Protected Area Management and Planning Challenges: Sustainability and Integrity – A Cursory Investigation of the Role of the Management Plan

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ABSTRACT

Formally established protected areas in South Africa date back to the turn of the 19th century, yet requirements for protected area management plans only became mandatory approximately a century later. Before the promulgation of the Environment Conservation Act No. 73 of 1989 and subsequently the World Heritage Convention Act in 1999 and the National Environmental Management: Protected Areas Act 57 in 2003, requirements for management plans were voluntary, and guidance to its content was fragmented across various international, national and provincial policy instruments. There has been little academic debate on the relevance and content of protected area management plans to date and how such a long-term planning document can respond to emerging threats and opportunities. An improved understanding of these plans, and the role they play in biodiversity conservation, is required.

The aims of this investigation were two-fold. The first was to gain insight into the challenges of effective management of protected areas, the long-term protection and sustainability of these areas, and, notably, the management plan's role in addressing these challenges. The second was to evaluate the contribution and legislative weight that the management plan has in the efficient management, sustainable and ethical use, and long-term sustainability of protected areas within South Africa.

Given that the above aims cover a potential insatiable field of research, this thesis was focused on the legal and policy framework for management plans and the management plans role in effectively managing these areas. Within this context, the following questions were addressed:

- What is the role of management plans in the effective management of protected areas?

- How does the legal and policy framework ensure that the derived plan is relevant and achievable and ultimately accomplishes the protected area purpose?

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- What decision-making principles should be considered to facilitate sustainable and ethical use of protected areas, and what role does protected area management plans play in ensuring justifiable use of protected areas?

- What are the consequences when a long-term public-interest decision potentially isolates it from its transfrontier context, and what is the legislative weight of the management plan in mitigating such consequences?

- What role does the management plan, a long-term planning document, play in mitigating the impacts of or responding to immediate emerging threats and opportunities?

It was found that despite being the principal legislative framework for management plans, the World Heritage Convention Act and the National Environmental Management: Protected Areas Act did not consolidate the plethora of management plan requirements for protected areas. As a consequence, the legislative provisions for protected area management plans were, in several instances, fragmented, conflicting and ambiguous. A consolidation of relevant provisions in these two statutes together with emerging best practice is, therefore, recommended. This consolidation may also provide greater clarity on the contemporary understanding of the contribution of protected areas to conservation and people's well-being, i.e. it may entail a refurbishment of the 'purpose' of protected areas.

Furthermore, the parallel evolution of the management of protected areas, the recreational use of these areas, and protected area management plans over the last century have brought about a complex relationship between these three aspects. Because of the fragmentation of legal and policy frameworks relating to these aspects, a need for a consolidated decision-making framework that provides for the basis for ethical and transparent decision-making could exclude inconsistent interpretations of legislation and policies. Incorporating such a decision-making framework in the protected area management plan can

enhance transparency and accountability by the State or management authority to fulfil its fiduciary duty.

Understanding of the above aspects was enhanced through a literature review and a case study of a development application in the area bordering the Tembe Elephant Park. The case study highlighted some of the potential consequences of a long-term public-interest decision that isolates a protected area from its transfrontier context and the role of an adaptive management plan in responding to these impacts and other current emerging threats and opportunities.

A robust management plan remains the most relevant planning tool to address the complexities around protected area management and the fragmented legislative and policy frameworks for the effective management of protected areas in South Africa. Whereas management plans cannot be expected to cover explicitly every emerging circumstance – the principles included in such plans should provide the necessary guidance to decision-makers for unique circumstances and decision making.

PREFACE

The research in this thesis was undertaken in Pietermaritzburg, the Republic of South Africa, from January 2020 to April 2021, while registered at the School of Life Sciences, University of KwaZulu-Natal Pietermaritzburg, under the supervision of Professor Colleen T. Downs and Dr Andrew C. Blackmore.

This thesis, submitted for the degree of Master of Science in the College of Agriculture, Engineering and Science, University of KwaZulu-Natal, School of Life Sciences, Pietermaritzburg campus, represents original work by the author and has not otherwise been submitted in any form for any degree or diploma to any University. Where use has been made of the work of others, it is duly acknowledged in the text.

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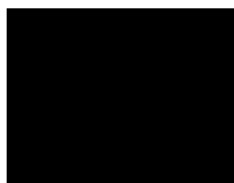
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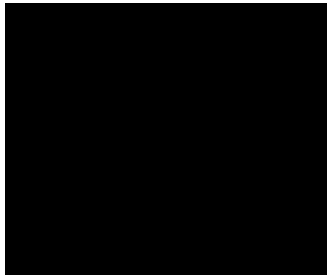
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DECLARATION 1 - PLAGIARISM

I, Magda Goosen, declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.

2. This thesis has not been submitted for any degree or examination at any other university.

3. This thesis does not contain other persons' data, pictures, graphs or other information unless specifically acknowledged as being sourced from other persons.

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DECLARATION 2 - PUBLICATIONS

DETAILS OF CONTRIBUTION TO PUBLICATIONS that form part and/or include research presented in this thesis.

Publication 1

M Goosen & AC Blackmore

Hitchhikers'guide to the legal context of protected area management plans in South Africa

Author contributions:

M Goosen initiated this paper and undertook the primary research and analysis. AC Blackmore assisted with legal interpretation and guidance in drafting the paper and its submission to and publication *in Bothalia - African Biodiversity & Conservation*. CT Downs contributed valuable comments to the incorporation of this manuscript into this thesis.

Publication 2- Not submitted yet

M Goosen, AC Blackmore & CT Downs

Sustainable and ethical use of protected areas – The role of the management plan

Author contributions:

M Goosen conceived this paper with CT Downs & AC Blackmore. M Goosen undertook the research and analysis and drafted the paper. CT Downs & AC Blackmore contributed valuable comments to the manuscript.

Publication 3- Not submitted yet

M Goosen, AC Blackmore & CT Downs

When a long-term public interest decision stands to undermine the integrity of a protected area and South Africa's commitments to transfrontier conservation initiatives: The case study of Tembe Elephant Park.

Author contributions:

M Goosen conceived this paper with CT Downs & AC Blackmore. M Goosen undertook the research and analysis and drafted the paper. CT Downs & AC Blackmore contributed valuable comments to the manuscript.
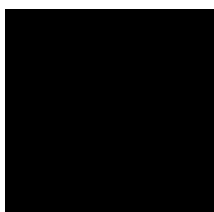
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May 2021

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'Knowledge is of no value unless you put it in practice'.

-A Chekhov

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CHAPTER 1

Introduction

1.1 Background to protected areas

The International Union for the Conservation of Nature (IUCN) defines protected areas as a 'clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' (Day et al. 2012). The concept of protected areas may evoke a broad range of opinions and philosophies in people; interest in these areas may relate to economic value, ecosystem service values, and the non-material value that may include human well-being, enjoyment and recreation (Lockwood, Worboys & Kothari 2012). Due to the growing dependence of protected areas on revenue from tourism, many protected areas, through diversification of nature-based experiences, build support for conservation initiatives and contribute to the financial sustainability of such areas (Moyle et al. 2017).

The requirement for the South African Government to establish a network of protected areas is derived, from a legal perspective, from section 24 of the Bill of Rights in the Constitution. This section grants everyone the right to, among other things, have the 'environment protected for the benefit of present and future generations, through reasonable legislative and other measures', by 'preventing pollution and ecological degradation, promoting conservation', and finally, securing 'ecologically sustainable development and wise use of natural resources while promoting justifiable economic and social development' (Republic of South Africa 1996). The National Environmental Management: Protected Areas Act, 57 of 2003 (NEMPA), read with the principles found in the National Environmental Management Act No 107 of 1998 - NEMA), gives effect to this right in terms of the establishment and persistence of protected areas, thereby establishing a fiduciary duty of the South African government to hold South Africa's biodiversity and protected areas in public

trust for this generation and generations to come (Republic of South Africa 1998; Republic of South Africa 2003).

In South Africa, protected area establishment closely follows the IUCN classification for protected areas (Dudley 2008). NEMPA, in section 9, makes provision for the establishment of several different kinds of protected areas ranging from special nature reserves, national parks, nature reserves, protected environments, world heritage sites, national parks, marine protected areas, specially protected forest areas, forest nature reserves, forest wilderness areas and mountain catchment areas (Republic of South Africa 2003) as provided for by NEMPA and subsequent amendments. Of the terrestrial component of these protected areas, the majority makes provision for the conservation of biodiversity and, in some instances, conservation of cultural heritage as the primary exclusive land-use of the area. The exceptions to this are mountain catchment areas and protected environments, where other land-uses and objectives dictate. For instance, the declaration of mountain catchment areas requires a land-care ethos promoting the conservation of scarce water resources (Republic of South Africa 1970). In contrast, the purpose of a protected environment declaration may be required to conserve an area that is sensitive to development and where land-use and development need to be controlled because of this sensitivity. The protected environment allows various landowners to take collective action to conserve the area's biodiversity, natural and cultural values (Republic of South Africa 2003). As a result of this diversity in types of protected areas, there is a need for careful consideration of the management required to achieve a particular protected area's objective/s.

The World Database of Protected Areas (UNEP-WCMC 2021) indicates that terrestrial protected areas, the focus of this thesis, currently covers 8.6% of South Africa, while marine protected areas cover 15.5% of the marine environment. Notwithstanding these areas being considered the core of a country's efforts to conserve representative and viable samples of its

biodiversity (Paterson 2009; Ervin et al. 2010), recently, the question of whether these protection measures are efficient in safeguarding biodiversity have come to the fore (see for instance Joppa, Bailie & Robinson 2016).

Chape et al. (2005) state that monitoring the number and extent of protected areas is a well-established indicator for biodiversity outcomes. However, it is acknowledged that such an indicator provides merely a one-dimensional outlook (Chape et al. 2005), and there is still extensive debate as to whether such areas' biodiversity values are secured in the long term (Geldmann et al. 2013). It is widely accepted that despite the importance of securing biodiversity outcomes, many other factors contribute to the management effectiveness of protected areas, and this may include socio-economic and other outcomes (Eklund & Cabeza-Jaimejuan 2017).

Formally protected areas have been part of the South African landscape since the 19th century (Goosen & Blackmore 2019); what changed significantly over time is their character and how the country values, manages and uses them. The role of protected areas in the twenty-first-century landscape has changed radically from its antecedent character (Cumming 2016), especially as it relates to socio-economic aspects. Dudley et al. (2014) highlighted the change in conservation approaches over the last two decades as a result of these growing complexities, ranging from a broader spectrum of social benefits to diversification of governance models.

Rotich (2012) recognised the increasing importance of modern protected areas in human welfare and socio-economic benefits. In negotiating the complexities around these multi-dimensional objectives, protected area planning and, more specifically, the protected area management plan has an increasingly critical role to play. In the South African context, this broadened scope and purpose of protected areas was integrated into law with the National Environmental Management: Protected Area Act to include in Section 17, not only providing for the natural and ecological aspects but also cultural, spiritual, tourism and socio-economic

purposes (Republic of South Africa 2003). From this broadened scope and purpose evolved a new approach that provided for a range of governance types.

Lockwood et al. (2012) defined 'protected area governance' as 'the interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken on issues of public concern, and how citizens or other stakeholders have their say'. Therefore, it essentially deals with matters of power, relationships, and accountability, responding to questions such as who influences, who takes decisions and who is responsible (Graham, Amos & Plumptre 2003).

Historically, the establishment and management of protected areas was predominantly the State's responsibility; yet it is well-established that, globally, conservation efforts are not adequately countering critical biodiversity loss (Langholz 1996). As a result, a diversity of conservation approaches and alternative types of governance evolved, and in the process, a range of new actors, for example, private and communal landowners, entered the protected area establishment and management arena (Blackmore & Trouwborst 2020).

The International Union for Conservation of Nature and Natural Resources (IUCN) recognise four broad governance types (Borrini et al. 2013):

- Governance by the government (various scales);
- Shared governance (governance by various stakeholders);
- Governance by private individuals and organisations; and
- Governance by indigenous people or local communities.

Whereas terrestrial protected area governance diversified, common law and particularly 'the law of the sea' prescribed that the sea cannot be privately owned; therefore the Exclusive Economic Zone (EEZ) as provided for in the 1982 United Nations Convention on the Law of the Sea is held in trust by the state for the benefit of the public (ed. Nordquist 1985). Thus, the responsibility for marine protected areas remained exclusively that of the state.

Furthermore, governance quality is becoming increasingly critical to the long-term persistence of protected areas (Borrini et al. 2013; De Vos et al. 2019). Notwithstanding this importance, good governance is not easily defined and more often described as a framework of principles that may overlap and are complex to apply in decision-making (Graham et al. 2003). Several broad frameworks that provide governance quality assurance and assessment exist. For example, the IUCN guidelines for the governance of protected areas and the IUCN Green List Standard for protected areas provide for aspects of governance ranging from legitimacy of voice, strategic direction, performance, accountability and fairness and rights. Principles contained in these frameworks will be discussed in more detail in Chapter 3.

Lockwood (2010) stated with regards to governance:

> *'Governing norms by which to steer traditional government functions are well established and understood; however, this is not the case for the new multi-level and collaborative approaches that characterize protected area governance. This is largely new territory that makes novel demands on governance institutions and policy. In this context…establishing and maintaining good governance…is critical for the future effectiveness and acceptability of protected areas'.*

The IUCN provides for such novel ways of thinking by including elements of an ethical nature such as 'fair and consistent decision-making,' a field thus far not sufficiently explored in the protected area context (Hockings et al. 2019). Effective and appropriate protected area decision-making may be undermined by several critical factors, including limited financial and human resources and a disconnect between research and management (Lemieux et al. 2018).

Many variables contribute to the sustainability, success and effectiveness of protected areas, notwithstanding sustainable tourism (Salerno et al. 2013) and persistence of species within a protected landscape (Di Minin et al. 2013; Strimas-Mackey & Brodie 2018) being

well-explored concepts, a brief literature review indicated that other aspects contributing to overall protected area sustainability and long-term persistence of protected areas are yet to be fully understood. There is a range of often contradictory opinions on the sustainable use of protected areas for recreational purposes. One school of thought holds the opinion that there is a 'long-lasting, uneasy relationship' between the two aspects because of a 'desire to simultaneously preserve and consume landscapes (Shultis & Way 2006; Blackmore 2020). Another school of thought hail it as a 'long-lasting and mutually beneficial relationship (Strickland-Munro & Moore 2014); thus, the need to ensure that decision-making around these aspects is consistent and fair (Borrini-Feyerabend et al. 2014). These aspects will be discussed in later chapters and include sustainable funding, socio-economic aspects, conservation outcomes, and ecological integrity.

Furthermore, the changing role of protected areas in recent decades (Rotich 2012; Watson et al. 2014) magnifies the complexities faced by protected area managers and those involved in drafting and implementing management plans. Section 17 of NEMPA provides a mechanism that consolidates such complexities into a series of ˈpurposesˈ which protected areas are to fulfil. In so doing, the Act sets the platform on which the management plan is to be developed and applied. The importance and relevance of the purpose of protected areas are discussed in more detail in Chapters 2 and 3.

1.2 Introduction to protected area management plans

Notwithstanding a long history of conservation, and before the promulgation of the World Heritage Convention Act 49 of 1999 (WHCA) and NEMPA (2003) into law, there was no legal requirement in South Africa for the drafting and implementation of protected area management plans. The Environment Conservation Act No. 73 of 1989 made provision for management plans for special nature reserves, but this did not extend to other categories of protected areas.

In the absence of a legal imperative, 'requirements for management plans were voluntary, and guidance to the plan's content was fragmented across an array of international, national and provincial policy frameworks' (Goosen & Blackmore 2019).

The primary obligation for protected areas to have an adopted management plan is founded in sections 39 and 40 of NEMPA. Section 40 obligates the management authority to, *inter alia*, manage the protected area 'exclusively for the purpose for which it was declared, the protected area management plan and in accordance with the National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA) and any other applicable legislation' (Republic of South Africa 2003). Notwithstanding the legislative framework being in place since 1999 and 2003, respectively, best practice, norms and standards, and other policy guidelines relating to the development and implementation of management plans emerged slowly over the two decades post- promulgation of NEMPA with the publishing of national norms and standards for protected areas (Department of Environmental Affairs 2016) and a national guideline for the development of management plans (Cowan & Mpongoma 2010). As a result, it stands to reason that management plans had to consolidate, in the absence of such guidelines, legal requirements, including a broad range of cross-sectoral legislation that came into existence post the promulgation of NEMPA and the WHCA.

1.3 Scope of research

1.3.1 Focus of the investigation and research question

The aims of this investigation were two-fold. The first was to gain insight into the challenges of effective management of protected areas, the long-term protection and sustainability of these areas, and notably the management plan's role in addressing these challenges. The second was to evaluate the contribution and legislative weight of the management plan in the efficient

management, sustainable and ethical use, and long-term sustainability of protected areas within South Africa.

1.3.2 Research questions

Given that the above aims cover a potential insatiable field of research, this thesis sought to address the following questions:

- What is the role of management plans in the effective management of protected areas?

- How does the legal and policy framework ensure that the derived plan is relevant and achievable and ultimately accomplishes the protected area purpose (s)?

- What decision-making principles need to be considered to facilitate sustainable and ethical use of protected areas, and what role does the protected area management plan play in ensuring justifiable use of protected areas?

- What are the consequences when a long-term public-interest decision potentially isolates it from its transfrontier context, and what is the legislative weight of the management plan in mitigating such consequences?

- Further to this, what role does the management plan, a long-term planning document, play in mitigating the impacts of or responding to immediate emerging threats and opportunities?

1.4 Methodology

This study considered both the theoretical and applied aspects of protected area management and the evolution and use of management plans within the South African context. A literature review and case studies, mainly in the KwaZulu-Natal Province, South Africa, were used to gain insights into the changing role of protected areas and protected area management plans in

the long-term persistence of biodiversity in South Africa. Discussions herein were centred on the four elements adapted from Liefferink's (2006) environmental framework on the ˈPolicy Arrangement Approachˈ.

Since this investigation essentially provides an analysis of the policy and legal framework for protected areas and management plans, augmented by case studies, the use of the abovementioned approach has been deemed appropriate in that the management plan development and implementation context are dependent on similar elements as described in the ˈPolicy Arrangement Approachˈ. Furthermore, this approach highlights the multi-directional interaction between management plans and four key elements, viz. 1) rules of the game (legislation), 2) resources (financial and expertise), 3) actors and coalitions (stakeholders and partnerships), and 4) policy discourse (policies) adapted from Liefferink (2006).

A critical focus area for research related to protected areas and conservation, in general, relates to bridging the gap between science and practical application (Dudley et al. 2018). For this reason, case studies have been used to reflect how these overarching principles can be integrated into the practice of protected area management and planning and what the potential consequences are if integration does not take place.

1.5 Structure of the thesis

This thesis consists of five chapters. Chapters 1 and 5 provide the introduction and conclusion to the study and literature review. Chapter 2 has been published in Bothalia, an international peer-reviewed open access journal under the title 'Hitchhikers' guide to the legal context of protected area management plans in South Africa'. Similarly, Chapters 3 and 4 have been prepared as stand-alone manuscripts. The authors intend to submit these manuscripts to a peer-reviewed journal. As a consequence of this intention, there is partial repetition or overlap between these chapters.

- Chapter 1 provides an introduction to the management of protected areas and the evolution and use of management plans.

- Chapter 2 consists of an investigation into the international and domestic legal foundation of protected area management plans. The authors aimed to determine whether the legal framework in South Africa prescribes effectively for the derived plan to be both relevant and achievable and to accomplish the purpose(s) for which the protected area was declared.

- Chapter 3 explores the ethical and sustainable use of protected areas and the role management plans play in ensuring the sustainability, integrity and long-term protection of the purpose and value of the area as dictated by NEMPA. This chapter considers existing decision-making principles for good governance that ultimately supports ethical and justifiable use of protected areas. The chapter explored a consolidated framework of principles from the fragmented legal, policy and best-practice requirements to guide management in ensuring decision-making is justifiable, especially in relation to recreational use decisions. In addition, whether the management plan, a long-term planning document, can facilitate response to current and emerging opportunities and threats is investigated.

- Chapter 4 explores the potential consequences for a protected area and neighbouring rural communities when a long-term public-interest decision isolates it from its transfrontier context. The chapter is based on a case study in Tembe Elephant Park, KwaZulu-Natal, South Africa. It considers the legislative weight of the management plan in resolving or mitigating conflict relating to what could be considered inappropriate development in an area bordering the Park.

▪ Chapter 5 summarises the insights gained from this investigation, highlights the role of the management plan and provides recommendations and future research requirements that will contribute to the body of work on protected area management.

1.6 Conclusions

In summary, the management plan must ensure that protected areas are appropriately managed – at least for the purpose(s) for which they were established. It serves as an omnibus for the public to ascertain that a protected area is being managed in their best interests and the interest of future generations (Goosen & Blackmore 2019), therein fulfilling the fiduciary duty of the state, as the principal trustee, to protect the integrity of these areas for the enjoyment of current and future generations.

It is evident from an analysis of the legislative framework in South Africa, international legal instruments, as well as best practice principles and the case study detailed in discussions in Chapter 2, 3 and 4, that protected area management plans play a significant role in ensuring the long-term persistence, sustainability, and integrity of protected areas. From the perspective of international legal instruments, management plans serve as a repository for a plethora of best practice principles, guidelines and commitments agreed to by member states.

In addition, the management plan plays a significant role in the resolution of conflict. As a result of the legal conundrum resulting from a vast array of often overlapping legislation, many South African protected areas may be of *dual persona*. These protected areas can, as an example, be a declared nature reserve in terms of NEMPA as well as mountain catchment area in terms of the Mountain Catchment Act 63 of 1970. A layer of complexity is, therefore, added with additional designations through international legal instruments such as a Ramsar or a world heritage site. The management plan needs to consolidate the legal and best practice

requirements to facilitate compliance and clarify the functions of different state organs, preventing conflicting objectives arising from this dual mandate.

As mentioned earlier, the provisions providing for protected area management plans and the content thereof are fragmented, housed in a variety of statutes and associated regulations and other forms of policy. This fragmentation risks protected area management plans being incomplete and therein failing to be legally compliant. A further risk of an incomplete plan may result in the protected area not being appropriately managed to achieve the protected area's purpose. A consolidation of relevant provisions, as well as emerging best practices, is therefore recommended. To achieve this, a revision and consolidation of South Africa's environmental law will be required to provide greater clarity on the scope of the protected area management plan. This consolidation may also provide insights into the contemporary (legislative) understanding of the contribution of protected areas to conservation and people's well-being (viz. the protected area's 'purpose').

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CHAPTER 2

Hitchhikers' guide to the legal context of protected area management plans in South Africa

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2.1 Abstract

Background: Although formally protected areas in South Africa date back to the turn of the 19th century, requirements for protected area management plans only became mandatory a century later. Before the promulgation of the World Heritage Convention Act in 1999, and subsequently, the National Environmental Management: Protected Areas Act 57 in 2003, requirements for management plans were voluntary, and guidance to its content was fragmented across an array of international, national and provincial policy instruments.

Objectives: As there has been little academic debate on the relevance and content of protected area management plans, an improved understanding of these plans, and the role they play in biodiversity conservation, is required.

Method: This study explores the evolution of management plans, revisiting its historical and current legal context at international and national scales.

Results: Despite being the principal legislative framework for management plans, the World Heritage Convention Act and the National Environmental Management: Protected Areas Act did not consolidate the plethora of management plan requirements. Hence it did not bring clarity when these conflicted or were ambiguous.

Conclusion: Legal provisions for management plans are highly fragmented; this risk plans not being complete, falling short of the requirement to ensure that protected areas fulfil the purpose for which they were established. A consolidation of relevant provisions, as well as emerging best practices, is recommended. The consolidation may require the revision of South African environmental law to provide greater clarity on the contemporary understanding of the contribution of protected areas to conservation and people's well-being (*viz.* the 'purpose').

Keywords: best-practice, conservation, ecologically sustainable, legislation, protected areas, multilateral agreements, objectives, proclamation, protected area integrity, purpose, recreation, values.

2.2 Introduction

Formally protected areas in South Africa date to the turn of the 19th century, with the proclamation of the first (colonial) protected area in Africa in 1894 – the Pongola Nature Reserve in KwaZulu-Natal (Carruthers 1985). Following the formation of the Union of South Africa in 1910, nature conservation was retained as a predominant provincial competence. Although there were similarities, each of the then four provinces derived their conservation legislation independently by way of 'Ordinances'. Many of these, albeit in amended forms, remain in force.

This legislation provided the necessary powers for each province to promulgate provincial protected areas; however, there was no requirement for the then provincial conservation agencies to develop and implement protected area management plans. In 1926,

the then national government established the National Parks Board through the National Parks Act 56 of 1926 (Republic of South Africa 1926). As with the provincial ordinances, this Act and subsequent revisions were silent on the need for protected area management plans.

Thus, prior to the promulgation of the World Heritage Convention Act 49 of 1999 (WHCA) and the National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA) into law, there was no legal requirement, and hence obligation, for South African conservation agencies to draft and implement protected area management plans. Any drafting thereof, by the conservation agencies, was purely voluntary and was based on ad hoc intuitive, pioneering good practice, and was guided by the then developing international law pertaining to the conservation of biodiversity (Strydom & King 2009). Therefore, the drafting of these plans was uncoordinated across the country, rarely incurred public scrutiny, and did not consider or reinforce the achievement of provincial or national goals or – given the international isolation prior to 1994 – international commitments (Strydom & King 2009).

The re-acceptance of South Africa into the international community in 1994 introduced a variety of biodiversity obligations into the country's environmental management. Thus, the evolution and development of protected area management plans, at least from a legislative perspective, is relatively new and, as a result, has incurred little critical analysis and debate.

South Africa acceded to the Convention on Biological Diversity (CBD) in November 1995. That ushered in, *inter alia*, a target-focussed obligation to secure and protect representative samples of the country's biodiversity – described as Aichi Targets in the 2010 Strategic Plan for Biodiversity. Aichi Target 11 requires contracting parties to the Convention to establish, by way of protected areas, a minimum of 17% of terrestrial and inland water and 10% of coastal and marine areas by 2020.

These areas are required to be effectively and equitably managed in a manner that ensures their continued contribution to achieving the target and integration into the broader

landscapes and seascapes (Ervin et al. 2010). The consequence of this Aichi Target for South Africa was the need to expand protected areas – not only expansion in the size of existing protected areas but also a significant increase in the number of protected areas.

Against this legislative backdrop, the following question arises: what are the objectives of protected area management plans, how does the legal framework prescribe and ensure that the derived plan is both relevant, achievable, and ultimately accomplishes the protected purpose area for which it was declared?
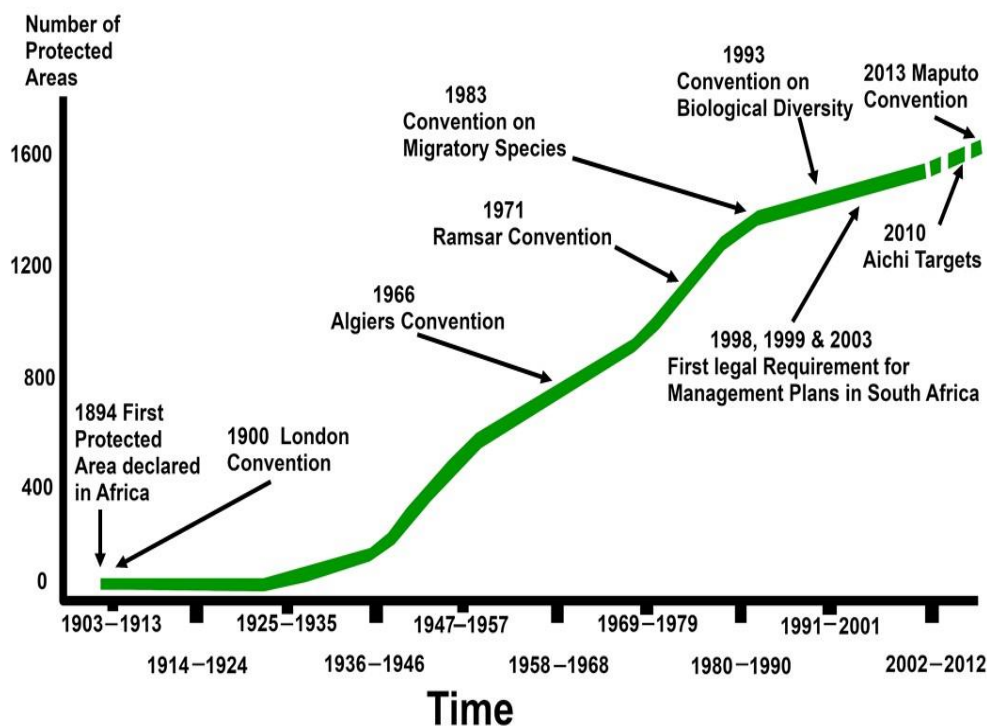
Figure 2.1 A schematic representation of the accumulation of protected areas (South Africa), together with a timeline of the occurrence of key events that have influenced the evolution of protected area management plans (UNEP-WCMC 2021).

2.3 Discussion

2.3.1 African multilateral context of protected area management plans

The concern over declining wildlife numbers because of unregulated hunting led to the drafting of the Convention of the Preservation of Wild Animals, Birds and Fish in Africa (1900 London Convention) (Blackmore & Trouwborst 2018). This Convention never came into force, as most signatory states failed to ratify it (Selier et al. 2016). Notwithstanding, it set out the foundation for the then colonial powers to influence the administration of the colonies in Africa to establish 'reserves' of 'sufficient large tracks of land which have all the qualifications necessary as regards food, water and, if possible, salt, for preserving birds or other wild animals' (Article 2[5]) (British Parliamentary Papers 1900).

This Article further prescribed that these areas had to be managed in a particular manner that affords them the 'necessary quiet during the breeding time' and that a prohibition is enforced making it unlawful 'to hunt, capture, or kill any bird or other wild animal except those which shall be specially exempted from protection by local authorities'. In so doing, the 1900 London Convention anticipated that the authority would need to make provision for protected areas and actively manage it to achieve at least the two outcomes mentioned above.

The theme of establishing protected areas and managing them for the common good was significantly enhanced by subsequent revisions of the 1900 London Convention and, in particular, the 1966 Algiers Convention (Figure 2.1). Article X (1) of the Algiers Convention (African Convention on the Conservation of Nature and Natural Resources 1968) required signatory states to, *inter alia*, ensure that the conservation of species and their habitats took place within the ʾframework of land-use planning and of sustainable developmentʾ. This Convention further required its signatories to ʾmanage plant and animal populations inside conservation areas according to the objectives of such areasʾ (Article VII(1)(a)). Furthermore,

Article XII (1) required that such management 'preferably' be within a ˈframework of environmental and natural resource policiesˈ.

This approach to managing protected areas was carried through and enhanced (drawing on the already established global multilateral agreements, e.g., the CBD) in the revision of the 1968 Algiers Convention in Maputo in 2003 (African Union 2003) – to form the (revised) African Convention on Conservation of Nature and Natural Resources (the Maputo Convention).

The Maputo Convention sets a wide range of objectives in place, and many of these are multi-faceted and require predefined and adaptive management strategies over extended periods of time (Figure 2.1). Although not explicitly stated, it stands to reason that given the need for consistency from one manager to the next, such management complexities can only be efficiently achieved through a robust protected area management plan. The Maputo Convention further touches on the broad purpose of a protected area in that it defines a conservation area to be any protected area ˈdesignated and managed mainly or wholly for one of the following purposesˈ (Article V [6]):

(1).   science or wilderness protection (strict nature reserves and wilderness areas)

(2).   ecosystem protection and recreation (national parks)

(3).   conservation of specific natural features (national monuments)

(4).   conservation through management interventions (habitat and species management areas)

(5).   landscape/seascape conservation and recreation (protected landscapes and seascapes)

(6).   the sustainable use of natural ecosystems (managed resource protected areas).

Article XII (1)(a) of the Maputo Convention encourages the Southern African Development Community (SADC) states to establish and maintain (manage) conservation areas within a:

'framework of environmental and natural resources policies, legislation and […] in order to ensure the long-term conservation of biological diversity […] and of the habitats that are critical for the survival of such species'. (Article XII [1])

Interestingly, this Article limits the conservation focus of member states to biodiversity represented within areas of their jurisdiction, is threatened, or of special scientific or aesthetic value, and those 'habitats which are critical for the survival of such species'. Therefore, it appears that the Maputo Convention explicitly excludes ex-situ conservation of species not indigenous to the member state and possibly those species whose home ranges extend marginally into a member state jurisdiction. Conservation of these species is, thus, limited to those states in which they predominate. In this regard, the convention appears not to support, if not impede, the establishment of a protected area that includes those species (and their habitats) explicitly considered either common or vulnerable and are not reasonably of special scientific or aesthetic value. In so doing, this convention constrains the purpose and scope of a protected area to those land and seascapes essential for conserving biodiversity within a country. Therefore, the management plan would reasonably be expected to primarily embody the management of these land and seascapes.

Finally, the Maputo Convention recognises the importance of a buffer zone to maintain the integrity of a protected area. In this, the state party is required to establish a buffer zone to 'control activities outside conservation areas which are detrimental to the achievement of the purpose for which the conservation areas were created' (Article XII [4]). The inclusion of this buffer zone requirement within the provisions of Article XII suggests, therefore, that the buffer is considered as a part of the protected area and hence needs to be included in the management plan.

2.3.2 Global multilateral context of protected area management plans

2.3.2.1 Convention on Biological Diversity (CBD)

Parallel, if not causal to, the inclusion of the abovementioned biodiversity and protected area establishment provisions in the Maputo Convention, the CBD views protected areas as the foundation with respect to the conservation of biodiversity. The CBD defines a protected area as a 'geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives' (Article 2). Thus, it would be a common cause for the protected area management plan to include the necessary management actions to achieve those specific conservation objectives.

The purpose and scope of the management plan are further defined by the encouragement of Parties to the convention to, *inter alia*, 'establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity' and to 'develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity' (Article 8). As such, the management plan for individual protected areas would need to include those actions that would contribute to the achievement of the purpose of establishing the protected area.

The CBD further encourages Parties to 'promote environmentally sound and sustainable development in areas adjacent to protected areas (buffer zone) with a view to furthering protection of these areas' (Article 8). As with the Maputo Convention, it appears that the CBD sees the buffer zone as an integral part of the protected area, and, as such, it should be incorporated into the protected area management plan. This inclusion would naturally enable setting specific goals and targets for the buffer and the achievement of the CBD Conference of Parties – Decision VII/28. The integration of the buffer-zone requirement into the protected area management plan would facilitate the integration of the protected area into the broader landscape, seascape and cross-cutting sectors to maintain or improve the integrity of the

protected area. The extent to which the management plan would facilitate this integration beyond the requirement for a buffer zone is uncertain. Certainly, in the South African context, such requirement would most likely be better placed in the municipal sectoral plans, and the integration of the protected area into the broader municipal landscape, while relevant, is outside the scope of this paper.

In addition to establishing new protected areas, the CBD encourages Parties to expand existing protected areas to incorporate key neighbouring biodiversity elements and increase the viability of a protected area as a transient or seasonal destination for migratory species (Goal 1.1). Thus, the management plan would need to consider the neighbouring areas of the protected areas that are important from a resident species or biodiversity habitat perspective, key habitats for migratory species, as well as increasing viability of the protected area. This consideration would naturally include those management actions required to ensure that these areas are sustained in a natural state, and their valuable biodiversity attributes are safeguarded – and would ultimately serve protected area expansion target areas.

Goal 1.4 of the CBD speaks directly about the improvement of site-based protected area planning and management, and specifically the need for a management plan, which is scientifically based and participatory in development and implementation. This goal also links the effective management of protected areas to the development and implementation of the management plan through a process of active stakeholder participation and adaptive management.

2.3.2.2 Convention on wetlands of international importance (Ramsar Convention)

South Africa, being a contracting party to the Ramsar Convention (1971), is encouraged to incorporate important wetlands into its network of protected areas. For a wetland to be listed by the Secretariat of the Convention as a wetland of international importance, the wetland

ought, although not an obligatory action, to be declared a nature reserve (Article 4 [1]). Furthermore, the Convention (International Union for Conservation of Nature (IUCN) 1972) requires the Parties to 'provide adequately for (the) wardening' (Article 4 [1]) of at least the wetlands listed or included in the network of protected areas and to ensure that each of these protected areas is managed and researched by competent personnel (Article 4 [5]). It is uncertain whether the protected area management plan would necessarily include these matters, as they are best placed in the management authority's administrative and policy framework referenced in the site's management plan.

The Convention, however, in Article 4 (4), specifies that 'The Contracting Parties shall endeavour through management to increase waterfowl populations on appropriate wetlands'. Hence, the management plan for these sites should include an objective toward and management interventions aimed at achieving this requirement. Therefore, the purpose of the protected area outlined in the management plan should include the recovery and maintenance of waterfowl habitats.

In 2002, the Convention established specific guidelines for the management planning of Ramsar sites (IUCN 2002). The guidelines placed a strong emphasis on the management plan as part of an overarching planning process that provides for adaptive management, objectives, outcomes and integrated monitoring. These guidelines require the management authority to develop a specific management plan for the wetland. This plan should be integrated into the protected area management plan, and relevant spatial and economic sector plans at local, regional and national scales (COP8 – Resolution VIII: I (4)). As a result, these guidelines not only set in place a requirement for a protected area management plan but also provide clear guiding principles as to the content of the management plan. The following functions of the protected area management plan were identified in the 2002 guidelines:

(1).   identification of management objectives

(2).   identification of factors that influence or are influenced by features

(3).   conflict resolution

(4).   identify monitoring requirements

(5).   management interventions to achieve the objectives

(6).   maintain continuity in managing sites

(7).   source financial resources for the implementation of the plan

(8).   mechanisms for stakeholder communication

(9).   accountability in the implementation of the plan

(10).   compliance with policy frameworks.

Together with the CBD requirements as they relate to management plans, these functions would later be incorporated into the NEMPA 57 of 2003.

2.3.2.3 World Heritage Convention

The intention of the World Heritage Convention (WHC) (United Nations Educational, Scientific and Cultural Organization [UNESCO] 1972) was to create a global framework for the protection and conservation of natural and cultural heritage that was considered to be of 'Outstanding Universal Value' (OUV). The management plan for a world heritage site (WHS) should, as a minimum, provide for the permanent protection of the OUV on which the inscription of the WHS was based. The inscription of a site onto the World Heritage List by the World Heritage Committee of UNESCO depends on whether 'effective and active measures' can be taken 'for the protection, conservation and presentation of the cultural and natural heritage' (Article 5). The plan, therefore, must contain those management actions that reasonably guarantee the integrity and authenticity of the OUV. To achieve this, the WHC sets in place guidelines (UNESCO 2012) that, *inter alia*, enable both the drafting and implementation of WHS management plans and a system of reporting the state of conservation

of the site and the achievement of the management plan (World Heritage Convention 1972). Thus, to remain compliant with the Convention, it would be essential that the WHS management plan predominantly complies with the provisions of these operational guidelines.

Furthermore, both the Convention and the operational guidelines recognise that the OUV may not always remain fixed within the WHS. Some OUV may be moveable (e.g. archaeological artefacts) or may become moveable over time, requiring them to be conserved in a facility outside the site (Jakubowski 2004). For the management plan to be considered compliant with the provisions of the Convention, it would need to include procedures and actions required to ensure that the integrity of ex-situ OUV artefacts is safeguarded. Where third parties become the custodian of the OUV and other protected area artefacts, the management plan would need to include, or at least refer to, a mandatory custodianship agreement (Shefi & Veth 2015).

2.3.2.4 Convention on Migratory Species of Wild Animals

The Convention on Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, was signed in 1979 and entered into force in 1983, under the United Nations Environment Programme (UNEP). Although this Convention is focused on protecting migrant species across international boundaries, it is important to recognise that protected areas play a critical role in conserving and protecting these species. Where this is deemed to be relevant, and where specific agreements have been entered into between rangeland counties (e.g. the Conservation of African–Eurasian Migratory Waterbirds [AEWA]), these specific provisions need to be incorporated into the protected area management plan in order to comply with this Convention.

2.3.3 South African context for protected area management plans

The requirement of protected area management plans, and all South African legislative provisions, is rooted in the Constitution of the Republic of South Africa (Republic of South Africa 1996), and specifically in Section 24 (the Environmental Right), which states that: Everyone has the right

(1).   to an environment that is not harmful to their health or well-being

(2).   to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:

(a)   prevent pollution and ecological degradation

(b)   promote conservation

(c)   secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Subsection (2) of the Environmental Right embeds the ethos for establishing protected areas; in that, they protect South Africa's biodiversity for the benefit of current and future generations. It stands to reason then that the management of the protected area to remain within this constitutional imperative must promote not only the conservation of biodiversity but also provide for the persistence of these protected areas over time. The same philosophy applies to any development or recreational activities within a protected area in that these activities cannot compromise the ecological integrity of the biodiversity or the protected area as a whole (Blackmore 2014). The Environmental Right is primarily operationalised through South Africa's environmental legislation and, in particular, the National Environmental Management Act 107 of 1998 (NEMA).

2.3.3.1 National Environmental Management Act 107 of 1998

Two chapters within NEMA (Republic of South Africa 1999) have direct relevance to protected area management plans. Chapter 1 specifies the environmental management principles that the government must apply in decision-making (*viz.* adopting a protected area management plan for implementation that may significantly affect the environment). These principles serve as a 'general framework within which environmental management and implementation plans must be formulated' (Section 2 [1] [b]). The National Environmental Management Act, 107 of 1998, separates the principles into three synergistic and, in places, overlapping categories. The first category places all people (inclusive of future generations) at the forefront of environmental management – in that decisions taken must reflect people's 'physical, psychological, developmental, cultural and social interests equitably' (Section [2][2]). That is to say that the protected area management plans, within the context of biodiversity conservation, must be balanced and consider, if not be reflective of, South Africans' multicultural character, as well as the potential interests and expectations of those yet to be born. The second category provides for development that must be socially, environmentally and economically sustainable (Section [2] [3]).

In the context of protected areas, this principle requires that all development needs to be ecologically sustainable, reflective of South African society and be economically viable over time. In essence, the protected area, or at least the commercial development within the protected area (i.e. tourism facilities), should be self-sustaining and not cause an ongoing financial burden on the protected area and therein the state.

The third category provides for those principles that evoke sustainable use of the environment, best practice and sound governance (Section 2 [4]). These principles include *inter alia*, avoidance of disturbance and remediation where significant damage has occurred, safeguarding the integrity of ecosystems, the precautionary and polluter-pays principles and

the public trust doctrine. While it is not a prerequisite for the environmental management principles to be explicitly included in the protected area management plan, it is a common cause that the plan must include sufficient details to demonstrate that the principles have been considered and applied. The management plan would, therefore, ideally need to include sufficient reference to these principles that bind the management authority for the protected area to consider and apply them when drafting and implementing the plan.

The National Environmental Management Act also provides for all organs of state to apply 'Environmental implementation plans and management plans' to, *inter alia*, 'secure the protection of the environment across the country as a whole' (Chapter 3). The purpose of these plans is to consolidate relevant, inter-and intra-discipline policies, plans, and programmes that significantly affect the environment and provide a foundation for co-operative governance for organs of state that have a mandate in managing the environment concerned. The relevance of this chapter lies therein that a number of protected areas in South Africa have a dual persona – they may be a national park, nature reserve or WHS, and also may be proclaimed as a state forest, state dam, cultural heritage site or mountain catchment area. In such cases, the area concerned may be subject to varying and potentially conflicting legislative requirements, which will need to be integrated into one co-ordinated (as the case may be) environmental implementation or management plan. These plans are, *inter alia*, required to make explicit the functions exercised by the relevant organs of state, the norms and standards that are to be maintained and the policy requirements. In so doing, this chapter of NEMA specifies, in part, the content and purpose of management plans that apply to these protected areas.

Finally, Chapter 6 of NEMA provides for the incorporation into the country's environmental decision-making framework provisions derived from international environmental instruments that are binding on the state, which have not already been included in the country's environmental legislation. In such cases, the protected area management plans

would need to consider the provisions of relevant multilateral environmental instruments into which South Africa has entered. The protected area management plans would also need to be revised at a frequency that allows for the consideration and incorporation of subsequent decisions adopted by the Conference of Parties for that particular instrument. Furthermore, Chapter 6 also allows, as do the principles for environmental management, for the consideration of international soft law – i.e. that which is not binding on the state – to be considered as a guide and incorporated, where relevant, into environmental decision-making (Section 25).

The National Environmental Management Act provides for several specific environmental statutes. Two of these explicitly dictate the requirement of protected area management plans, as well as the purpose and content of these plans:

• National Environmental Management: Protected Areas Act 57 of 2003

• World Heritage Convention Act 49 of 1999

In addition to these, the following specific environmental statutes may have direct relevance to the protected area management plans, and thus relevant provisions need to be catered for in the protected area management plans:

• National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)

• National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEMICMA)

• Mountain Catchment Act 63 of 1970

• National Water Act 36 of 1998

• National Forest Act 84 of 1998

• National Heritage Resources Act 25 of 1999.

The contribution of these eight statutes to the content of protected area management plans is discussed below. These statutes further provide for Regulations that may have direct relevance

to the content of the management plan, for example, the Alien and Invasive Species Regulations. Although paramount, they are subject to change as circumstance dictates and thus are not considered in this paper.

2.3.3.2 National Environmental Management: Protected Areas Act 57 of 2003

The primary obligation for each protected area to have an adopted management plan is grounded in Section 40 of NEMPA (Figure 2.1). This section obligates the management authority to, *inter alia*, manage the protected area 'exclusively for the purpose for which it was declared, the protected area management plan and in accordance with the provisions of NEMBA and any other applicable legislation' (Section 40). Therefore, it is vital that the management plan clearly identify the purpose of the protected area to provide for the appropriate management. While this requirement may be easily tractable, it does pose a 'legal' conundrum.

Firstly, the NEMPA (Republic of South Africa 2003) specifies 12 wide-ranging purposes of protected areas (Section 17) but is silent on whether such purposes are the sole basis for which a protected area may be declared. Furthermore, the Act is silent on whether the specified purposes have a retrospective application and if they will be in addition to or replace the original purposes for which the existing protected areas were established. Secondly, there is no requirement in the Act for the declaration notices to include the reason for which an area is to be set aside as a protected area. Thus, the declaration notices contemplated in Chapter 3 of the Act are likely to be mute on the conservation purpose of the protected area.

Even if the purpose for declaration is stated in the gazetted notice, the founding conservation purpose for a protected area in the original declaration may not necessarily be consistent with and accurately reflect the protected area's current contribution to the network of protected areas representing South Africa's biodiversity. As circumstances change (i.e.

discovery of more important values of the protected area, loss of biodiversity elsewhere, change in the threatened status of components of biodiversity amongst others), the conservation contribution, as well as the purpose of the protected area, is likely to change with time. For example, the Tembe Elephant Park was established to protect the local communities from the then free-roaming elephant (*Loxodonta Africana*) population (Blackmore 2014). Subsequent to its establishment, it was discovered that the protected area housed more significant biodiversity values in terms of critically endangered and endemic sand forest (Matthews 2001) than the conservation of elephants. Both Lagendijk et al. (2011) and Kirkwood and Midgley (1999) found that the disturbance caused primarily by elephants to sand forest was a significant threat to this habitat's conservation status and persistence. Thus, to stringently manage Tembe Elephant Park exclusively for the purpose it was declared for as a protected area would risk both the sand forest habitat and its endemic species becoming extinct.

Similarly, Davies (2000) indicates that the Madikwe Game Reserve was established 'to stimulate ecological sustainable economic activity based on wildlife through joint venture operation between government, private sector and local people for the benefit of the region'. In keeping with this purpose, it is, therefore, although inconceivable from a conservation and protection of biodiversity perspective, plausible that an abattoir and a chromium-based tannery could be established in the protected area. These examples both highlight the potential vulnerability of protected areas that have declaration notices or management plans that specify a very narrow or specific purpose, or a purpose that may be inconsistent with the listed purposes for establishing a protected area.

To resolve the conundrum and therein counter outdated purposes or a misinterpretation of a declared purpose which may lead to inappropriate use and development in the protected area, NEMPA (Republic of South Africa 2003) in section 41 obligates the management (and therefore its use) of the protected area to be constrained:

'to ensure the protection, conservation and management of the protected area concerned in a manner which is consistent with the objectives of this Act and for the purpose it was declared'.

Where the interpretation of the declared purpose is in conflict with the objectives of NEMPA (viz. stand to threaten the integrity of the protected area or the biodiversity therein), the objectives of the Act and the listed purposes in section 17 should prevail. Therefore, the management plan must be written to promote the objectives of the Act and the listed purposes of a protected area. The objectives of the Act that concern the content of a management plan include the conservation of biodiversity, provision of a mechanism for the sustainable use for the benefit of people and participation of neighbouring communities therein, and to provide for co-operative governance where the protected area involves an overlapping mandate with various organs of the State (e.g., where the protected area includes significant heritage or a state dam) (Section 2). Section 12 of NEMPA provides for protected areas that are reserved or protected, in terms of alternate legislation, for 'any purpose for which an area could in terms of this Act be declared' to be deemed a protected area under NEMPA. Therefore, it can be assumed that the 'purpose' stated in this section is equal to the 'purposes' for protected areas stated in Section 17 of the Act.

2.3.3.3 World Heritage Convention Act 49 of 1999

The World Heritage Convention Act 49 of 1999 (WHCA) was established to incorporate the WHC into South Africa's legislative framework (Republic of South Africa 1999) and provide for its implementation. Preceding NEMPA, the WHCA became the first statute to require a management plan – termed an 'integrated management plan' (IMP) – specifically for WHS. The Act set out the fundamental principles that relate to transparency and participation in and

benefits from WHS, and these principles set the scene for the purpose of IMPs and how they would be developed and implemented (Sections 3 and 4).

The concept of safeguarding the public trust entity was first recognised as a fundamental principle in the WHCA (Republic of South Africa 1999). The Act sets out these principles in section 4 – providing that the: cultural and natural heritage is held in public trust for the people, the beneficial use of cultural and environmental resources must serve the public interest, and the cultural and natural heritage must be protected as the common heritage of the people. The fundamental principles of WHCA not only ensured transparency and participation in the planning and management of this type of protected area but also juxtaposed two very different and specialised fields: natural heritage and cultural heritage. Therefore, the management of WHS may include both natural and cultural heritage attributes, the management of which must be integrated into one plan to ensure that conflicts in management do not arise. Furthermore, the IMP is required to be harmonised not only with provisions of the WHC but also with those plans specified by NEMA, various sectoral plans adopted by other organs of state, and regional and municipal development plans (Section 22). Finally, the WHCA specifies that the IMP includes, *inter alia*, as a minimum, a co-ordinated policy framework, performance criteria, an implementation programme, mechanisms for public and expert participation, provisions where specific management actions are required to conserve elements within the park and any other matter prescribed by law or directed by the minister.

2.3.3.4 National Environmental Management Biodiversity Act 10 of 2004

The objectives of the NEMBA (Republic of South Africa 2004) are threefold, two of which relate directly to the management of protected areas and, therefore, management plans. The first objective is the 'protection of species and ecosystems that warrant national protection' (some of which are contained within formally protected areas), and the 'sustainable use of

indigenous biological resources'. As with NEMPA, this Act formally brings into South Africa's environmental law many of the international obligations that are contained in the Convention on Biological Diversity, the Convention on Migratory Species and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Where relevant, these obligations would need to be catered for in the protected area management plan.

Chapter 3 of the Act provides for 'integrated and co-ordinated biodiversity planning'. This planning will ultimately set out national biodiversity targets, more importantly in terms of protected areas, and guide where these critical biodiversity areas require formal protection. Secondly, this chapter deals with monitoring various components of biodiversity and the promotion of biodiversity research – two aspects that are key components in management plans in addressing adaptive management and best practice in protected areas.

2.3.3.5 National Environmental Management: Integrated Coastal Management Act 24 of 2008

The National Environmental Management: Integrated Coastal Management Act (NEMICMA) (Republic of South Africa 2008) relates to the appropriate management of the coastal environment – including the management of estuaries. In certain instances, protected areas have been established in these coastal landscapes and may contain estuaries entirely or partially within their boundaries. For these circumstances, the management plan for the protected area will have to be compliant with both NEMPA and NEMICMA; in that, the latter makes provision for the development of estuarine management plans. Furthermore, estuary management plans must be drafted (and hence the estuary is to be managed) in accordance with the National Estuarine Management Protocol and its minimum requirements (Section 33). The Act requires the Protocol to include a strategic vision and objectives for the estuary, standards for estuary management, management procedures and minimum requirements of the estuary.

Naturally, the protected area management plan would need to include these requirements. As the Protocol applies to estuaries at a national level, a conflict may arise between the purposes, objectives, and the estuary management and that of the protected area of which it forms a part. In these circumstances, given that both NEMPA and NEMICMA claim superiority, and in the absence of a legal resolution, it would be obligatory for the protected area management plan to resolve potential conflicts and to set in place parity between NEMPA and NEMICMA requirements. Should parity not be achieved, the protected area management plan risks not being adopted and hence not implemented, and therefore may potentially fall short of the constitutional conservation imperatives discussed above.

2.3.3.6 Mountain Catchment Areas Act 63 of 1970

The relevance of this legislation for protected areas lies in the previously referred to the double persona that protected areas may have. It is common for protected areas to include declared mountain catchment areas or *vice versa*. The Mountain Catchment Areas Act, 63 of 1970 (MCAA), provides 'for the conservation, use, management and control of land situated in mountain catchment areas' (Republic of South Africa 1970). As per this Act, the definition of a mountain catchment area is 'any area declared under Section 2 to be a mountain catchment area'. The term 'management and control' implies that the management of these areas should be directed at achieving the purpose for which these areas were declared (as a mountain catchment area). This purpose includes, *inter alia*, 'conservation, use, prevention of soil erosion, the protection and treatment of the natural vegetation' (Section 3 [i] a & b), including the eradication of invasive vegetation. Thus, it is a common cause in terms of this Act that a management plan should, at least, demonstrate the intent of the management authority for the mountain catchment area to achieve these objectives.

Notwithstanding the desirability of this management plan, the Act prescribes explicitly for a dedicated 'fire protection plan', for the management of fire within all or part of the mountain catchment area. In terms of fire management as prescribed by this Act versus fire management inside protected areas, there is a discrepancy in terms of the purpose of fire management. In the case of mountain catchment areas, the fire protection plan and, ultimately, fire management focus on protecting the catchment against fires. In the case of a protected area, and in line with fire management requirements incorporated in the protected area management plan, the focus is on both protection from unplanned burning and recognising that fire may be an essential determinate of the protected area's biodiversity. Thus, the use of fire is a critical management tool to sustain the biodiversity of the protected area.

Furthermore, the MCAA provides for what appears to be a regulated 5-km-wide 'buffer' (Section 3 (1) (b)) surrounding the mountain catchment area. The creation and management of this buffer would naturally be managed in support of the mountain catchment area and in accordance with the objectives of the Act, and as such, this must be included in the management plan of the protected area. In its essence, this regulated 5-km-wide 'buffer' would be equivalent to the buffer envisaged around a protected area.

The additional protection and underlying principles of conservation, soil erosion prevention, invasive species control, and protection of vegetation that are contained in this Act, is complementary to other protected area legislation. Although specific management of the area as it pertains to fire management, as contained in the protected area management plan versus in the fire protection plan of the mountain catchment area, may create conflicting objectives. Unlike the potential conflict between NEMPA and NEMICA, the MCAA is silent on its supremacy over other legislation. Thus, in a case of conflict between the two Acts, from a legal perspective, the provisions of NEMPA would prevail. Nonetheless, not to comply substantially with MCAA risks the mountain catchment designation being withdrawn.

2.3.3.7 National Forests Act 84 of 1998

Some of South Africa's earliest conservation efforts pertain to the protection of forest areas – as early as Jan van Riebeeck's first ventures into Southern Africa. Britton (2006) indicated that the 'first regulations were issued for the systematic management of the indigenous forest' in 1883. Historically, many natural forests in South Africa, and specifically in KwaZulu-Natal Province, were declared as protected forest areas in the early to mid-1900s – for example, Giant's Castle was established under Government Notice No 356 of 1907, in terms of various acts that were later consolidated under the National Forests Act 84 of 1998. A key provision of this Act, given it preceded NEMPA by 5 years, was the formal establishment of protected areas specifically for natural forests. As with NEMPA, this Act requires the forest protected areas explicitly to be managed to achieve the purpose for which they were established (Republic of South Africa 1998). This achievement may be regulated by the political head for natural forests through specific rules. These rules and the means to achieve them would need to be included in the protected area management plan.

The National Forests Act, Chapter 4 (19), provides for public access (for recreational use, recreation, education, culture or spiritual fulfilment) of all state forests, including forest protected areas, as well as the 'voluntary' granting of public access for these activities to forests that are privately owned. Access to forests by the public is, however, not necessarily absolute. The Act recognises that a protected area may be established as a sanctuary, protected from being disturbed by public access, or is sensitive to public use. To provide for such protection, Section 20 (3) of the Act provides an organ of state to restrict entry into these areas based on specific rules. This 'restrictive purpose' may be additional and complementary to the original purpose for which the forest was declared as a protected area. Therefore, the protected area management plan would need to include the original purpose, any restrictive purposes and

specific rules, and how these will be affected. The management plan would also need to provide for, where necessary, access and any reasonable public use of the protected area.

2.3.3.8 National Heritage Resources Act 25 of 1999

The public trust principle was also embedded into the National Heritage Resources Act (Republic of South Africa 1999) (NHRA), which emphasises the conservation of heritage resources 'so that they may be bequeathed to future generations' (National Heritage Resource Act 1999). The Act makes provision for the designation of provincial and national heritage sites (Chapter 2), and for these heritage sites to be managed in accordance with a management plan (Section 9). At least some of these heritage resources may be located within protected areas that have been established for the conservation of biodiversity; these protected areas and therefore their management plans for these protected areas, now being of dual persona, would have to comply with the requirements of natural and cultural heritage.

2.4 Conclusions

Protected area management plans have evolved out of 150 years of conservation history, which has culminated in three overlapping functions. The first function of the management plan is to ensure that protected areas are appropriately managed – at least for the purpose for which they were established. Secondly, they provide a mechanism for consistency in management actions from one manager or management authority to another. Thirdly, the management plan serves as an omnibus for the public to ascertain that a protected area is being managed in their best interests and that of future generations.

Contrary to expectations, NEMPA does not provide a one-stop-shop for management plans and protected areas in South Africa. In fact, various legislation exists to guide and direct the management of various types of protected areas and the development of management plans

for these areas. This legislation provides a framework for the integration of various planning mechanisms and supports the principle of public trust, whereby the state is held accountable for securing natural and cultural heritage for current and future generations.

While protected area management plans are mainly prescribed in the WHCA 49 of 1999 and the NEMPA57 of 2003, these two statutes do not embrace the full range of requirements to be included in these plans. This review has discovered that the legal provisions of both domestic and international laws are fragmented and thus are highly complex. This circumstance risks management plans not being complete, therein falling short of the requirement to ensure that the protected areas fulfil the purpose for which they were established. It is thus recognised that comprehensive protected area management plans are crucial for the conservation of autochthonous and migratory biodiversity and heritage and other values of protected areas. It is recommended that the relevant provisions within the plethora of statutes and African and global multilateral environmental agreements, and emerging best practices should be consolidated. This may require the revision of South Africa's environmental law to remove the complexity, and therein provide for greater clarity on the contemporary understanding of the contribution of protected areas to conservation and thus the well-being of people (viz. the 'purpose').

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CHAPTER 3

Sustainable and ethical use of protected areas – the role of the management plan

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3.1 Abstract

Background: The parallel evolution of protected areas, protected area management plans and recreational use of protected areas over the last century has brought about a complex relationship between the three. The fragmented legal and policy framework creates a need for a consolidated decision-making framework that facilitates (a) a consistent interpretation of legislation and policies and (b) provides for ethical and transparent decision-making and c) responsible, reasonable, and administratively just decision making as provided for in section 33 of the South African Constitution This section of the Constitution is primarily given effect to by the Promotion of Administrative Justice Act 3 of 2000.

Objectives: Various governance quality assessment frameworks exist; this chapter aims to draw on these and analyse the most critical principles for decision-making relating to the use of protected areas in the South African context. It stands to reason that incorporating such a decision-making framework in the protected area management plan can ensure consistent interpretation of legislation and policies and provide for ethical and transparent decision-making.

Method: A literature review and case studies in the province of KwaZulu-Natal, South Africa, were used to investigate the principles that must inform a management authority's decision-making in managing protected areas. The management plan's role in applying these principles was considered, and discussions were based on the four elements adapted from the Policy Arrangement Approach.

Results: From a legislative perspective, the management plan serves as a repository for the plethora of legal and policy requirements to be applied in managing protected areas. Additionally, it establishes a framework of principles that guide decision-making and ensure the long-term persistence of the protected area, providing specific guidance where trade-offs between specific objectives are required, thereby contributing to the long-term sustainability and protection of the area's values and purpose, which embodies the primary requirement for its protection.

Conclusion: A robust management plan remains the most relevant planning tool to address the complexities around protected area management and the fragmented legislative and policy frameworks for the effective management of protected areas in South Africa. Whereas management plans cannot be expected to cover explicitly every emerging circumstance – the principles included in such plans should provide the necessary guidance to decision-makers for unique circumstances and decision making.

Keywords: biodiversity, decision-making, ethical, justifiable, legislation, management plans, protected areas, recreational use, sustainable use principles, zonation.

3.2 Introduction

Protected areas form the core of a country's efforts to conserve representative and viable samples of its biodiversity (Paterson 2009; Ervin et al. 2010; Mora & Sale 2011; Baghai et al. 2018). The requirement for the South African Government to establish protected areas is, from

a legal perspective, derived from section 24 of the Bill of Rights in the Constitution. This section grants everyone the right to have the 'environment protected for the benefit of present and future generations, through reasonable legislative and other measures' by 'preventing pollution and ecological degradation and promoting conservation' (Republic of South Africa 1996). Furthermore, protected areas also contribute to the constitutional requirement for securing 'ecologically sustainable development and wise use of natural resources while promoting justifiable economic and social development'.

The National Environmental Management: Protected Areas Act, 57 of 2003 (NEMPA), gives effect to this Constitutional Right by being the prime statute for establishing and sustaining protected areas. This same ethos contained in section 24 of the Constitution, together with the State's role as trustee of protected areas that provide for the 'progressive realisation of these rights' in the Constitution, as provided for in NEMPA section 3, can reasonably be extended and applied to recreational use in a protected area. Inevitably, considerations of the protected area's long-term sustainability need to form part of the decision-making framework in decisions relating to any proposed activities (Blackmore 2014).

Historically, the establishment and management of protected areas was predominantly the State's domain; however, at a global scale, governments' conservation efforts are not adequately countering the loss of critical biodiversity (Langholz 1996; Mora & Sale 2011). As a result of a growing number of private, non-governmental organisations (NGOs) and communal protected areas, together with a rapidly growing awareness of protected area benefits to people and society (Stolton et al. 2015), a diversity of conservation approaches and governance types evolved.

Currently, the International Union for Conservation of Nature (IUCN) and the Convention on Biodiversity (CBD) recognise four broad groupings of governance (Borrini et al. 2013):

- governance by the government (various scales);

- shared (governance by multiple stakeholders);

- governance by private individuals and organisations; and

- governance by indigenous people and or local communities.

Because of the above diversification and resultant greater stakeholder interest in protected areas (Borrini-Feyerabend 2003), accountability by those responsible for decision-making within protected areas, particularly the recreational use thereof, has received greater scrutiny. Within context, the Promotion of Administrative Justice Act 3 of 2000 gives effect to section 33 of the Constitution requirement for a material decision (taken by the government) to be lawful, reasonable and procedurally fair. This statute, therefore, represents, amongst others, a powerful tool for the public to ensure responsible decision-making occurs within and about protected areas.

3.2.1 Protected area management plans

 As discussed in Chapter 1, before the promulgation of the World Heritage Convention Act 49 of 1999 (WHCA) and NEMPA (2003) into law, there was no legal requirement for developing and implementing protected area management plans in South Africa. The Environment Conservation Act No. 73 of 1989, did make provision for management plans for special nature reserves, but this did not extend to other categories of protected areas. Guidelines for developing these plans only emerged in 2010 and 2016, respectively, with the publishing of 'National Norms and Standards for Protected Areas' and 'Guidelines for the development of a Management Pan for a Protected Areas in terms of the National Environmental Management Protected Areas Act', by the then National Department of Environmental Affairs. As a result of this vacuum, management plans became the mechanism to consolidate legal and policy

requirements, including a range of cross-sectorial legislative requirements affecting protected areas.

An example of the necessity to consolidate cross-sectoral legislation requirements is the Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA). While this legislation does not explicitly consider protected areas, it contains provisions that must reasonably be incorporated into the management of these areas. For instance, SPLUMA makes provision for land use management schemes that may include any number of protected areas due to its coverage of the full extent of these local government jurisdiction boundaries. In terms of section 25 of this Act, these land use management schemes must promote (Republic of South Africa 2013):

a) economic growth

b) social inclusion

c) efficient land development and

d) minimal impact on public health, the environment and natural resources.

Hence, to be compliant with SPLUMA, all the above list must be given due consideration within 'any environmental management instrument (such as a management plan for a protected area), adopted by the relevant environmental management authority' (Republic of South Africa 2013). In addition, section 12 of SPLUMA requires that in drafting spatial development frameworks, consideration must be given to the requirement of such environmental management instruments - which naturally include protected area management plans (Republic of South Africa 2013). The management plan's role would be to guide the land use management scheme towards appropriate development permitted for the protected area in line with the protected area purpose and the zonation plan.

3.2.2 The changing role of protected areas in South Africa

Carruthers (1995) stated that protected areas could not be separated from the society that created them. In South Africa, protected areas, sustainable tourism and use evolved amid a complex socio-economic and political environment, and protected area management, as a result, had to expand beyond the conservation of biodiversity and include people, economics and politics (Suich, Child & Spenceley 2009). Protected areas in the twenty-first century play an increasingly vital role in improving human well-being and providing economic benefits (Rotich 2012; Watson et al. 2014).

In South Africa, this changing role has been consolidated into law with the promulgation of NEMPA. Section 17 of this Act highlights the importance of protected areas, broadening the scope and purpose to encompass ecological, cultural, tourism and socio-economic aspects, such as contributing to 'human, social, cultural, spiritual, and economic development' (See Chapter 2). In recognition of these broadened purposes for protected areas, the management plan must guide effective decision-making, especially when considering trade-offs or resolving conflicts between these purposes.

3.2.3 Protected areas and tourism: an evolutionary tale

Preceding the establishment of formally protected areas in the 19th century (Goosen & Blackmore 2019), the protection of land for use and enjoyment can be traced much further back in time (Eagles, McCool & Haynes 2002). While many nations set aside specific areas of cultural significance or for the use of natural resources, protected areas were first established by royalty and leaders of importance in Europe during the before and during early Renaissance, predominantly as exclusive hunting areas (Eagles, McCool & Haynes 2002; Allsen 2006). As a result of public pressure, these areas were opened for use by the broader public, and in so doing, paved the way for community involvement in protected areas and tourism (Eagles et al.

2002). Before the establishment of the Yellowstone National Park in the USA, pre-1870, the setting aside of this area as an area for public use was considered (Schullery & Whittlesey 2003). When the area was formalised as a legislated national park in 1872, the inscription specified 'a public park or pleasuring ground for the benefit and enjoyment of the people' (Eagles et al. 2002). It is clear that, at least from a global perspective, the interdependent relationship between protected areas and recreational use of these areas evolved since the establishment of these areas.

In the South African context, the first record of tourism in protected areas was only formally instituted in 1926 in an area that was Maurice S. Evans presentation to the Natal Legislative Assembly in 1901 to establish the Natal National Park (currently known as the Royal Natal National Park) which was proclaimed in 1903 (Carruthers 2013). Subsequently, in 1928, visitors were allowed access to the areas that later became the Kruger National Park establishment (Joubert 1986). Despite the recognition and acceptance of ad hoc visitors in areas that enjoyed some form of legal protection, the concept of 'tourism' as a formal activity within the protected area had not been contemplated (Carruthers 2017). By the early 1900s, there was an understanding that the purpose of protection efforts included the 'visual gratification of the public of another generation' (Carruthers 1995), alluding to recreational use of protected areas and the sustainability of such for future generations. However, this historical use and enjoyment of protected areas were not necessarily equitable and did not reflect broader society's needs. Instead, they were often exclusionary, providing benefits to a select few, mostly white sportsmen, who used the areas for hunting purposes (Carruthers 1985; Blackmore 2018).

Globally, protected areas are increasingly dependent on tourism revenues for their long-term persistence (Langholz & Lassoie 2001; Blackmore & Trouwborst 2020); this tendency also applies to state-owned protected areas in South Africa (Lindsey et al. 2007). Hence recreational use decision-making must consider both economic and ecological dependencies.

3.2.4 Policy arrangement approach and methods

This study's focus was to develop a consolidated framework of principles, combining legislative aspects, best practice and applied science, and ethical aspects to support sustainable use of protected areas within the current socio-economic context of South Africa (Chapter 1). Given that this is a highly variable field, the focus was on the ethical and sustainable recreational use of protected areas, and the role management plans play in ensuring the integrity and the long-term protection of the purpose and values for these areas, as dictated by NEMPA. Whereas management plans cannot be expected to cover every emerging circumstance – these principles provide the necessary guidance to decision-makers for unique circumstances and decision making.

3.3 Methods

A literature review and case studies in the KwaZulu-Natal Province, South Africa, is used to gain insights into the changing role of protected areas and protected area management plans in conserving biodiversity. Discussions are based on a thematic analysis of the four elements adapted from the Policy Arrangement Approach, as they relate to protected area management and management plans. This approach primarily deals with environmental policy frameworks. Since this study analyses both policy and legal frameworks, the approach mentioned above is deemed appropriate, as the management of protected areas and the development of protected area management plans share the contextual elements discussed in this approach. The approach furthermore highlights the multi-directional dynamics between protected area management, management plans and four critical elements, namely 1) rules of the game (legislation), 2) actors and coalitions (Stakeholders and partnerships), 3) policy discourse (policies), and 4) resources (funds, expertise, infrastructure). The literature review and analysis included an investigation of South Africa's environmental and conservation legislation and policies and

interpreted those in relation to the four elements and the consequences for protected areas, particularly to the use of protected areas. Furthermore, the use of protected areas and the role of the management plan was assessed with consideration of existing best-practice guidelines.

3.4 Results and Discussion

Notwithstanding biodiversity conservation being the focus of protected areas, its contribution to livelihoods, beneficiation, and socio-economic upliftment is becoming increasingly important in protected area management (Nsukwini & Bob 2016). This expanded role of protected areas must be considered within a decision-making framework that will include social, economic, and ecological aspects of management.

The South African Constitution provides in section 33 for citizens right to just administrative actions that is 'lawful, reasonable and procedurally fair' (Republic of South Africa 1996), this obligation extends reasonably to include decisions relating to the management, use and planning of protected areas. The consolidation of these principles in a management plan guides managers in making recreational use decisions that are ethical and consistent.

3.4.1 The global outlook on sustainability and use in protected areas

The academic debate around sustainable tourism and the sustainability of protected areas attracts various contradictory opinions and views. On the one hand, the relationship between the two aspects has been described as an innate 'long-lasting, uneasy relationship' because of a 'desire to simultaneously preserve and consume landscapes' (Shultis & Way 2006).

Others advocate a 'longstanding and mutually beneficial relationship' between the two aspects (Strickland-Munro & Moore 2014). A local example of such a beneficial relationship is the management of lion (*Panthera leo*) populations in small to medium-sized reserves in

South Africa; the primary purpose is to encourage tourism to these reserves. Although this management intervention (e.g., stocking lions in small to medium protected areas) may be implemented primarily for ecotourism purposes, in many instances, these lion populations make a significant contribution to the conservation of the species – providing mutual benefits to both the protection of biodiversity and tourism (Licht, Slotow & Millspaugh 2008).

As provided in chapter 1 of NEMA, a risk-averse and cautious approach must be applied to unlock the tourism potential within protected areas to ensure their long-term sustainability (Blackmore & Trouwborst 2020). In the absence of this adaptive approach, tourism operations may ultimately risk deteriorating these protected areas (Blackmore 2020a,b, Eagles et al. 2002) instead of fulfilling their potential to support long-term sustainability and provide optimal sustainable benefits. In collaboration with relevant protected area stakeholders, the management authority must ensure that the latter, rather than the first scenario applies. The management plan and the public consultation process in drafting such plans provide a platform for such collaborations.

3.4.2 The rules of the game: legal framework for use in South African protected areas

Protected areas in South Africa were initially established to conserve dwindling numbers of dynamic wildlife species (Blackmore 2018), thus presenting a narrow focus or purpose for these areas that would significantly change over time. The 1900 London Convention, although it never came into effect, was the forerunner for the later Algiers Convention or the African Convention on the Conservation of Nature and Natural Resources in 1968, made provision for setting aside protected areas, focusing on the preservation of birds or other wild animals (1933 London Convention; Goosen & Blackmore 2019).

Within the legislative framework in the current South African context, a protected area's purpose refers to the reason for establishment. Goosen and Blackmore (2019) highlighted the

challenge that arises when a protected area's explicit or historical purpose is found to be narrow. Where a change in context or the availability of new scientific knowledge dictates, this purpose may need to change or at least be expanded over time. A local example is Tembe Elephant Park, established in 1983 to protect the last free-ranging African elephant (*Loxodonta africana*) population in the area with the aim of removing (or significantly lessening) the conflict that had arisen between the community and elephants. Today there is an acknowledgement that juxtaposed to this initial purpose, the protection of threatened Sand Forest habitat (Matthews 2001) has become one of the primary purposes of this protected area (Ezemvelo KZN Wildlife 2017). This complexity has been addressed by the explicit inclusion of such purpose and management requirements of these Sand Forests in the Tembe Elephant Park Management Plan. This inclusion will require all management interventions, including recreational use decisions, to consider elephant conservation and the protection of the Sand Forest Habitat.

Goosen and Blackmore (2019) concluded that since Section 41 of NEMPA obligates the management of the protected area to ensure 'the protection, conservation of the protected area in a manner that is consistent with…the purpose it was declared for', where the interpretation of the purpose conflicts with the objectives of the Act, the listed purposes stated in NEMPA prevails. Due to the substantial variability in the scope of these purposes, in some instances, there may arise a need to make value judgements on potentially conflicting purposes. Therefore, a closer look at the legislative framework in the South African context is required. In section 17 NEMPA specifies twelve broad-ranging purposes listed (a) to (l), which appears to be hierarchical, but may not be so as it is a requirement of legislation to list each provision specifically. Thus, it may be argued that the 12 listed purposes are of equal standing (Goosen & Blackmore 2019, Chapter 2). Notwithstanding, purposes (a) to (f) of section 17 explicitly deals with biodiversity conservation, whereas (g) to (l) relates to purposes that have a

predominantly anthropogenic basis and restoration of anthropogenic impacts. Furthermore, it seems evident that the purposes also reflect a gradation of human impact, with the first purpose (a) relating to 'protection' and the last purpose to 'rehabilitation' of systems impacted by anthropogenic factors. Therefore, it can be argued that Section 17 of NEMPA may be predominantly hierarchical, especially when read with the main objectives of the Act, and the purposes of species and habitat protection carry greater weight than, for instance, socio-economic and restorative purposes. The exception would be where the primary purpose(s) of a particular protected area consists of one of the anthropogenic purposes; this hierarchy will no longer apply to the specific protected area.

3.4.3 Actors and coalitions

To ensure protected area use and particularly recreational use and tourism, is sustainable and supports management effectiveness, enhanced cooperation among the tourism industry, multi-scaled government, local communities, protected area managers, planners and tourists is required (Eagles et al. 2002; McCool 2009; Bello, Carr & Lovelock 2016). Protected areas increasingly have to engage with a range of diverse stakeholders (Dovers et al. 2015). Initially, these parties' primary role was to support the government in achieving its objectives; as best-practice evolved, stakeholders now play a more substantive role in funding, planning, and managing protected areas (Nelson & Sportza 2000; Dovers et al. 2015).

The Constitution of South Africa (Republic of South Africa 1996) makes provision for participation in and accountability to the broader public in terms of the legislative process (section 72) as well as in administrative decision-making (section 33). This participation extends to decision-making that may affect a citizen's right to have the environment protected for current and future generations and provides the basis for public consultation in protected areas provided for in national and provincial legislation and policy.

South African legislation and policies provide for the involvement of stakeholders in protected area management (Paterson 2009). These stakeholders include co-management partners (landowners) provided for in section 42 of NEMPA and decisions on the use, access and development of such areas, which would be included in the drafting and implementation of management plans (Republic of South Africa 2003). Since section 39 of NEMPA requires a zonation that will direct any permittable activities within a specific zone, stakeholder consultation must be facilitated from the planning phase onward, often from the time of drafting the management plan.

Despite there being no definition of a stakeholder in NEMPA, Chapter 1 of this Act defines local communities, lawful occupiers, municipalities and organs of State. Based on this inclusion, it would reasonably be expected that these groups would have to be consulted in the management of the protected area and hence the drafting of management plans. Furthermore, section 39 of this Act requires the management authority, in drafting a management plan, to consult municipalities, organs of State, local municipalities and then expand this stakeholder group by including 'other affected parties which have an interest in the area' (Republic of South Africa 2003). Thus, placing an additional obligation on the management authority to include any other stakeholder with interest, potentially extending the consultation process beyond local and provincial boundaries.

The World Heritage Convention Act, 49 of 1999, does not prescribe who the stakeholders of a world heritage site would be, although it does require management authorities to include 'procedures for public consultation' (Republic of South Africa 1999). However, the Act makes provision in section 4 for decision-making that considers the 'interest, needs, and values of all interested and affected parties' (Republic of South Africa 1999). One of the purposes of this Act is to incorporate the World Heritage Convention that provides for the protection of cultural and natural heritage into South African legislation. These natural and cultural assets are

considered irreplaceable to a particular nation and humankind (World Heritage Committee 2008). Therefore, public participation for management plans may well extend beyond local, national, and international boundaries.

This active participatory approach in the management of protected areas by a diversity of stakeholders (Paterson 2009), together with the failure of protected areas to deliver on ecological, economic and social outcomes, may lead to the formation of coalitions or partnerships to facilitate improved management (Baghai et al. 2018). These partnerships may vary within the different governance models that have been discussed in section 3.2 and may allow for delegated management, co-management or the provision of financial and technical support (Baghai et al. 2018) within State-owned, private, community, or co-managed protected areas. Any agreements relating to such coalitions and particularly the use of protected areas and procedures for ongoing public consultation would be best placed within the protected area management plan.

As a result of the diversity of stakeholders who may hold interest or rights in protected areas, the question of whose voice is heard and whose interest will be served in sustainable tourism (McCool 2009), is often considered. Stakeholder groups may vary in their capacity to provide input in the management of protected areas, may have broad-ranging needs and values and, therefore, different expectations from protected areas (Thomas & Middleton 2003). A consolidated approach in terms of the planning and development of protected areas can facilitate economies of scale and increased beneficiation to stakeholders; this is only possible with appropriate and well-documented cross-sectoral partnerships and a cautious planning approach (Thomas & Middleton 2003). Another critical issue in managing relationships with the broader stakeholder base relates to the equitable access to benefits from use – primarily recreational use and resource use in protected areas (McCool 2009). The support for protected

areas by local communities often depends on the benefits they derive (Booth, Gaston & Armsworth 2010; Heagney et al. 2015; Abacheba 2017).

All of the above requirements are best placed in an appropriately consulted and adaptive management plan. The role of the management plan may, in this instance, include the resolution of conflict, appropriate beneficiation planning and serve as a repository for any legal agreements the partners of such programmes may enter. Should the management plan fall short in addressing these issues, it will fail both management authority and stakeholders, potentially exacerbating existing conflict. A 2018 study to determine priorities for protected area research highlighted the alignment and implementation of management plans with biodiversity and other objectives in the broader landscapes (Dudley et al. 2018) and, by implication, with diverse stakeholder groups.

3.4.4 Policy discourse

Various policies, norms and standards and guidelines exist in South Africa to ensure sustainable use of protected areas. In the case of world heritage sites, a variety of current and anticipated or proposed uses may be supported in the site, with the proviso that the State party or management authority ensures that such activities do not impact the Outstanding Universal Values of the site (World Heritage Committee 2008). These uses are conditional in terms of the Operational Guidelines for the Management of World Heritage Sites (2008) that it must support the broader conservation of both natural and cultural heritage with the active participation of communities and stakeholders. Therefore, it is anticipated that in developing the integrated management plan and the zonation plan of the world heritage sites, the management authority and stakeholders will jointly plan for such current and anticipated use.

In terms of the management of nature reserves, the Norms and Standards for the Management of Nature Reserves gazetted in 2016 provides limited guidance to the

management and planning of recreational use in South African protected areas. Provision is made for a mechanism to monitor and mitigate or rehabilitate impacts caused by visitor activities on other visitors and the environment (Department of Environmental Affairs 2016). At a national level, overarching policy guidelines include:

- Draft White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997.
- Bioregional Approach to South Africa's Protected Areas, 2001/2002. Community-Based Natural Resource Management Guidelines, 2003.
- National Framework for Sustainable Use, 2008.
- National Framework for Sustainable Development, 2008.
- A Framework for Developing and Implementing Management Plans for South African National Parks,

Although critical aspects of the above policy frameworks are discussed, a detailed consideration of these falls outside the scope of this thesis.

3.4.5 Resources

Protected areas in South Africa and elsewhere are under increasing pressure to find sustainable solutions to finance these areas, turning to innovative approaches to attract sustainable financial resources and ensure that these resources are used in the most effective way to achieve the best possible conservation outcome for the site (Lockwood, Worboys & Kothari 2012). The lack of resources and the conflicting expectations of how they should be used and distributed often create uncertainty between protected area managers, stakeholders or partners. The debate about sustainable financing of these areas is ongoing and innovative approaches to such investigated (Lausche 2011).

Furthermore, human resource capacity is often not optimal for effectively managing protected areas when considering the expanded role of these areas to include sustainable development, livelihoods, rights of local communities, ecosystem services and others. Typically managers are not expected to engage with such issues as well as provide leadership and enabling environment for the establishment of effective partnerships (WCPA 2015). Although some of these challenges can be partially addressed by developing partnerships with NGOs or private and community stakeholders, the resourcing of protected areas from a financial and human capacity perspective remains a challenge.

The protected area management plan provides a mechanism to build accountability into the management of protected areas. Based on the strategic direction of the protected area, specific programmes identified in the plan and operational requirements assist with management motivations and prioritisation of financial resources and provide indicators to all stakeholders that they are spent appropriately. The plans can contribute to capacity building, future thinking, and management continuity programmes in terms of human resources.

3.4.6 Multi-directional interaction between the management plan and the Policy arrangement approach

The interactions between the management plan and the four elements of the Policy arrangement approach, namely, 1) rules of the game (legislation), 2) Resources (funds and expertise), 3) Actors and Coalitions (stakeholders and partnerships) and 4) Policy discourse (policies) are illustrated in Figure 3.1.
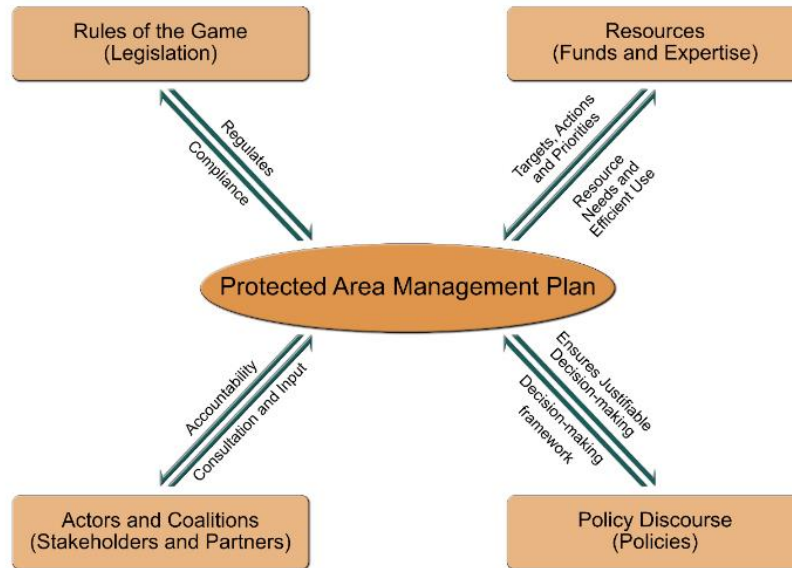
Figure 3.1. Schematic representation of the multi-directional flow between the protected area management plan and the four elements of the policy arrangement approach (Author's work, with the four elements adapted from the policy arrangement approach (Liefferink 2006)).

From a legislative perspective, the management plan serves as a repository for the plethora of legal requirements, regulating the content of management plans and, ultimately, the management of protected areas (Goosen & Blackmore 2019). Legislative requirements must be incorporated to ensure that they are prioritised and complied with through an adaptive management approach that facilitates implementation, monitoring and reporting (Department of Environmental Affairs 2016).

In terms of the second element of the Policy arrangement approach, the management plan provides a mechanism to ensure that available resources are allocated and spent efficiently (Figure 3.1; Cowan & Mpongoma 2010). Since public funding, as well as in some instances, non-public funding is used in managing State protected areas. The management plan provides a mechanism to monitor and report resources allocations based on specific targets and actions

to achieve the strategic direction and provides the basis for budgets and indicators that such finances are correctly spent (Cowan & Mpongoma 2010).

The third element of the Policy arrangement approach considers the stakeholders and partnerships that may develop when managing protected areas and drafting and implementing protected area management plans. In South Africa, NEMPA (Section 19 (2)) requires the developers of a management plan to consult relevant organs of State, local communities, and interested and affected parties (Republic of South Africa 2003).

Visitor recreational could potentially impact the natural and cultural values of the site and may also affect the quality of experience of other visitors (Blackmore 2020a,b). As a result of broad-ranging stakeholder interest and expectations regarding the recreational use of protected areas (Manning 2002), management authorities must be clear and concise in how decisions will be taken and conflicts resolved. As the general public does not always have direct access to the policies of the management authority, the management plan provides such information to any interested and affected party.

The fourth element of the Policy arrangement approach is the policy discourse relevant to the use of protected areas in South Africa. In South Africa, national environmental policies include the White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity, Bioregional Approach to South Africa's Protected Areas and Community-Based Natural Resource Management Guidelines. The drafting of management plans incorporates principles from these high-level policies and ensures that management decisions are based on such policies. Several frameworks for governance quality assessment exist, for example, the IUCN Guideline for the Governance of Protected Areas (Borrini et al. 2013) and the IUCN Green List Standard for protected areas (Hockings et al. 2019). A detailed analysis of such frameworks falls outside the scope of the present study; however, a brief assessment of such frameworks provided the basis for the consolidated framework recommended below.

3.4.7 Principles for the sustainable and ethical use of protected areas

Similar to the legal requirements for protected area management and management plans (Goosen & Blackmore 2019), principles for sustainable use of these areas are mostly fragmented and not readily available to guide managers in their decision-making. Many of these principles focus on sustainable tourism and do not necessarily consider the broader context of long-term protected area sustainability.

The IUCN classification of protected areas promotes the '75 % rule' in multiple-use protected areas (Day et al. 2012). The rule states that the primary objective of a protected area should apply to at least three-quarters of the protected area. In so doing, it allows for up to 25 % of land or water within a protected area to be managed for purposes other (secondary uses) than that for which the protected area was set aside. The application of the 75% rule is conditional on the secondary uses being compatible with the primary objective of the protected area (Day et al. 2012).

When considering sustainable and ethical use of protected areas, management authorities must ensure that decision-making is justifiable. Based on the previous discussions, essential questions that may arise in making 'use related' decisions are:

- What will the impact be on the purpose and values of the protected area?
- How will the decision influence the ecological integrity of the ecosystem?
- Who will benefit from the use, and how substantive will this benefit be?
- Is it ecologically, financially and operationally sustainable?
- Can innovative approaches such as temporal zoning be utilised to mitigate adverse impacts?

As discussed in the introduction, the management plan with the zonation plan may clarify instances where conflicting visitor needs must be considered (Blackmore 2020a,b). In some instances where two user groups' conflicting recreational use exists, the activity may be

considered if adequate mitigation measures such as temporal zonation is provided for in the management and zonation plan (Blackmore 2020a,b). Figure 3.2 shows a recommended decision-making framework to resolve desirable but conflicting uses based on the prevailing legislative requirements and best practice.

Figure 3.2. Framework for the sustainable and ethical use of protected areas and the resolution of potentially conflicting but desirable uses in South Africa (Author's work)

3.4.7.1 The Constitution

Göpel (2010) stated that the sustainability concept was embedded in the constitutions of many countries. This constitutional provision or provisions is commonly referred to, particularly in South Africa, as the 'Environmental Right'. Despite this, at a policy-making level, clear and

guidance to the question of sustainability considered in terms of intergenerational time scales seldom exists (Göpel 2010).

The South African Constitution, specifically the Bill of Rights, provides all South Africans with the right to a protected environment (Republic of South Africa 1996). This Right forms the basis for the management of protected areas (Goosen & Blackmore 2019). It should remain a key consideration in making use of decisions that can potentially affect the long-term persistence of protected areas. The Bill of Rights further makes provision in 24 (b) 'to have the environment protected for current and future generations'. Incumbent on this is that impacts resulting from use should not only be considered for the immediate and medium-term. Cumulative impacts (taking into consideration other uses) and consequences for the next and all subsequent future generations must be investigated (Leung et al. 2018). Therefore, the protected area management plan must ensure that this Right is considered and that decisions on the recreational use of protected areas do not compromise this Right for future generations.

3.4.7.2 South African legislation and international environmental instruments

South African legislation and international environmental instruments related to the management of protected areas place onerous requirements (in the realm of long-term persistence and sustainability of protected areas) on custodians of these areas (see Chapter 2). For these requirements to be complied with and maintained over time, the management plan should provide a consolidated framework based on these requirements that should be easily trackable, enabling lower-level operational decisions relating to recreational use in protected areas or guides higher-level strategic direction for the use of a particular protected area.

Both the South African legal framework and the Environmental Rights for current and future generations in the Constitution incorporates the principles of ecological integrity, the long-term sustainability of the protected area, the legal rights of rightsholders and serving the

interest of broader society. These principles are embedded in both the South African Constitution as well as in its legislative framework.

3.4.7.3 Ecological integrity

The importance of 'intactness' or ecological integrity of ecosystems has wide recognition, and intact ecosystems are decreasing globally (Plumptre et al. 2019). In the South African context, NEMPA recognises the importance of ecological integrity by incorporating it in Section 17 as one of the purposes for the establishment and function of a protected area. Therefore, the protected area management must incorporate ecological integrity as a consideration in all management activities, including in decisions relating to the use of protected areas. The management plan provides a mechanism to consolidate these and other requirements for implementation. NEMPA defines ecological integrity as 'characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes' (Department of Environmental Affairs 2014).

Notwithstanding, contradictory definitions and methods to accurately measure impacts and assess ecological integrity exist; some scholars argue that the pursuit of developing reliable and defendable measures often fails because of ecosystems being simply 'too dynamic in space and time' (Shultis & Way 2006; Rohwer & Marris 2021). These contradictory definitions and methods may significantly hinder the application of this principle in the management of protected areas. Management and specialists may, in certain instances, be required to make informed value-judgements that will concurrently include consideration of the range of principles required by the legislative and policy frameworks and in the absence of sufficient scientific knowledge (Elliott 2019). When such value-judgements are required, Elliott (2019) argues that they need to be transparent, reflect social and ethical priorities and be informed by

effective consultation with affected stakeholders. All of these requirements can be facilitated through a protected area management plan.

3.4.7.4 Long-term sustainability of the protected area

The long-term persistence and sustainability of a protected area are a consequence of various interrelated variables (Cumming et al. 2015), namely:

- Sufficient and sustainable funding to effectively manage the protected area;
- the protected area and its operations are considered to be socially just by key stakeholders and communities; and
- effective conservation outcomes in protecting the values and achievement of conservation targets (Leung et al. 2018).

To ensure the requirements mentioned above are achieved for a protected area, a robust management plan that 1) sets the strategic direction, 2) determines conservation targets and priorities, 3) determines financial requirements and 4) makes provision for public consultation, provides a roadmap for the achievement of a sustainable protected area, and include monitoring, reporting and adaptive management embedded in the management cycle.

Stakeholder support or the protected area ability to contribute socio-economic-ecological benefits to society and communities contribute to the social justness of the protected area (Oldekop et al. 2016). Although arguments contrary to this exist, Oldekop et al. (2016) highlighted that positive social outcomes often contribute to effective conservation outcomes. These social outcomes may include but are not limited to economic benefits, capacity building and other benefits linked to ecotourism programmes in the protected area (Leung et al. 2018).

Globally significant degradation of biodiversity is taking place inside many protected areas (Oldekop et al. 2016), sometimes as a result of visitor activities. There is also the potential for these activities, if appropriately managed and impacts mitigated, to contribute to

social and economic benefits to society as a whole, thereby supporting the long-term persistence of protected areas (Leung et al. 2018). The potential beneficiation from recreational non-consumptive use of protected areas can facilitate and enhance economic benefits to communities, people's well-being, and attitudes towards protected areas (Duffus & Dearden 1990; Leung et al. 2018).

3.4.7.5 Legal rights of rightsholders

The South African legal framework and best practice dictate that protected area support and effective management of these areas are best served where neighbouring communities recognise the importance of these areas, benefits from them and are actively involved in the management of protected areas (Department of Environmental Affairs 2016). The protected area management planning process establishes a basis for managing the protected area by these communities and other stakeholders or interested and affected parties (Cowan & Mpongoma 2010). Regulations published under NEMPA make provision for establishing advisory forums where ongoing consultation beyond the protected area management planning process can be facilitated (Republic of South Africa 2004).

There may be several circumstances, because of either the land restitution process provided for in the Restitution of Land Rights Act 22 of 1994, or the incorporation of private land into existing State-owned protected areas through a specific co-management agreement, where a particular community or private individual may be the landowner of a portion or the full extent of the protected area. In such instances, the legal agreements and legislative requirements may dictate a specific beneficiation strategy directing benefits to these landowners (Republic of South Africa 1994), whose rights are rooted in law rather than best practice. Given that these agreements stand to direct decisions relating to management

interventions and protected area use, they need to be incorporated into and give effect to the management plan.

3.4.7.6 Interest of broader society

The social, economic, and ecological influences of protected areas are not evenly distributed in that they gradually lessen from local to a national scale. Ecological influences, for example those that cause dangerous game to escape, may affect the neighbouring communities (with distance of impact depending on the species), whereas economic and social influences primarily focus on local community empowerment with a more direct influence on direct neighbours. These influences are also seen to vary amongst local communities abutting or are located near a protected area (Oldekop et al. 2016).

Ideally, the management of the protected area should seek to provide the greatest range of benefits (tangible and intangible) to the broadest range of stakeholders, which, in turn, will ensure greater support and ultimately contribute to the sustainability of the protected area. To ensure that the interest of the broader society is served, stakeholders are consulted in management planning and decision-making. The management plan must provide a coordinated policy framework and procedures for public participation, as required by section 41 of NEMPA, and ongoing consultation in managing the protected area as provided in the NEMPA Regulations.

3.4.7.7 Protected area value and purpose

Values of a protected area refer to those attributes of the area that must be protected and range based on the site-specific context to include natural, cultural, social and economic values, and provides the basis for developing the strategic direction of the protected area (Department of Environmental Affairs 2016).

The importance of protecting these values can be illustrated by the case study of a recreational use request in the uKhahlamba Drakensberg Park (UDP), a component of the Maloti Drakensberg Park Transboundary World Heritage Site. Wilderness areas are a scarce and globally declining resource (Allan, Venter & Watson 2017). In contrast, the tourism sector is globally growing (Spenceley & Snyman 2017). These dynamics may present a scenario for a potential opportunity or a potential threat. Buckley (2000) argues that wilderness is 'the most fragile of environments' and that 'small impacts can cause serious damage'. Should management strategies relating to the recreational use of these areas fail to consider the full extent of the potential impacts on the wilderness value, a decline of this value may represent an irreparable loss of Outstanding Universal Value for a world heritage site (Gogarty et al. 2018). Such an outcome would effectively deprive future generations of equivalent enjoyment of the wilderness and its values.

The draft Integrated Management Plan for the UDP highlights the importance of the wilderness value that incorporates:

i)   experiential, the direct value of the wilderness experience;

ii)   the value of wilderness as a scientific resource and environmental baseline;

iii)   the symbolic and spiritual values of wilderness to the nation and the world; and

iv)   the value of wilderness as a commodity or place that generates direct and indirect economic benefits (Ezemvelo KZN Wildlife 2020).

One of the specialised stakeholder groups of this protected area is an active gliding community who requested to access the world heritage site and enjoy the wilderness values. This request required permission to use alternate access points with gliders and fly over wilderness areas, an activity that was not provided for in the zonation of the integrated management plan (Ezemvelo KZN Wildlife 2012). Based on the previous discussions, the management authority's assessment of this activity had to consider the appropriateness of the

activity. Specifically, the impact it would have on other wilderness users and the wilderness values, along with a range of other factors such as the legal limitations of flying within the airspace above a world heritage site (Ezemvelo KZN Wildlife 2012). Section 47 of NEMPA defines the world heritage site to include the air space above it to a level of 2 500 feet above the highest point of the site, allowing the management authority to, where appropriate, provide for flight paths in instances where such access is granted as well as specific conditions relating to such access.

Section 24 of the World Heritage Convention Act specifies the requirement for an integrated management plan for world heritage sites as well as the content of this plan. This section further stipulates, for inclusion into the integrated management plan, any permissible activities and associated conditions, prohibition of certain activities and control of the frequency, size, impact or manner of conducting permissible activities (Republic of South Africa 1999). The achievement of this by the integrated management plan may be difficult, if not impossible, due to the broad-ranging interest for use in the world heritage site. The role of the integrated management plan would, therefore, be to provide a framework for decision-making within which managers may draw on to decide on the permissibility of novel activities as they are encountered.

NEMPA sought to consolidate some of the provisions for world heritage sites into the Act. Chapters 1 and 2 of NEMPA applies to world heritage sites, thus excluding, in particular, Chapter 3 that provides for the management of protected areas and associate management plans. Thus, the requirements for the management and management plans of world heritage sites are limited to the WHCA and UNESCO's operational guidelines for the implementation of the World Heritage Convention. Management of all world heritage sites in South Africa (as is the case with the uKhahlamba Drakensberg Park World Heritage Park), therefore, must

consider and include into the Integrated Management Plan all relevant provisions from both these statutes.

Section 41 (g) of NEMPA prescribes that a protected area must have a zoning plan, and such must be embedded in the protected area management plan. The purpose of the zonation plan is to define areas that need to be managed in a particular manner, for example, a hunting zone or an area being assigned a specific conservation objective (e.g. a fire exclusion zone). Novel activities would need to be assessed against the purpose of the protected area and the conservation objective of the zone in which the activity may take place.

Returning to the request to access the uKhahlamba Drakensberg Park with gliders included flying in areas zoned as Wilderness, with wilderness values being part of the site's Outstanding Universal Value. The conservation objective for this zone is to provide, amongst others for 1) protection of the wilderness core for visitor experience, protection of proclaimed wilderness areas, 3) protection of priority species, habitats and cultural heritage (Ezemvelo KZN Wildlife 2020). With due consideration to the above-mentioned legal requirements, the Park's Integrated Management Plan, the Outstanding Universal Value of the Park and the conservation objective of the specific zone, it was concluded by the Management Authority that gliding might be accommodated under certain conditions. These conditions were included in an operational 'gliding policy' and which was included in the Parks Integrated Management Plan (Ezemvelo KZN Wildlife 2012).

Chapter 2 highlighted the broad-ranging purposes for protected areas provided for in Section 17 of NEMPA, whereas Section 40 of NEMPA requires the management of a protected area to be directed at achieving the purpose for which it was declared and according to the management plan (Republic of South Africa 2003). It is, however, recognised that the historical purpose for a protected area might change with the passing time and the realisation of new conservation priorities. By including a revised purpose in the protected area

management plan, the plasticity of the 'protected area purpose' may be catered for (Chapter 2). The management plan, together with the zonation plan, provides a mechanism for supporting these decisions, ensuring that it is legally compliant, justifiable, and based on consultation with relevant stakeholders. In the absence of a management plan or a clearly defined purpose of the protected area, the broad-ranging purposes from Section 17 of NEMPA would apply. This list of purposes would need to be considered, in this circumstance, when making decisions on allowing particular activities within certain zones of the protected area.

3.4.7.8 Protected area objectives and zonation

The changing role of modern protected areas (Thomas & Middleton 2003; Watson et al. 2014) as a vehicle for social and economic development has been discussed in section 3.2.2. Clear objectives need to be included in the management plan to direct strategies and actions relating to conservation, social and economic aspects (Thomas & Middleton 2003) to accommodate this emerging role of protected areas. As a consequence, trade-offs between multi-faceted or potentially conflicting objectives may be required. The potential impact of recreational use on a particular protected area objective requires concurrent consideration of the protected area's values and purpose as dictated by NEMPA and relevant norms and standards (Chapter 2; Republic of South Africa 2003; Department of Environmental Affairs 2016).

Globally, with the exception of 2020/2021 as a result of Covid-19 impacts (Spenceley et al. 2021), protected areas are experiencing increased visitation by the public, partially due to urbanisation and people's need to escape from urban environments to experience nature's health and spiritual benefits (Eagles et al. 2002; Bell et al. 2007). With increased visitation, there is also a diversification in the types of activities that visitors want to experience in the protected area setting (Bell et al. 2007; Leung et al. 2018).

The management plan and the zonation plan can reduce user conflict, which may be achieved through spatial or temporal zoning (Blackmore 2020a,b). Beyond the zonation plan, activities have to be measured against the guiding principles set out in the protected area management plan, including the principles described in this study. The management plan, together with the zonation as provided for in section 41 of NEMPA, provides a mechanism for supporting justifiable protected area use decision-making.

3.4.8 The role of the management plan

As custodian of protected areas for current and future generations, the State must demonstrate accountability in the management of protected areas (Goosen & Blackmore 2019). Individuals in broader society often hold diverse values and expectations relating to protected areas. Blackmore (2020a,b) highlighted the need, in considering decisions on the use of protected areas, for a 'transparent, uniform and predictable outcome or decision, which is derived irrespective of the personal biases, values, or subjective judgements of decision-makers. The management plan represents the *pro forma* which directs the management authority's activities. It serves as a mechanism to hold the authority accountable for decisions and actions that are taken. In so doing, the management plan provides the omnibus to ensure the protected area is managed in the best interest of current and future generations and guides management where conflicting legislative requirements may arise.

The World Heritage Convention Act 49 of 1999 makes provision for securing both natural and cultural heritage, international best practice dictates that the management plan should serve as a mechanism to integrate these two aspects, as per the United Nations Educational, Scientific and Cultural Organization (UNESCO) Connecting Practice project, which sets out to achieve an integrated consideration of natural and cultural heritage under the World Heritage Convention (Leitão et al. 2018). An example of this integration can be found

in the uKhahlamba Drakensberg Park, the South African component of the Maloti-Drakensberg Park Transboundary World Heritage Site, KwaZulu-Natal, South Africa. The Park was initially listed as a mixed world heritage site in 2000 to recognise its natural and cultural Outstanding Universal Values (OUV) (Bainbridge 1999; Ezemvelo KZN Wildlife 2020).

The Integrated Management Plan makes provision for several objectives, setting out a specific high-level objective for each of these aspects, including natural and cultural aspects. In terms of protecting the natural values, the management plan objective is to 'conserve the full range of biodiversity in the UDP, including the natural processes that maintain it' (Ezemvelo KZN Wildlife 2020). The high-level objective for protecting the cultural values is to 'implement effective conservation management and public appreciation of all cultural heritage resources within the UDP following statutory regulations' (Bainbridge 1999; Ezemvelo KZN Wildlife 2020). It is therefore incumbent on the Integrated Management Plan to ensure strategic and operational integration of such matters.

The following example highlights the critical role the management plan plays in resolving potential conflict between pieces of the equally applicable legislation. The National Environmental Management: Integrated Coastal Management Act, 24 of 2008 (NEMICA), provides for, among other things, the management of estuaries. In some instances, a protected area may contain estuaries either entirely or partially (Goosen & Blackmore 2019). Section 33 of NEMICA requires that all estuaries are managed, and that estuary management plans are to be developed in line with the National Estuarine Management Protocol. The protected area and the estuary therein may be best placed to achieve key provincial or local priorities that may not necessarily be recognised or given adequate weight at a national level. In these circumstances, given that both NEMPA and NEMICMA claim superiority, in the absence of a legal resolution, it would be obligatory for the protected area authority to resolve the conflicts so that both pieces of legislation are complied with. In these circumstances, incorporating the resolution into the

management plan would ensure that this outcome (i.e. compliance with both pieces of legislation) is given effect (Goosen & Blackmore 2019).

3.5 Conclusions

As a result of the changing role of protected areas, increased and diversified interest and rights from stakeholders, and increasing anthropogenic pressures and emerging threats, scientific, ecological, socio-economical and ethical aspects must be considered in managing protected areas. As a result of these complexities, the role of the management plan has become critical and provides for:

- From a legislative perspective, the management plan serves as a repository for the plethora of legal requirements, regulating the content of management plans and, ultimately, the management of protected areas. In turn, the management plan through implementation, monitoring and reporting facilitates compliance with the legislative framework.

- Establishes a framework of principles that guide decision-making and ensure the long-term persistence of the protected area, providing specific guidance where trade-offs between specific objectives are required.

- Enhance transparency and accountability by the state or management authority, ensuring that it fulfils its fiduciary duty in terms of public trust.

- Whereas management plans cannot be expected to cover explicitly every emerging circumstance – these principles should provide the necessary guidance to decision-makers for unique circumstances and decision making.

- A consolidated approach in terms of the planning and development of protected areas can facilitate economies of scale and increased beneficiation to stakeholders; this is only possible with appropriate and well-documented cross-sectoral

partnerships and a cautious planning approach. All of the above requirements are best placed in an appropriately consulted and adaptive management plan.

- It provides a mechanism to ensure that available resources are allocated and spent efficiently and therein provides for a tractable monitoring and reporting process to ensure public and private funds are appropriately used.

- Provides the basis for budgets and indicators that such finances are correctly spent.

- The management plan provides a platform for consultative engagements with stakeholders with the resultant ongoing cooperative relationship.

- Finally, the management plan ensures the long-term sustainability and protection of the area's values and purpose.

In conclusion, protected area managers face multiple complexities in ensuring the long-term persistence of these critical biodiversity areas, often having to achieve multiple and sometimes conflicting objectives (Leung et al. 2018). A robust management plan remains the most relevant and expedient planning tool to address such complexities.

3.6 References

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CHAPTER 4

When a long-term public interest decision stands to undermine the integrity of a protected area and South Africa's commitments to transfrontier conservation initiatives: The case study of Tembe Elephant Park

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4.1 Abstract

Background: Tembe Elephant Park (TEP) is situated on the northern border of the KwaZulu-Natal Province of the Republic of South Africa with Mozambique. The Park forms part of a trilateral transfrontier conservation initiative between South Africa, Mozambique and eSwatini. In 2018, the Department of Environmental Affairs received an application for the substantial upgrade of border control infrastructure along the South African-Mozambique border, in the northeast of KwaZulu-Natal.

Objectives: This investigation aims were two-fold. The first was to determine the consequences when a long-term public-interest decision potentially isolates a protected area from its transfrontier context, and the legislative weight of the management plan in mitigating such consequences. The second was to determine what role the management plan, a long-term planning document, plays in mitigating the impacts of or responding to current emerging threats and opportunities.

Method: A literature review and a case study of a development application in the area bordering the Tembe Elephant Park was used to determine how a long-term public interest decision may challenge the integrity of a protected area and South Africa's commitments to transfrontier conservation initiatives with neighbouring countries. Discussions centred on the four elements, namely, 1) rules of the game (legislation), 2) resources (financial and expertise), 3) actors and coalitions (stakeholders and partnerships), and 4) policy discourse (policies).

Results: Transfrontier conservation areas, because of their cross-cutting nature, face several challenges from a misalignment of policies from two or more countries. Such misalignment may be complex and, as a result, the consequences for the conservation of biodiversity, benefits to neighbouring communities and transfrontier conservation efforts often remain undetermined. Without an adaptive management approach, the management plan will ultimately not facilitate an effective response to emerging opportunities and threats. In Tembe Elephant Park, the phased approach to the decision to upgrade border infrastructure without due consideration of cumulated impacts of later phases challenges the integrity of this protected area and South Africa's commitments to transfrontier conservation initiatives with Mozambique.

4.2 Introduction

4.2.1 Background to transfrontier initiatives

South African legislation provides a range of protected area categories with different protection levels and unique characteristics. Section 9 of the National Environmental Management: Protected Areas Act, 57 of 2003 (NEMPA) and subsequent amendments sets out nine types of protected areas ranging from special nature reserves, nature reserves, world heritage sites and forest nature reserves and several others.

Notwithstanding the policy framework to provide for transfrontier conservation areas being in place, legal provision and consolidation of requirements for the management of transfrontier areas were first published in 2019 with the publication of the National Environmental Management: Protected Areas Amendment Bill. From a legislative perspective, there was insufficient guidance on the management of such areas or the structures needed to support them. Although this Amendment Bill has not been finalised and brought into law, the broader scope of transfrontier conservation areas, at least from a legislative perspective, is still lacking, and guidance for managing such sites dependant on the policy and high-level agreements between countries. As a consequence, these areas may be subject to multiple complexities, including legal and policy aspects from two or more countries, establishing the need for multi-lateral agreements to achieve harmonisation.

Transfrontier conservation area initiatives evolved as a strategy to achieve both wise-use and long-term protection of large intact landscapes (both natural and cultural) and ecosystems that may extend beyond a country's jurisdiction, ultimately facilitating increased benefits to local communities (Zunckel 2014). In 1992, The South African Development Community (SADC) entered into a treaty to facilitate regional integration and poverty alleviation in Southern Africa, consisting of several protocols.

One such initiative was the Protocol on Wildlife Conservation and Law Enforcement (1999), which made provision for Transfrontier Conservation Areas (TFCA). The Protocol defined TFCA's as areas where a 'component of a large ecological region straddles the boundaries of two or more countries encompassing one or more protected areas as well as multiple resource use areas' (Southern African Development Community 1999).

Initially, the establishment of transfrontier conservation areas aimed to achieve five high-level objectives that are, 1) conservation of biodiversity, 2) socio-economic development, 3) regional cooperation, 4) collaboration between nations on environmental issues, and 5)

establishment of wildlife corridors (Hanks 2003). These objectives correlate with the broad-ranging purposes stipulated in section 17 of the National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA) that range from biodiversity and ecosystem conservation to sustainable use and human, social, cultural, spiritual, and economic development (South Africa 1998). Notwithstanding protected area expansion and transfrontier conservation opportunities considered critical priorities actively pursued by conservation entities, these opportunities may be hampered due to the often ignored regional and global contexts in which they are located (Ramutsindela 2007).

4.2.2 Conservation areas that traverse international borders

Border areas are often highly diverse and of high natural, cultural and historical significance, and as a result, may have significant tourism potential from both a natural and cultural perspective (Więckowski 2011). Globally, several effective conservation outcomes highlighted the success of transboundary efforts, notably the recovery of large carnivore species such as the expansion of wolves (*Canis lupus*) into central and western Europe, where they were previously absent for decades (Linnell et al. 2016). This initial successful conservation effort was substantially countered with the development of extensive border barriers, directly impacting the connectivity of protected areas and species conservation (Linnell et al. 2016).

The 1979 Bonn Convention (Convention on Migratory Species of Wild Animals) recognise the need for cross-national boundaries of states in the protection of migratory species. The Convention makes provision in Article II (3) for agreements between countries for the conservation of such species (United Nations Environment Programme (UNEP) 1979). In the case of a transboundary conservation area or park, the protected area management plan should include the obligation of any such agreements.

Governments are sensitive to incursions, risks and threats that can influence the integrity of state territories (Anderson 2013), causal to barriers along international borders increasing, which may inadvertently have considerable impacts on biodiversity (Trouwborst, Fleurke & Dubrulle 2016). Linnell et al. (2016) state that research relating to borders and border barriers considers the physical impacts of such infrastructure on individuals, species and populations of wildlife, such as to 'cause mortality primarily, obstruct access to critical seasonal resources', amongst others, and to limited extent research considers impacts on the 'Transboundary Paradigm'.

Barriers established to secure these sensitive areas may inherently limit conservation outcomes by isolating and fragmenting transfrontier conservation efforts (Liu et al. 2020). For example, several types of barriers, such as various designs of game fences or wall-type structures, may limit permeability for certain species depending on size. By contrast, transfrontier projects aim to expand, open ecosystems, encourage wildlife movement and allow cross-jurisdictional tourism opportunities.

4.2.3 Tembe Elephant Park

In 1983 the Tembe Elephant Park (TEP) was established on communal lands owned by the Tembe Traditional Authority and situated on the northern border of the KwaZulu-Natal Province of the Republic of South Africa with Mozambique (Figure 4.1; Ezemvelo KZN Wildlife 2017). The Park forms part of a trilateral transfrontier conservation initiative between South Africa, Mozambique and eSwatini, and is a core conservation area of the Combined Lubombo Conservancy Goba and Usuthu-Tembe-Futi TFCA (previously the Usuthu-Tembe-Futi TFCA).
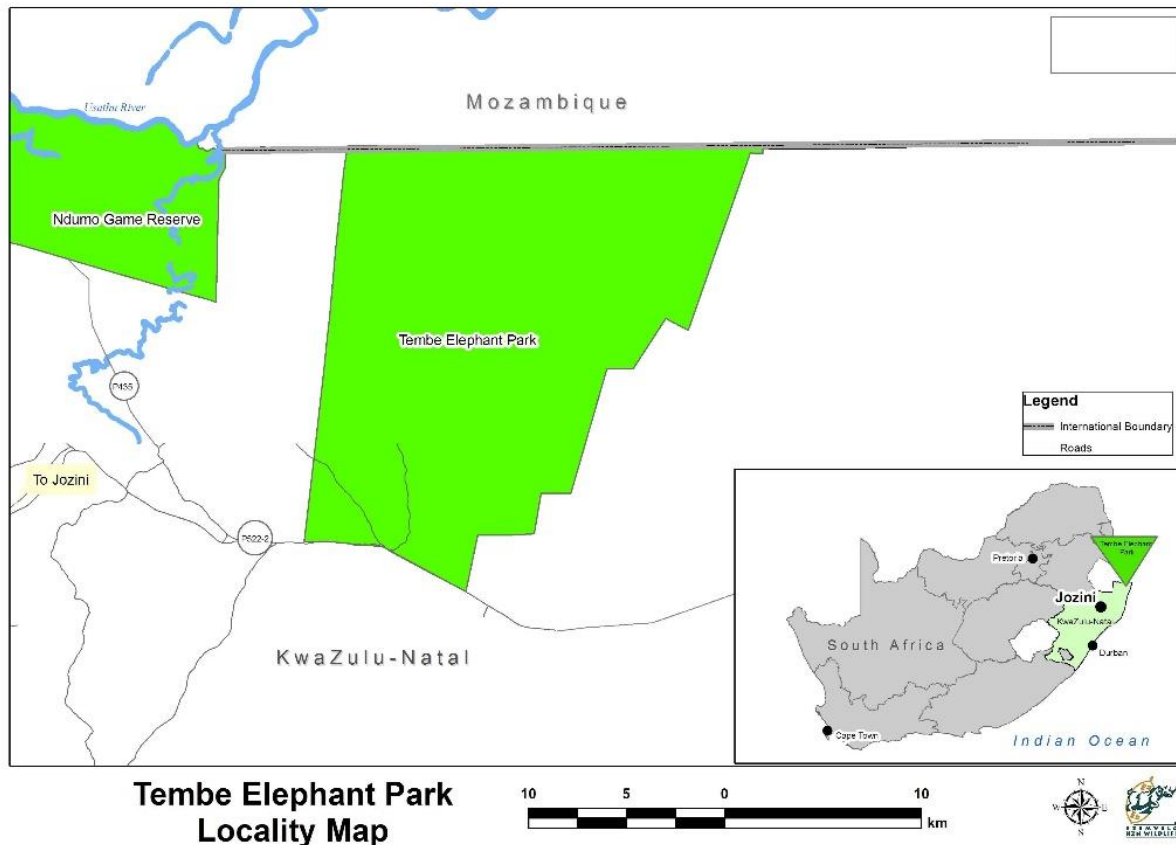
Figure 4.1: Location of Tembe Elephant Park in KwaZulu-Natal Province, South Africa. Source: Ezemvelo KZN Wildlife (2017).

The protected area protects significant natural, ecosystem service, eco-cultural tourism, cultural and socio-economic values. The initial purpose of the protected area was to protect local communities from free-roaming elephants (Goosen & Blackmore 2019). The purpose has subsequently been extended as per NEMPA section 17 to protect additional significant biodiversity aspects such as sand forests (Matthews et al. 2001). Furthermore, this expanded purpose highlights the anchor role of the Park in local, regional, national, and international conservation and economic initiatives (Ezemvelo KZN Wildlife 2017), primarily by creating and augmenting regional tourism initiatives and providing sustained environmental goods and services.

The Lubombo Ndumu-Tembe Futi Transfrontier and Resource Area Protocol, adopted by the South African and Mozambique government in 2000 (Republic of South Africa and Republic of Mozambique 2000), allows South Africa and Mozambique to pursue management objectives in the area jointly. The principal objective stated in Article 2 of this Protocol is to 'develop the Area in a sustainable manner for the benefit of both countries and its citizens and to prosper jointly from this development' (Republic of South Africa; Republic of Mozambique 2000). The Protocol seeks to realise economic returns from tourism, safeguard ecological integrity, explore opportunities for cross border movement and visa-free reserves, and benefit and uplift the communities in the area. The achievement of these objectives for the greater area is critically dependent on core areas, such as Tembe Elephant Park. Figure 4.2 shows the transfrontier context of Tembe Elephant Park.

Figure 4.2 Transfrontier context of Tembe Elephant Park, KwaZulu-Natal Province, South Africa. Source: (Ezemvelo KZN Wildlife 2017).

From the above, it is clear that transfrontier conservation areas potentially provide opportunities to increase protected area effectiveness, sustainability and maximise community beneficiation for neighbouring communities and land claimants (eds. Andersson et al. 2017). These opportunities may be linked to economies of scale in small to medium-sized protected areas, such as Tembe Elephant Park, which may require higher financial inputs while providing limited opportunities for income generation and community beneficiation. However, large, heterogeneous ecosystems underpin critical ecosystem services and potentially increase income generation opportunities through eco-tourism (Hanks 2003), and these increased opportunities could therefore be unlocked through the transfrontier conservation strategy.

4.2.4 Border wall development application

In January 2018, the South African Department of Public Works initiated a development application for the planning and design for the maintenance and upgrade of the patrol roads and fencing on borders between South Africa, Swaziland and Mozambique. This project involved several other departments, including the then Department of Agriculture, Forestry and fisheries and the South African National Defence Force. The focus of this project (Royal Haskoning DHV 2018) was to control the movement of elephants, livestock, stolen vehicles, contraband and people through the establishment of a border barrier and other supporting infrastructure. Although the pre-consultation and the development application itself did consider the various environmental and legal considerations, the initial planning documents and the development application details did not refer to the protected area management plan for Tembe Elephant Park.

4.2.5 Tembe Elephant Park Management Plan

The Tembe Elephant Park management plan was adopted by the then Member of Executive Council of the provincial Department for Economic Development and Environmental Affairs and Tourism in 2017. Although initial discussions relating to the upgrade of the border wall date back many years, the plan did not explicitly address this particular issue. Therefore particular aspects of the plan that supported the transfrontier conservation efforts and provincial protected area expansion targets may have been compromised in the longer term. Furthermore, some of the Park values that include those attributes that need to be protected have been left vulnerable in the process. The most critical of these values that may have been affected by the above would be the Tembe Elephant Park being the core of the transfrontier conservation area, which would strive to open up the movement of game and tourists in its latter phases between South Africa and Mozambique.

The most relevant of these values as per the protected area management plan include:

- Border identities and character of the Thonga, Swazi and Zulu cultures
- Frontier Lifestyle of the local people with kin on both sides of the border and trade across borders, border markets etc.
- TEP is a core protected area within the Maputaland Centre of Plant Endemism, the Combined Lubombo Conservancy-Goba and Usuthu-Tembe-Futi TFCA and the greater Maputaland-Pondoland-Albany system (Steenkamp et al. 2004).

These values also support the purpose of the Park, which is the aspect of the Park that needs to be protected in line with the National Environmental Management: Protected Areas Act No 57 of 2003 in section 17.

- play an anchor role in local; regional; national, and international economic and other relevant development and conservation initiatives;

- make available surplus game meat and controlled access to the Tembe people to specific natural resources within the area; and

- play an anchor role in local, regional, national and international economic and other relevant development and conservation initiatives (Ezemvelo KZN Wildlife 2017).

Interestingly these purposes may be the very aspects that could be impacted and compromised through the approval of the border infrastructure process, especially in the light of those focus areas of the development application highlighted in section 4.2.4. Furthermore, NEMPA may be creating contradictory purposes highlighting the role of a protected area as an anchoring role in local, regional, national and international economic and other relevant development and conservation initiatives (Republic of South Africa 2003). For a protected area to play an anchoring role in an economic development initiative on an international scale may be opposing the purpose stated in terms of conservation initiatives.

Furthermore, the management plan explicitly states as a high-level priority the 'forging of Transfrontier linkages between the TEP and the authorities and communities of the bordering Mozambique and Swaziland[1]' in line with the Combined Lubombo Conservancy-Goba and Usuthu -Tembe-Futhi TFCA biodiversity conservation and social development strategies (Ezemvelo KZN Wildlife 2017). Further to this, there may also be provincial and national protected area expansion targets affected by this project.

The management plan identifies several opportunities for expansion of the protected area:

- transfrontier linkages incorporating: the Ndumo Game Reserve, Tembe Elephant Park (in collaboration with the Mbangweni and Bhekabantu Communities), the Usuthu Gorge Community Conservation Area (CCA), and bordering areas in Mozambique.

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[1] This country has recently been renamed as 'eSwatini'.

- a community conservation area in the Muzi area adjoining the Park on its northeastern corner (uKhamba) and Mozambique. This would also assist with the effective establishment of a Transfrontier link with Mozambique; and

- Tshanini Bhekula Community Conservation Area to the south of TEP (Ezemvelo KZN Wildlife 2017).

The implication for these communities for beneficiation from these protected area expansion opportunities is unclear, as these could be affected by both the current development and the second phase, where impacts are not yet determined.

The current situation in terms of security is that immigrants often cross the international border illegally. Having said that these individuals seldom traverse the Tembe Elephant Park because of law enforcement efforts and vigilance maintained within the Park, based on the management plan requirement for the development and active participation in cross border security strategies (Ezemvelo KZN Wildlife 2017). The status quo may very well change with the implementation of the development project, and these impacts have to be considered. Furthermore, issues that have been identified in the management planning process to be addressed included cross border access and eco-cultural tourism as part of the transfrontier efforts. These are some of the critical issues that need consideration within the development application process.

As a result of their inherent complexities and crosscutting nature, transfrontier conservation areas face several challenges. This chapter sought to explore these complexities by way of a literature review and the case study of a development application in the area bordering the Tembe Elephant Park, KwaZulu-Natal, South Africa, a state-owned previously provincial protected area, restituted under South African legislation to the original owners and now owned by the Tembe community, co-managed with Ezemvelo KZN Wildlife. The aim was to determine how a long-term public interest decision may serve to challenge the integrity

of a protected area and South Africa's commitments to transfrontier conservation initiatives with neighbouring countries. The focus of this investigation was three-fold, 1) the impacts on transboundary conservation efforts when a protected area and the neighbouring community are isolated from its transfrontier context, 2) the legislative weight of the management plan in responding to emerging threats and opportunities, and 3) whether the management plan contributes to mitigating conflict relating to a development application in an area bordering the Park.

4.3 Methods

A literature review and a case study of a development application in the area bordering the Tembe Elephant Park was used to determine how a long-term public interest decision may challenge the integrity of a protected area and South Africa's commitments to transfrontier conservation initiatives with neighbouring countries. Discussions aimed to investigate the thematic elements adapted from the Policy Arrangement Approach viz. 1) rules of the game (legislation), 2) actors and coalitions (stakeholders and partnerships), and 3) policy discourse (policies), 4) resources (financial and expertise) adapted from Liefferink (2006). Since this investigation essentially provides an analysis of the policy and legal framework for transfrontier conservation areas, the use of this approach has been deemed appropriate as management plans can be contextualised within these elements. The analysis included an investigation of the relevant reports during pre-consultation and during the different phases of the development application to determine whether the management plan and the critical aspects contained in it as it related to the Tembe Elephant Park have been considered.

A critical focus area for research related to protected areas and conservation, in general, relates to bridging the gap between science and practical application (Dudley et al. 2018). For this reason, case studies have been used to reflect how these overarching principles can be

integrated into the practice of protected area management and planning and what the potential consequences are if integration does not take place.

4.4 Results and Discussion

4.4.1 Rules of the game (legislation)

Border areas, by nature, are subject to the legal frameworks of at least two separate countries. It is unrealistic that any country will be able to homogenise all aspects of their legislation and policies to another country (Sturza 2006; Mugadza 2019), potentially leading to inharmonious political, social and economic constructs. In such instances, there may be a need for harmonisation of these divergent jurisdictional and administrative frameworks. In the South African context, this harmonisation of biodiversity objectives is supported through the Protocol on Wildlife Conservation and Law Enforcement (1999). The Protocol allows for structures and strategies for the two countries to jointly pursuit TFCA outcomes.

In 2018 Department of Environmental Affairs received an application for the upgrade of border control infrastructure along the South African-Mozambique border, in the northeast of KwaZulu-Natal. This proposed development on the periphery of the northern boundary of the Park could significantly erode the protected area's integrity and reduce the transfrontier partners' ability to deliver on its stated objectives, particularly those objectives relating to cross border wildlife movement and sustainable tourism projects to support community beneficiation.

The Environmental Authorisation for this development application was issued, and this approval reflects this high-level priority of securing state territories in deeming the project necessary for 'fulfilling the constitutional mandate of a number of national and provincial government departments as well as the mandate of the South African National Defence Force in securing South Africa's borders, to protect its citizens and to prevent the spread of disease

as well as the illegal movement of goods and people' (Department of Environmental Affairs 2019). As this application will have residual impacts on biodiversity and potentially on the Tembe Elephant Park and transfrontier conservation efforts, a biodiversity offset has been proposed.

As this application will have residual impacts on biodiversity and potentially on the Tembe Elephant Park and transfrontier conservation efforts, a biodiversity offset has been proposed. The offset plan has considered various impacts and proposed actions to mitigate these impacts. An assessment of the following documents was used to determine whether the management plan, impacts on the Tembe Elephant Park and the transfrontier conservation area was sufficiently considered in the development application process:

- Planning & Design for the Maintenance and/or Upgrade of the Patrol Roads and Fencing on the Borders between RSA, Swaziland & Mozambique – Pre-application Consultation with the Department of Environmental Affairs.

- Various specialist studies including vegetation assessment and aquatic ecological assessments.

- Environmental Basic Assessment and Water Use Authorisation for the Proposed Planning and Design for the Maintenance and/or Upgrade of the Patrol Roads and Fencing on the Borders between RSA, Swaziland & Mozambique.

- The Basic Assessment Report.

- Department of Environmental Affairs, 2019, Environmental Authorisation in Terms of the National Environmental Management Act No 107 of 1998, Amended: Proposed Site Clearance for Planning & Design of Patrol Roads and Fencing on the Borders Between South Africa, Swaziland & Mozambique

- Proposed Border Patrol Road, Fence & Obstacle Barrier between South Africa, Swaziland and Mozambique within the KwaZulu-Natal & Mpumalanga Provinces. Biodiversity Offset Plan

An assessment of these reports indicated little consideration was given to the requirements, values and objectives in the protected area management plan and the potential impacts of the development application on the Tembe Elephant Park. Other aspects relating directly to impacts on the Tembe Elephant Park was excluded from this assessment and deferred for later consideration, and therefore the offsetting requirement may not address the full range of impacts on the area. The deferral may result in the permanent postponement of such considerations, therefore falling short of its initial intent.

4.4.2 Actors and coalitions (Stakeholders and partners)

Protected areas face growing demands on natural resources and shrinking financial resources (Weaver & Lawton 2017). To effectively deal with the complexities of such growing demands and lack of resources while ensuring public support for the protected area - an approach that provides tangible and intangible benefits to human society (Leung et al. 2018; Snyman & Bricker 2019) is needed for the protected area to stay relevant to broader society. These benefits can be improved by building effective partnerships and integrating protected areas into the broader planning landscapes (Thomas & Middleton 2003; Stolton et al. 2015). In Tembe Elephant Park, these tangible and intangible benefits can be provided and enhanced by integrating the Park into the Greater Lubombo Ndumu-Tembe Futi Transfrontier Conservation Area.

In its context as a core component of the transfrontier initiative, there are many roleplayers and stakeholders with interest in Tembe Elephant Park. These range from the Tembe community, who are the legal owners of the Park, the management authority,

neighbouring communities and cross-border communities, and interested and affected parties. The power relationships between such stakeholders vary significantly, as some are provided for in legal agreements, such as the co-management agreement between the landowners and the management authority of the Park.

The high-level agreement to remove the border barrier and specifically the veterinary fence for the management of disease to allow for the movement of wildlife and tourists raises some uncertainties relating to the distribution of benefits. The landowners' rights of the Tembe community may have to be prioritised as dictated by the co-management agreement. Notwithstanding, neighbouring communities on both sides of the border may have a reasonable expectation to benefit from the protected area. These considerations may be best placed in a beneficiation plan linked to the management plan of the protected area.

Should such a scenario realise and the fencing between the Tembe Elephant Park and neighbouring Mozambique be removed, there could certainly be additional benefits created through cross-border tourism initiatives that could provide benefits to the broadest range of stakeholders. Although the technical aspects of disease management fall outside the scope of this study, disease management requirements may dictate that the fence be conceivably moved to the south of the Park. This will effectively fence the Tembe Elephant Park out of South Africa and into Mozambique.

The fencing of the protected area to allow wildlife movement into Mozambique may restrict the consumptive use of wildlife by directing the movement of wildlife towards Mozambique and restricting it based on the veterinary fence towards South Africa. This secondary phase to the development application may therefore diminish the potential benefits for South African communities. Effective management of wildlife populations include maintaining carrying capacities and genetic management of populations which may require introductions and removals of wildlife (Frankham et al. 2017). It is the author's opinion that

the operational and effective management of such populations may be hampered due to disease management restrictions on the movement of wildlife. It could be argued that the opening of the fence between Mozambique and Tembe Elephant Park may reduce the need for such management interventions. The management implications of such restrictions have not been thoroughly considered in neither the Environmental Impact Assessment nor in the Tembe Elephant Park management plan.

Additional administrative and economic burdens may be incurred by the management authority, which may hamper the management effectiveness thereof and its ability to contribute to transfrontier conservation efforts. These complexities appear not to be addressed in the development application's current scope. In the absence of such consideration, the role of the management plan, essentially a longer-term planning document, may have to be expanded to effectively respond to emerging opportunities and threats to the protected area.

4.4.3 Policy discourse (policies)

The Protocol on Wildlife Conservation and Law Enforcement, section 2, requires State parties to develop 'common approaches to the conservation and sustainable use of wildlife' (Southern African Development Community 1999). It could be argued that specific national priorities may carry greater weight than others. From a national perspective, the political and economic implications of the security mandate and disease management may have challenged South Africa's commitments to multi-lateral agreements such as the Protocol on Wildlife Conservation and Law Enforcement and transfrontier conservation efforts by affording less weight to the country's conservation imperative than to the security mandate. When considering Tembe Elephant Park and the application to develop border infrastructure, the misalignment of policies and the harmonisation of legislative and policy frameworks may not have been achieved through either the relevant transfrontier protocols, or through the

Environmental Impact Assessment (EIA) process that appeared to have failed in identifying the array of impacts constructing the border wall would have on the environment. There may be a need for the management plan to be revisited to provide for these potentially misaligned policies and legislative frameworks and may ultimately facilitate such necessary harmonisation if not, at minimum, make provision for conflict management procedures should such arise.

4.4.4 Resources (funds, expertise and infrastructure)

The development approach with the border wall infrastructure development project is for the barrier to be less penetrable or 'harder' in areas that do not border onto Tembe Elephant Park and 'softer' along the boundary of the protected area (Blignaut & Da Cruz 2016). This variability in penetrability could create 'weak' areas along the protected area boundary and more secure, less penetrable barriers from a human perspective along the remaining international border. It is the authors' opinion that this could present a direct threat to both the integrity of the protected area and the transfrontier objectives.

From the perspective of the potential threat of cross-border and wildlife-related crime, these 'softer boundaries' could potentially offer a get-out-of-jail-free card for those acting illegally. The weak boundaries along protected areas such as Tembe Elephant Park may increase security concerns in Tembe Elephant Park and become a hotspot for both those involved in wildlife crime and other illicit activities. In this instance, conservation staff may potentially be less equipped in terms of capacity and equipment than a specialised defence force, border security agents, or police services, with an intensified security threat along the international boundary. Should this scenario realises, it can compromise the security of neighbouring communities and the integrity of the TEP. The security mandate of Park staff may substantially expand from biodiversity security to include the complexity of other cross-border crimes and contraband.

It is concluded that the offset plan acknowledges that 'further consideration should be given to impacts in protected areas, and how these impacts are accommodated in offset calculations' (Eco-Pulse Consulting 2021). In line with South African national policy, assessments for offsets focus on aspects that could be assigned a monetary value, such as vegetation clearing, habitat loss and impacts on wetlands, amongst others (Eco-Pulse Consulting 2021). In so doing, offsetting mitigation and alternate mitigation measures may be lacking for these particular impacts. Since the calculations as mentioned above are provided for in the same offset plan, it is the opinion of the author that these considerations may risk being disregarded, and impacts in the case of Tembe Elephant Park may not have been fully explored, such as, *inter alia*, the expanded security mandate, transfrontier conservation impacts and mitigation strategies. Since the offset plan indicates that further consideration of additional impacts to the protected area is required without specifying through which mechanism and within what timeframes this should occur, these impacts could remain unresolved.

The Basic Assessment Report (BAR) makes provision for border infrastructure to be removed in the core transfrontier conservation area once transfrontier initiatives are at an advanced staged, based on a high-level agreement between the applicant, end-users, and the management authority of the Tembe Elephant Park (Blignaut & Da Cruz 2016). Notwithstanding, the BAR explicitly excludes such development from the current scope of the application and, in effect, from any related mitigation.

The environmental authorisation for a development project, in line with NEMA and the relevant EIA regulations, records the competent authority's decision and set out conditions for implementing the development activity. The Environmental Management Plan required as a condition of the environmental authorisation makes provision for removing such infrastructure and therefore addresses the transfrontier conservation impact. A high-level objective of the Tembe Elephant Park is to establish functional partnerships to integrate the Park with

transfrontier initiatives (Ezemvelo KZN Wildlife 2017). Since this is a critical aspect of the protected area, in line with the National Environmental Management Act 107 of 1998 (South Africa 1998) cautious and risk-averse principles, it may have been judicious to stipulate this requirement as an explicit condition of the environmental authorisation and not house it in the lower level environmental management plan. Furthermore, some guidance on how this critical project would roll out should have been agreed upon as part of the process.

The management plan may, in such instances, provide a basis for assessment to identify impacts that may be beyond the scope of physical impacts on vegetation removal and habitat damage. Despite these impacts being more challenging to include in an offset plan due to their complex nature and an inability to place a justifiable monetary value on them, mitigation strategies for these impacts may be critical. Aspects of the management plan that should guide such assessment include the values, vision, objectives and zonation of the Park provided for in NEMPA.

4.3.5 The role of the management plan

Increased and diversified interest and rights from stakeholders, increasing anthropogenic pressures and emerging threats, requires scientific, ecological, socio-economical and ethical considerations in managing protected areas to prevent compartmentalisation of threats (Bonebrake et al. 2019). Bonebrake recommends that win-win approaches in conservation strategies should be pursued in addressing multiple threats. Additionally, the complexity of potentially inharmonious legislative and policy requirements of more than one country, the role of the management plan to achieve such harmony, or at least consolidate a unified approach, becomes critical.

It was highlighted that effective and well-documented cross-sectoral partnerships such as these required within the transfrontier context are best placed within an adaptive and

consulted management plan. In terms of Tembe Elephant Park and the development application, given the high-level priority of the country's security mandate, the EIA process may have failed in not giving equal weight to both sectors, i.e., the national conservation imperative and the national security imperative. The question remains whether the mitigation and offsetting process has sufficiently considered the management plan for the Park.

From a brief assessment of the documents provided and the assessments and recommendations made during the Environmental Impact Assessment process, it is clear that the management plan may have failed in its original intention to 1) guide development in areas peripheral to the Park and to encourage appropriate land-use and developments in this area, and 2) to respond to an emerging threat and opportunity that presented itself within the long-term planning period of the management plan. Such may require management plans to play a more significant role in identifying and responding to emerging complexities.

Adaptive management allows for decision-making within the local context of a protected area and allows for effective decisions within variable and uncertain conditions that may include responses to emerging threats and opportunities (Gillson et al. 2019). The question may arise as to how a longer-term planning document such as a management plan can engage with shorter-term emerging issues. This response can be achieved by an annual operations plan linked to the high-level objectives of the plan and that allow for the identification and response to emerging threats and opportunities and the implementation of the management plan. Figure 4.3 provides a recommended framework to achieve such.
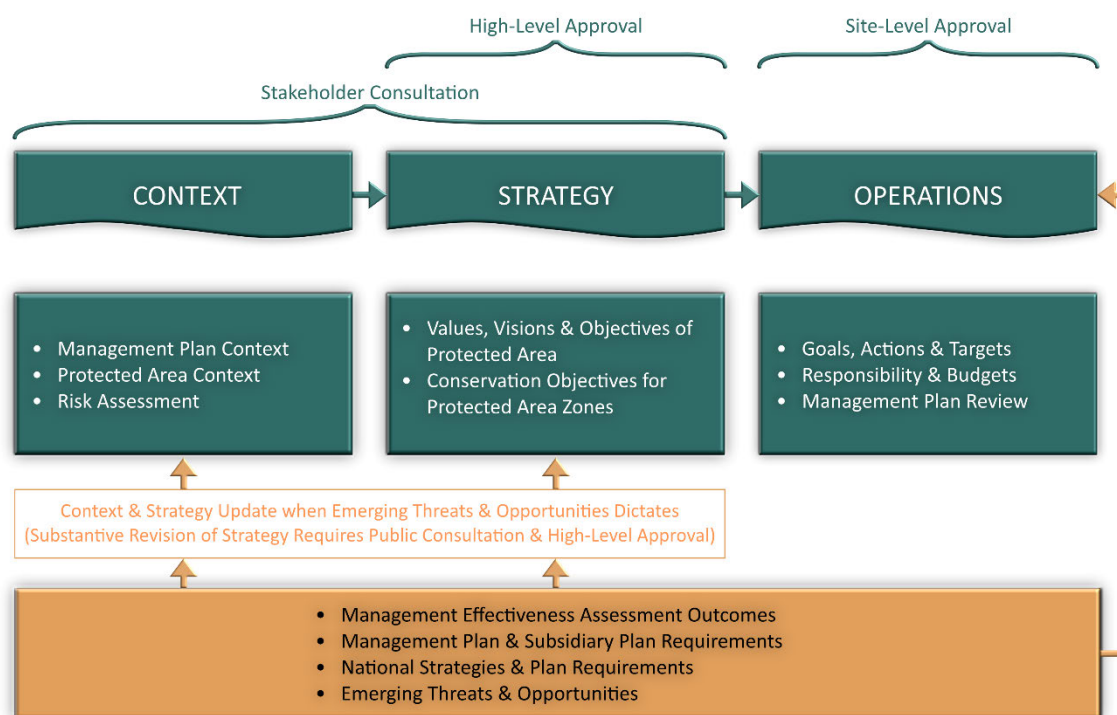
Figure 4.3 Management plan framework providing long-term strategic planning and response to emerging threats and opportunities for protected areas (Author's work).

The Context section of the management plan sets the scene for the development of the management plan (Figure 4.3). It describes the status quo and the critical historical context of the protected area, introducing the reader to the management plan, the planning approach used by the management authority in decision-making, the Legal, Policy and Institutional Framework for the development of the plan and the management of the protected area. Furthermore, the Context section provides a detailed description of the protected area, the protected area's ecological, cultural and socio-economic context and surrounding landscapes. Concurrently the protected area staff and funding, infrastructure description, and management effectiveness assessments. These elements are considered in developing a detailed risk assessment through a SWOT analysis (Figure 4.3).

The strategic framework provides a roadmap for the long-term management of the protected area. The section describes the Purpose, Values, Vision and Objectives of the protected area. As discussed in Chapter 2 and subsequent chapters, these aspects of the protected areas form the basis of any management decisions. Furthermore, the strategic component includes human and financial resources requirements, protected area zonation, conservation targets, monitoring and reporting requirements, and the guiding principles based on the legislative requirements, policy framework and best practice that guides the management of the protected area. This section gives the reader and the relevant authorities assurance that any management decisions will be made within a framework of relevant policies and based on the best available knowledge as required by section 41 of NEMPA (Republic of South Africa 2003).

The plan's operational component consists of annual operations plans where goals and actions are set out for the year based on the management plan and any subsidiary plans, the outcome of management effectiveness assessments, national strategies, and emerging threats and opportunities. The operational plans essentially become the management plan's implementation plan and allow adaptive management and responses to emerging threats and opportunities. These may require updates to the contextual or strategic components of the plan but more than not provide for goals and actions to be set in the operational response to such emerging threats or opportunities.

4.5 Conclusions

It was found that because of the inherent complexities and crosscutting nature of transfrontier conservation areas, several challenges arising from misalignment of policies from two or more countries may arise. Such misalignment may be complex, and as a result, the consequences for the conservation of biodiversity, benefits to neighbouring communities and transfrontier

conservation efforts remain primarily undetermined. It was furthermore found that in terms of the development application for a border wall at Tembe Elephant Park, the national priority for security outweighed at least some aspects of the country's conservation imperative and commitments to transfrontier conservation. This resulted from the Integrated Environmental Management process failing to sufficiently identify some of the critical impacts on the protected area that are linked to the Park's management plan, its strategic framework and conservation objectives.

It is recommended that a focus area for transfrontier areas must create administrative and juridical harmonisation to facilitate joint objectives that benefit both countries. It is suggested that the management plan with an effective adaptive component may achieve such harmonisation. Furthermore, it is critical for management plans to facilitate adaptive management to engage and respond to emerging threats and opportunities. This aspect is a research area that requires further attention to enable the use of management plans in response to emerging threats and opportunities in relation to protected areas.

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CHAPTER 5

Conclusion to protected area management and planning challenges: sustainability and integrity – A cursory investigation of the role of the management plan

5.1 Summary of findings

In South Africa, NEMPA provides for a broad range of protected areas, all of which contribute to the overarching purpose to conserve biodiversity, its associated ecosystem services, and the protection of cultural values (Day et al. 2012). The progressive change in the contribution of modern-day protected areas to socio-economic aspects (Cumming 2016), together with an increased need for people to escape the urban environment (Bell et al. 2007), led to innovative approaches to the use and management of these areas. As a result of these changes, various governance models evolved to achieve these additional purposes. This process led to, amongst others, both private and communal landowners establishing protected areas.

The legal obligation for protected areas to have an adopted management plan was legislated in WHCA and NEMPA in 1999 and 2003, respectively, and guidance to develop and implement these plans emerged post-promulgation of NEMPA. As a result, guidance to the content and implementation of these plans were fragmented across a number of legal and policy instruments (Goosen & Blackmore 2019). Therefore, it is a requirement of the management plan to consolidate these fragmented provisions and provide a mechanism for their operationalisation to ensure the management of protected areas is compliant with these provisions.

This investigation aimed to gain insight into the challenges of effective management of protected areas, the long-term protection and sustainability of these areas, and, notably, the management plan's role in addressing these challenges. A secondary focus was to evaluate the

contribution and legislative weight that the management plan has in the efficient management, sustainable and ethical use, and long-term sustainability of protected areas within South Africa.

In Chapter 2, the legal and policy framework for protected area management was considered along with the role of the management plan in ensuring that protected area management accomplishes the purpose for which it was established. It was found that domestic and international law is fragmented and therefore highly complex, and this may risk management plans being incomplete and hence place achieving the purpose of the protected area at risk. Furthermore, it was found that the management plan facilitated consistency in the management of protected areas, particularly when managers or management authorities change. It was also determined that protected area management plans serve as an omnibus for the public to ensure the protected area is managed in their best interest and the interest of future generations.

Chapter 3 investigated the decision-making principles to be considered in the sustainable and ethical use of protected areas and the role of the management plan in ensuring justifiable use of these areas. It was found that because of the changing role of protected areas, a diversity of stakeholders, interests and rights, and increasing anthropogenic pressures and emerging threats, scientific, ecological, socio-economical and ethical aspects must be considered in managing protected areas. Principles that must be considered by management include legal and best-practice principles that are housed in fragmented legislation and best-practice principles. It is concluded that the management plan plays a key role in consolidating these principles into a framework that guides decision making. It was also concluded that the decision-making framework plays an important role in resolving conflicting objectives or legislative requirements. While management plans cannot be expected to cover explicitly every emerging circumstance – it was concluded that the management plan should provide the necessary guidance to decision-makers for unique circumstances that may arise.

Chapter 4 investigated through a case study the potential consequences when a long-term public-interest decision isolates a protected area from its transfrontier context. It also considered the role of the management plan, given its legislative weight, is to be a long-term planning document to provide for the mitigation of the impacts of, or the procedure to be followed by the management authority to respond to immediate emerging threats and opportunities. Transfrontier conservation areas, because of their cross-cutting nature, may include complexities such as misalignment of policies from two or more countries. Such misalignment may be complex, and as a result, the consequences of such for conservation, community beneficiation and transfrontier conservation efforts often remain undetermined. Without an adaptive management component, it was found that the management plan may fail or lack the legislative weight to engage and respond to emerging opportunities and threats effectively, and therein compromise South Africa's commitments to transfrontier conservation initiatives with neighbouring countries.

In conclusion, protected area managers face multiple complexities in ensuring the long-term persistence of these critical biodiversity areas, often having to achieve multiple and sometimes conflicting objectives. A robust management plan remains the most relevant planning tool to address the complexities around protected area management and the fragmented legislative and policy frameworks for the effective management of protected areas in South Africa.

5.2 Conclusions and recommendations

While protected area management plans are mainly prescribed in the WHCA 49 of 1999 and the NEMPA57 of 2003, these two statutes do not embrace the full range of requirements to be included in these plans. Hence, the two primary statutes for protected area management did not bring clarity when legislative requirements from alternate statutes were ambiguous. In view of

the above, comprehensive protected area management plans are crucial for the conservation of the country's biodiversity, heritage and other important phenomena. It is recommended that the relevant provisions within the plethora of statutes, regional, continental and global multilateral environmental agreements, and emerging best practices should be consolidated. This consolidation may be achieved by way of norms and standards or guidelines.

Finally, it is concluded that decision-making relating to the use of protected areas is subject to a plethora of legislative, policy instruments and planning tools. It was found that these instruments are fragmented, and hence their application is a complex exercise. As a consequence, biased decision-making or inappropriate or inconsistent interpretation of legislation and policies may prevail. A framework of principles drawing on various existing governance quality assessment frameworks and included in an achievable protected area management plan will enhance justifiable decision-making through transparency and accountability. The complexity of South Africa's environmental law is seen to be a significant challenge deriving a clear and consolidated framework that ensures the relevance and completeness of management plans. It is thus concluded this complexity should be simplified through a revision and rationalisation of the country's environmental law.

5.3 Future research

Many variables contribute to the sustainability, success and effectiveness of protected areas; notwithstanding sustainable tourism being a well-explored concept, other aspects contributing to overall protected area sustainability are yet to be fully addressed and understood. Furthermore, there is a need to interrogate the impact and the legislative weight of management plans in influencing use and development decision-making and integration into the applied science field to improve adaptive management of protected areas.

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