a structured framework within which to conduct a systematic, thoughtful, traceable, and defensive analysis of carrying capacity, and provides national parks with a programme that works to manage the carrying capacity of the national park system” (Manning, 2001:93). VERP was created in an attempt to make the framework of LAC useful and effective for an organisation with a single purpose and it includes a crucial component of public participation (Haider, 2006: 17).

According to Manning (2001:98), the VERP process contains nine basic elements or steps:

- ❏ The creation of a project team, which should be interdisciplinary and include park planners, managers and researchers.
- ❏ VERP incorporates the inclusion of a public involvement strategy.
- ❏ Clear identification of the park's purpose, significance and primary interpretive themes.
- ❏ The park's important resources and potential visitor experiences should be mapped and analysed.
- ❏ The project team should identify the potential management zones that cover the range of desired resource and social conditions consistent with the purpose of the park.
- ❏ The team should apply the potential management zones in practice to identify a proposed plan and alternatives.
- ❏ Indicators should be selected that specify the quality of and desired standards for each zone.
- ❏ The desired conditions should be compared with existing conditions.
- ❏ Management strategies should be identified that address discrepancies (Manning, 2001:98).

The process of VERP has been well documented in the USA (Manning, 2001:93), but no application of this framework has been noted in South Africa. As mentioned by Haider (2006:17), this framework is successful for a park with a single purpose, and therefore this framework may not be suitable for a park such as MNP, which serves a number of purposes, including conservation, tourism, cultural heritage and community.

3.5.5 Visitor activity management process

Whereas the VERP process originated in the USA, Canadian National Parks have also developed a tourism management framework, known as Visitor activity management process (VAMP). This framework has been created to operate alongside Canadian National Park's natural resource management plan and to assist with the management of new parks, developing parks and established parks (Eagles *et al.*, 2002:170).

The primary focus of this management framework is on market research, as it connects a particular activity with the social and demographic characteristics of visitors, coupled with the activity's setting requirements and with developments affecting the activity (Haider, 2004).

VAMP involves the development of activity profiles that connect activities with:

- ☒ The social and demographic features of the visitors.
- ☒ The activity setting requirements.
- ☒ Trends affecting the activity (Wearing & Neil, 2009:83).

Each form of tourism activity has its own set of standards. Although this framework has been well planned to work alongside existing conservation plans and Wearing and Neil (2009:83) note its promotion of flexible decision-making, Haider (2004) notes that it has seldom been successfully implemented.

3.5.6 The recreation opportunity spectrum

The recreation opportunity spectrum (ROS) framework was developed by the United States Forest Service and the Bureau of Land Management in response to concerns related to growing recreational demands and the increasing conflict about scarce resources and legislation that required a comprehensive approach to natural resource planning (Eagles *et al.*, 2002:171). This management framework essentially prescribes carrying capacities and manages tourism impacts (Wearing & Neil, 2009:79). This is considered one of the first management frameworks for recreational activities in natural areas. The main purpose of this framework is to determine the carrying capacities of an area and to manage the impacts of recreational activities in the natural environment (Wearing & Neil, 2009:79).

The ROS concept was operationalised by Clarke and Stankey in 1979. The framework offers varying classes of land use management, ranging from primitive to modern, and it identifies site characteristics that influence opportunities for recreation. This framework considers the available opportunities, which include the natural environment, attributes of recreational use and management conditions (Clarke & Stankey, 1979:45). In essence, this form of management utilises the process of zoning within which directions and

measurements for exploitation and protection vary (Fredman, Hörnsten-Friberg & Emmelin, 2007:89).

This framework has been specifically designed to assist resource managers responsible for the management of natural or wilderness areas where limited recreational use is allowed in order to minimise the impact of these activities on the environment. Moreover, the utilisation of this framework could attract more and new visitor categories, since both wilderness and tourism developments exist in the area (Fredman *et al.*, 2007:94). The framework is also known to have contributed to an improved mutual understanding between park managers supporting conservation and visitors wishing to participate in activities, as the framework generally receive improved local support (Wallensten, 2003:228).

This framework is not without shortcomings: Fennell (2008:66) notes that although the ROS framework is successful in the field of outdoor recreation management it has not been widely implemented by tourism researchers, as the process does not have a tourism-specific approach.

3.5.6.1 Tourism opportunity spectrum

One approach to tourism that has developed from ROS is the framework of tourism opportunity spectrum (TOS), as identified by Butler and Waldbrook (2003:26-31). These authors describe the development of tourism in terms of the product life cycle. Initially destinations may be “adventurous” and attract limited numbers of people who may be considered “explorers”. These tourists usually participate in recreational activities in natural and wilderness areas, for which the ROS framework is suitable. However, as destinations grow and become more popular adventure destinations, ROS becomes less effective in managing the activities of tourism and the natural environment. For this reason, the TOS framework was developed. This framework is designed in the context of a destination becoming an increasingly popular destination for adventure travel and it allows proposed changes to take place and development to be reviewed (Butler & Waldbrook, 2003:26).

The application of TOS is appealing as it encompasses accessibility, other non-recreational uses (other than adventure), tourism development regulations, acceptability

of visitor impacts, social interaction with hosts and guests and on-site management (Butler & Waldbrook, 2003:26). The ROS and TOS frameworks are illustrated in Figure 3.7 below.



Figure 3.7: Main aspects of the ROS/TOS framework

Adapted from: Bulter and Waldbrook (2003:26) and Clark and Stankey (1979:52).

This framework has not been thoroughly investigated and although Butler and Waldbrook (2003:26) state that it could be utilised for other forms of tourism apart from adventure tourism, hardly any literature on research in this regard could be found.

3.5.6.2 Ecotourism opportunity spectrum

To adapt the framework of ROS, TOS, VAMP and LAC for the ecotourism sector, Boyd and Butler (1996:558) propose the ecotourism opportunity spectrum (ECOS) framework. These authors indicate the intricate relationship between tourism and the environment by mentioning two key issues. The first issue is the problem of maintaining the quality and ecological integrity of the environment in which ecotourism is to take place. The other issue is the problem of maintaining the quality of the recreational experience for ecotourists themselves. The ECOS framework was created to analyse the factors that

affect and imply multi-stakeholder participation in managing a site as an ecotourism attraction (Neth, 2008:51).

The ECOS framework, with its origins based on the ROS and TOS frameworks, contains components that are similar to the components of those frameworks, namely:

- ❑ Accessibility of the site, facility or attraction.
- ❑ The relationship between ecotourism and other resource uses.
- ❑ Attractions in the region.
- ❑ The availability of tourism infrastructure.
- ❑ Status of user's capability and knowledge.
- ❑ Level of social interaction.
- ❑ Degree of acceptance of impacts and control over level of use.
- ❑ Type of management developed for long-term protection of the area (Boyd & Butler, 1996:560).

As in the case of ROS and TOS, the ECOS model provides insight into the assessment of ecotourism in an area based on existing structures and realities. The framework also has the potential to indicate areas for potential development (Açıksöz, Görmüs & Karadeniz, 2010:599).

In the case of MNP it would be important to profile the type of tourist visiting the destination in order to determine which form of opportunity spectrum to use. Fleminger (2006:117) states that most tourists visit MNP for the purpose of experiencing the heritage sites and could therefore be considered heritage tourists. Other reasons could be ecotourism or adventure tourism.

3.5.7 The tourism optimisation model

The tourism optimisation model (TOMM) framework was first developed in 1997 by Manidis Roberts Consultants to monitor and manage tourism development on Kangaroo Island in South Australia (Twining-Ward & Butler, 2002:367). TOMM provides an integrated and place-specific approach to converting the monitoring results of tourism actions into effective management actions.

TOMM is very similar to LAC, with its main focus being on overcoming the lack of stakeholder support in LAC and on visitor impact management. The concepts “impact” and “limits” are often perceived to discourage the growth of tourism businesses, but this model is adapted to the needs of tourism (Grizāne, 2008;32). This process involves multi-stakeholder involvement, including an increased political dimension (Wearing & Neil, 2009:84), in recognition of indicators that are place-specific to the area under investigation.

TOMM incorporates the following:

- ✚ Identification of strategic objectives.
- ✚ Identification of community values, product characteristics, growth patterns, market trends and opportunities, positioning and branding and alternative scenarios for tourism in the area.
- ✚ Identification of indicators of the best possible conditions, acceptable ranges, monitoring techniques, benchmarks and performance.
- ✚ Identification of poor performance, exploring cause/effect relationships, identifying results requiring a tourism response and the development of management options to address poor performance (Wearing & Neil, 2009:84).

Twining-Ward and Butler (2002:367) note that although TOMM is a helpful point of reference and has been proved to be successful, it tends to be sector-specific and it does not go far enough in identifying other conditions such as ecological and social factors. For this reason, some adaptation of TOMM is needed for this model to be successful and to ensure its effectiveness.

Grizāne (2008:33) in a study on the comparison of visitor impact management, VAMP and TOMM on the North Vidzeme Biosphere Reserve (a heritage park in Latvia) found that the latter was the preferred framework. The reason why TOMM was preferred was that it compared the highest in terms of level of management application, level of sustainability and visitor friendliness.

Taking all the above tourism management frameworks into account, Borrie *et al.* (1998:133) have identified eleven guiding principles that provide a sound basis for any systematic planning system for a natural area. These principles are summarised in Table 3.2 below.

Table 3.2: Guiding principles for managing visitor impacts

	Principle	Description
1	Appropriate management requires stated objectives.	Management objectives are of the utmost importance. These objectives may originate from legal and administrative policy or from statements in the management plan of the area.
2	The diversity of resource, social and managerial conditions within the protected area is inevitable and may be desirable.	Visitors to a particular area have their own specific expectations; however, it is not likely that their demands will be met by a uniform set of conditions across the area.
3	Management is directed at influencing human-induced change.	Most protected areas are created for the preservation of unique and valuable natural features. Visitor activities are not the main focus of the protected area and as such management is concerned about influencing visitor behaviour.
4	The impacts on resource and social conditions are inevitable results of human use.	Any recreational use of a protected area will have some environmental impact, the complexity of which will depend on the environment's ability to resist and to recover from the event.
5	Impacts may be temporary or longer term.	Visitor impacts may occur off-site and/or may not be visible until a later time. A management framework eliminating visitor action might simply displace impacts to other areas. Impacts may have effects that are only evident long after the visitors leave the site.
6	Numerous variables influence the impact relationship.	Managers of a site should not presume that, as use levels increase the impacts will increase as well, or conversely, that reductions in use lead to reduction in impacts.
7	Numerous management problems are not density dependent.	There are few management problems that relate directly to the number of people using a site.
8	Limiting use is only one of	Limiting the number of visitors to an area is not

	Principle	Description
	many management options.	necessarily the best option. Other options such as improving visitor behaviour, enhancing resource durability and the redistribution or containment of use to less sensitive areas may also be utilised.
9	The process of monitoring is essential.	This is the periodic and systematic measurement of key indicators of biophysical and social conditions.
10	The decision-making process should separate technical decisions from value-based judgements.	Although technical decision-making is important, decisions should not only be based on technical data. Other judgements of value such as objectives for an area, optimal spacing between sites, types of facilities and kinds of recreational opportunities should also be incorporated.
11	Consensus among affected groups about proposed actions is needed.	Sometimes political polarisation and conflicting ideologies over resource management delay planning and management progress. It is therefore important to incorporate public participation as a fundamental and on-going component.

Source: Borrie et al. (1998:133-139).

Park managers, especially those involved in tourism, should keep in mind the above principles for managing visitors' impacts when making management decisions.

3.5.8 Community-based natural resource management

The national parks in Botswana and Namibia are, as is the case in South Africa, compelled to operate in accordance with national government policy. One policy followed by the Botswana Department of Wildlife and National Parks is community-based natural resource management (CBNRM).

Although there is no universally accepted definition of the concept of CNRBM (Armitage, 2005:703) it is seen as an incentive-based conservation viewpoint that links conservation of natural resources with rural development (Swatuk, 2005:96; Twyman, 2000:323). This process aims at improving the quality of life of local people by distributing the benefits of

the utilisation of natural resources (Mbaiwa & Stronza, 2010:636). This process is believed to promote local community support for conservation.

CBNRM is based on a number of conceptual fundamentals, namely:

- ✚ A commitment to involve community members and local institutions in the management and conservation of natural resources.
- ✚ An interest in devolving control and authority from central and/or state government to local and possibly indigenous institutions and peoples.
- ✚ Aspirations to connect and reconcile the objectives of socioeconomic development and environmental conservation and protection.
- ✚ A propensity to defend and legitimise local and/or indigenous resource and property rights.
- ✚ A belief in the purpose of including traditional values and ecological knowledge in modern resource management (Kellert, Mehta, Ebbin & Lichtenfeld, 2000:706).

Although CBNRM has been successfully implemented in a number of scenarios, different stakeholders have divergent views on the levels of participation that should take place in particular projects. Additionally, local people find it difficult to voice their concerns about the environmental issues of sustainability, given the power relations involved in this “participatory” process (Twyman, 2000:323). In a case study involving CNRBM in the Kalahari, Twyman (2000:332) noted that the consultation process revealed that although CNRBM projects appear to have a sound participatory approach, it is essentially a planner-centred form of participation. Therefore few choices are available to the community and they are encouraged to follow the government recommendations.

3.5.9 The 7Es management model

The 7Es management model was developed by Catibog-Sinah and Bushell (2004) as a planning guide for nature-based tourism in order to support the conservation of natural and cultural heritage while at the same time promoting economic development (Catibog-Sinah & Wen, 2008:147). The 7Es model was developed taking into consideration the principles and guidelines put forward by the UNEP and IUCN (Catibog-Sinah & Wen, 2008:149). The model has been applied in a study on the Xishuangbanna Biosphere Reserve (XBR) in South China by Catibog-Sinah and Wen (2008:149). This reserve has similar features to MNP; both areas have been created to protect unique natural and

cultural features and are challenged by forces related to agricultural development and the mining of mineral resources. The sustainable management of tourism was a challenge at the XBR, and for this reason Catibog-Sinah and Wen applied the 7E model as indicated in Figure 3.8.

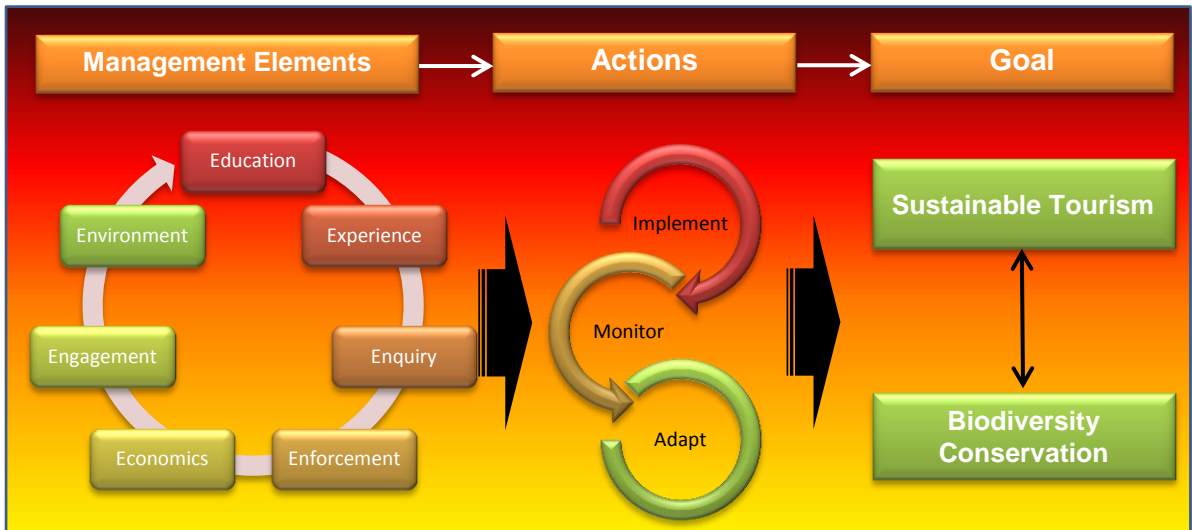


Figure 3.8: The 7E model.

Adapted from Catibog-Sinah and Wen (2008:148).

The 7E model consists of three main stages, each with its own sub-stages. In the first stage (management elements) an assessment is done of the site in order to develop a sustainable tourism management plan. In the second stage the plan is put into action (implementation) and finally sustainable tourism and biodiversity conservation are achieved as the goal of the model. In the first stage of the model, the major planning and plan development takes place, from which the model derives its name as this stage has seven management elements:

- ❏ **Environment** – Incorporates the assessment of the management of natural and physical environments, including human-nature interactions.
- ❏ **Economics** – This involves the promotion of financial profitability without destroying the environment.
- ❏ **Enforcement** – Assessment of the implementation of management and monitoring plans, legislative and other regulatory measures.
- ❏ **Experience** – This involves enhancing tourist satisfaction, experience and knowledge.

- ✚ **Engagement** – This involves actively involving all stakeholders in planning, decision-making and implementation.
- ✚ **Enquiry** – This involves conducting research on the technical and social implications of tourism for the conservation of natural and cultural heritage.
- ✚ **Education** – The improvement of understanding about natural and cultural environments (Catibog-Sinah & Wen, 2008:148).

In Figure 3.8, the 7Es are linked by two-pointed arrows that indicate the interrelationship between the seven elements. These elements are not in a specified order; they rather operate together in a system. Catibog-Sinah and Wen (2008:148) indicate that this process provides the 7Es model with a holistic overview of the situation which improves decision-making. Apart from the study by Catibog-Sinah and Wen (2008), the model has been found to be suitable in areas where management zones have been established. In Australia it was successful in the movement of marine-based wildlife tourism (Catibog-Sinah & Bushell, 2004).

3.6 CONTEMPORARY TOURISM MANAGEMENT FRAMEWORKS FOR NATIONAL PARKS AND HERITAGE SITES IN SOUTHERN AFRICA

As MNP is a national park, it can be assumed that tourists visiting these parks do so in order to experience wildlife or for ecotourism purposes. These motivators were seen to be present during studies at the Kruger National Park (Van der Merwe & Saayman, 2008:158; Kruger & Saayman, 2010:100; Saayman & Slabbert, 2004:6), the Tsitsikamma National Park (Kruger & Saayman, 2010:100) and the Kgalagadi National Park (Bothma, 2009). Therefore it is necessary to determine the stance of SANParks on ecotourism for the purpose of this study.

Although all national parks in South Africa are guided by the three principles of conservation, tourism and constituency building (see section 3.3 of this chapter), each park has its own features, climate and offering, which makes each park unique. As such, it may be necessary for each park to have its own unique management approach to tourism. The following section will analyse various management frameworks that have been developed specifically for the management of national parks and World Heritage Sites in South Africa.

De Witt (2011:7) provides a detailed discussion of the role of SANParks in the attainment of sustainable tourism (described in Chapter 4) through ecotourism. However, she indicates that SANParks does not have a practical strategy in place for applying the principles of sustainable tourism through ecotourism. For this reason an ecotourism model is proposed, which is outlined in Figure 3.9.

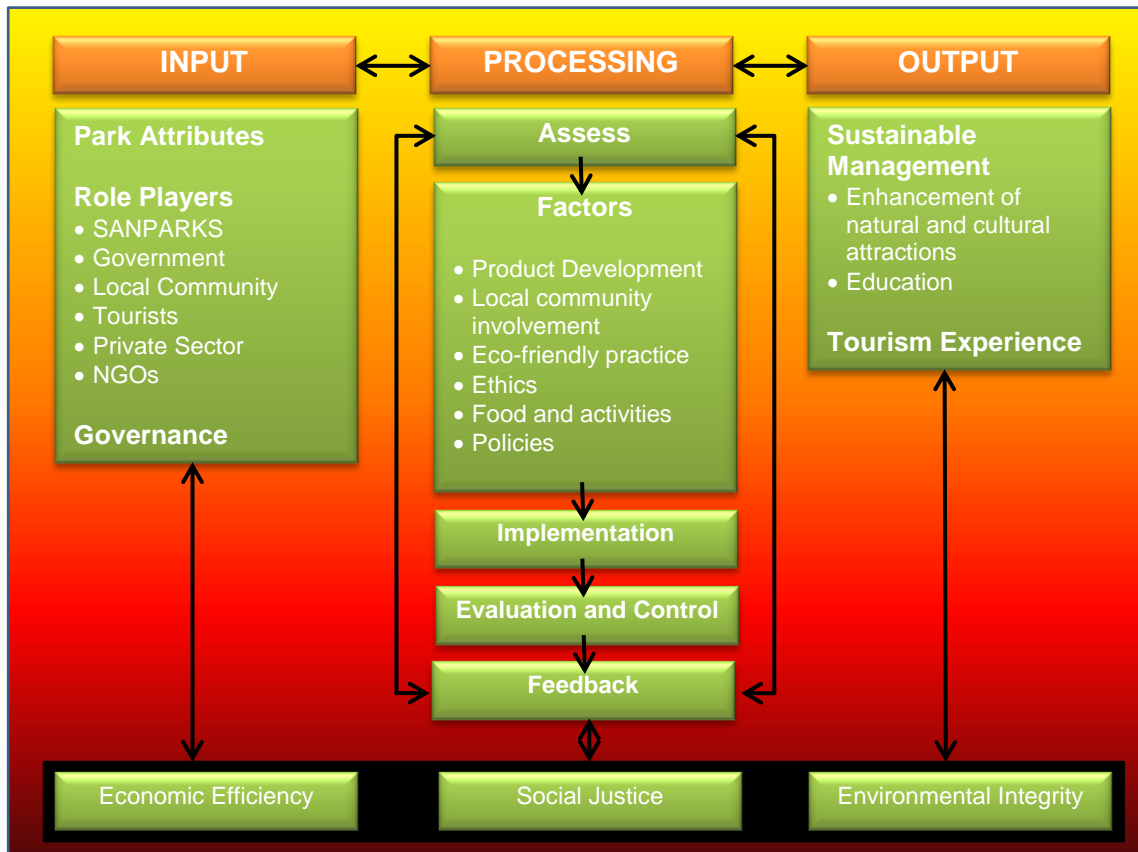


Figure 3.9: An ecotourism model for SANParks

Source: De Witt, 2011:162-168.

In the ecotourism model proposed by De Witt (2011:162-168) three main phases were developed, namely input, process and output.

- **Input phase:** During this phase attention is given to three main components: park attributes, role players and governance issues. Park attributes represent an environment that encapsulates natural attractions and unique features (topography, fauna, flora and cultural heritage) that provide a visitor with an “enlightening experience”. The role players in the model represent all those stakeholders involved in the management process, which could include government, private sector, local community, tourists and non-governmental organisations.

- ❏ *Process phase*: This phase of the model represents the activities involved in the process of developing and managing ecotourism. The first stage of this process represents the assessment of the current state of ecotourism in terms of economics, social state and environmental state. Secondly, factors of ecotourism development are identified, followed by implementation, evaluation and control and feedback.
- ❏ *Output phase*: This final phase of the model represents the achievement of ecotourism through its primary principles of conservation, natural and cultural environmental enhancement, environmental education, sustainability and improved tourism experience (De Witt, 2011: 162-167).

The above model represents a recent study on the achievement of an effective model to manage ecotourism in SANParks. However, the model does not place significant emphasis on the incorporation of heritage resources and their management.

Coetzee (2004:200) provides a sustainable tourism development model developed for heritage sites, more specifically for the Vredefort Dome as a World Heritage Site. In his study, Coetzee promotes the following general recommendations when developing a tourism strategy for the Vredefort Dome, which could also be applicable to MNP:

- ❏ The involvement of all stakeholders (local authorities, community, management and tourists) in providing data towards the progression of sustainable tourism.
- ❏ Staff members should be involved in decision-making.
- ❏ A culture of learning should be created and incentives provided for new initiatives
- ❏ Alliances should be forged with local associations involved with sustainable development.
- ❏ Tourism stakeholders should provide information on codes of good practice and guidelines that deal with good tourist behaviour.
- ❏ Stakeholders should publicise their commitment to sustainable tourism (Coetzee, 2004:200).

Coetzee, Van Niekerk and Saayman (2008:60), in a study on the application of economic guidelines for responsible tourism on the Vredefort Dome World Heritage Site, propose the following strategies in order to reduce negative impacts and to promote positive tourism impacts:

- ❏ All stakeholders in the area should be incorporated into an integrated approach that addresses socio-cultural, economic and environmental impacts.
- ❏ Protect and promote human health.
- ❏ Promote education and training.
- ❏ Promote sustainable human settlement development.
- ❏ Establish a supply chain that guarantees supply that is in line with FTT.
- ❏ Reduce leakages (Coetzee *et al.*, 2008:60).

Khorommbi (2011) proposes a tourism development framework for Lake Funduzi, which, like MNP, is situated in the far north of South Africa, in the Limpopo Province. In this framework he notes that tourism resources in the area principally fall into two main groups, namely heritage and natural resources. He observes that, as a result, there are significant opportunities for both heritage tourism and ecotourism development (Khorommbi, 2011:264). Although it should be noted that some authors prefer to classify ecotourism as a form of heritage tourism since it involves natural heritage (Swarbrooke, 1994:222; Douglas, Douglas & Derrett, 2001:142; Keitumetse, 2009:225). However, Khorommbi (2011:264) promotes the utilisation of an ecotourism management approach as this should lead to lower concentrations of tourists, which thus have an influence on the scale of revenue that may be earned. He promotes the concept of smaller numbers of tourists, but these numbers should be viable.

Mabunda (2003:203) provides an integrated framework for the Kruger National Park, specifically for the management of tourism in the flagship national park. This framework adapts the structure of AD in order to develop the required tourism framework. The framework developed by Mabunda (2003:203) makes specific reference to the importance of human resources, financial management and marketing management.

In terms of human resource management, Mabunda (2003:203) states that a human resource plan should:

- ❏ Integrate the human resource needs of the national park into the tourism management plan.
- ❏ Make the frontline staff (receptionists, rangers and housekeepers) a visible public expression of the park's management philosophy.
- ❏ Develop a positive relationship between human resources and tourists.

- ❏ Recruit and employ competent staff that protect the environment, involve communities and convey a positive conservation message to tourists (Mabunda, 2003:203).

Although human resources are considered by some (Swanepoel, Erasmus, Van Wyk & Schenk, 2003:9) as an intrinsic part of an organisation and its management, financial management is also seen as fundamentally important for a national park (Mabunda, 2003:206).

Mabunda (2003:206) states that a financial management plan for a national park should form part of an overall tourism management strategy. Financial management is imperative for the generation of revenue in order to compensate for decreasing national government subsidies and to eliminate the potential for corruption and mismanagement. This financial management plan should include the following aspects:

- ❏ **Management of park revenue sources:** This includes setting objectives for and determining sources of revenue for the park. This could include entrance fees, adventure activities, accommodation charges, contracts, debtors, interest on investments, rentals, donations and government subsidies (Mabunda, 2003:207).
- ❏ **Budgeting:** Budgeting forms an essential part of financial management. It should be programme-based and expenses should be linked to the park objectives (Mabunda, 2003:207).
- ❏ **Financial management system:** The financial management system should provide all relevant parties with sufficient information for management decisions, control mechanisms, financial processes and spending objectives (Mabunda, 2003:208).
- ❏ **Other important financial management aspects:** These aspects include the development of an asset register, a risk management system and financial and performance reporting (Mabunda, 2003:208).
- ❏ **Financial management training:** This training should be provided to all managers, including non-financial managers, to provide them with a better understanding of financial management, such as reading and interpreting financial statements and how to make informed financial decisions (Mabunda (2003: 209).

Tourism management plans for national parks should additionally also incorporate a marketing plan. This marketing plan should consist of a six-step process, namely:

- i. Conducting a marketing audit.
- ii. Selecting the appropriate target market.
- iii. Positioning the park for the target market.
- iv. Determining the marketing objectives.
- v. Developing and implementing action plans.
- vi. Monitoring and evaluating the success of the marketing plan (Mabunda, 2003:210).

Each of the three tourism management frameworks described above has been developed for a unique purpose and situation. MNP with its unique challenges, as mentioned in Chapter 2, may require its own unique management framework.

3.7 CONCLUSION

SANParks is the custodian of 19 national parks in South Africa, after the merger of Tsitsikamma, Knysna National Lake Area and Wilderness National Parks into the Gardenroute National Park. As an organisation of state it is required to operate within structures laid down in, among others, the Constitution, acts and organisation management plans. These, together with forces from the market environment, will shape the internal environment of the organisation. SANParks currently utilises the approach of adaptive management and strategic adaptive management to develop and implement management plans for all national parks, as is the case with MNP. However, adaptive and strategic adaptive management as a management strategy has a primary focus on natural resource management and does not incorporate the management of tourism as a major element. The MNP management plan utilises LAC in its approach to the management of tourism in the park. Protected area planning and management have moved from a period of relative stability to a period of social, economic, environmental and political change and uncertainty.

To respond to modern developments, various other management frameworks have come to light over the years including VIM, VERP, VAMP, ROS/TOS/ECOS and TOMM. All of these frameworks have been implemented in various situations and each is known to have positive applications and various shortcomings.

One of the identified shortcomings is that visitor impact management frameworks are mostly concerned with the impact of tourism on the natural area. VERP and carrying capacity do not address the reactive relationship of tourism with the environment, but rather focus on the environment as a result of tourism.

To manage tourism in MNP productively a management framework is required that operates successfully within the overall management strategy of strategic adaptive management as influenced by the various external forces in the environment. The existing management plans could be adapted or components of other management frameworks could be incorporated to effectively manage tourism in MNP, taking into account the park's unique challenges.