FROM INTERNATIONAL CONVENTIONS TO LOCAL PARK MANAGEMENT PLANS: AN ANALYSIS OF THE VERTICAL INTEGRITY OF ZAMBIA'S NATIONAL PARK SYSTEM

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ABSTRACT

National parks, particularly in the Global South, are struggling to achieve their economic, ecological, and socio-cultural objectives and their sustainability is now in question. The challenges faced by national parks cross jurisdictional boundaries, cutting through vertical tiers of governance, from supranational organisations, via national governments, to sub-national entities. Given this complexity, it is extremely challenging to make system-wide improvements. Sustainable national park management requires whole-of-government approaches and policy consistency across different governance levels. Aligned policy frameworks are essential for achieving consistency, driving collaboration, and, ultimately, coherence where subnational actors work together with other actors to achieve common goals towards global challenges. Examining the alignment of policies used across the different governance levels could provide information to help improve sustainable national park management.

This study focuses on Zambia's national park laws, policies, plans, and reports, and particularly how these align with international principles for national park management. Thematic content analysis is used to examine how a set of IUCN national park management principles are considered in Zambia's national park legislation, policies, plans, and reports.

The results reveal wide variation in the extent to which Zambia's national park laws, policies, plans, and reports reflect the IUCN principles. They highlight isolated outcomes of positive alignment with the IUCN principles both at national and local level, amidst a general picture of uneven support for the IUCN principles. This is because international principles are introduced, or interpreted, contingent on specific local conditions, making it difficult for policymakers to develop local policies that mirror global policy models. A balance between the respect for international principles and an understanding and appreciation of the local context thus appears to be a way for strengthening policy linkages between the global and local. International and local level policymakers retain an important responsibility in this regard.

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ACRONYMS

ADC	Area Development Committee
AMU	Area Management Unit
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DDCC	District Development Coordinating Committee
DNPW	Department of National Parks and Wildlife
GMP	General Management Plan
GRZ	Government of the Republic of Zambia
IAS	Invasive Alien Species
IEAs	International Environmental Agreements
IUCN	International Union for Conservation of Nature and Natural Resources
KNP	Kafue National Park
MTA	Ministry of Tourism and Art
NGOs	Non-Governmental Organisations
PAC	Policy Analysis and Coordination
PDCC	Provincial Development Coordinating Committee
PMPs	Park Management Principles
SADC	Southern African Development Community
WHC	Convention Concerning the Protection of the World Cultural and Natural Heritage
WWF	World Wide Fund for Nature
ZAWA	Zambia Wildlife Authority

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CHAPTER 1. INTRODUCTION

1.1. Background

Over the past 30 years, a diverse range of organisations around the world have been promoting the concept of sustainable development (Vanegas, 2003). Sustainable development, a development model that considers holistically the society and the environment (WCED, 1987), has become an overarching policy goal and has been presented as an action-guiding principle for decision-makers globally (Hugé, Waas, Dahdouh-Guebas, Koedam, & Block, 2013). Gibson (2006, p. 171) asserts that the increased social and political support for sustainable development is, in part, "a response to widespread pressures for more effectively comprehensive, farsighted, critical and integrated approaches to decision-making on important policies, plans, programs and projects". Even so, empirical research on the diffusion and implementation of sustainable development into public sector policies, plans and programs, has been limited (Mitchell, Wooliscroft, & Higham, 2013). Thus, it is necessary to improve understanding of sustainable development implementation.

Protected areas, including national parks have an important role in contributing towards sustainable development (Kettunen & ten Brink, 2013). Well-managed protected areas could contribute to sustainable development by "improving human welfare and wellbeing including poverty alleviation, food and water security, health, disaster risk reduction, sustainable cities and climate change strategies" (Dudley, Ali, & MacKinnon, 2017, p. 10). Protected areas have realistic and strong links to all the Sustainable Development Goals (SDGs) which many countries around the world have agreed to implement. Therefore, improved understanding of the international and national activities around sustainable development in protected areas can foster their contribution to it.

National parks provide one effective way of protecting biodiversity worldwide (Terborgh & van Schaik, 2002; Scanlon & Burhenne-Guilmin, 2014). Even so, many national parks, particularly in the Global South, are experiencing a serious depletion of biodiversity and

their sustainability is now in question (Barker & Stockdale, 2008). Like most so-called "patently tangled wicked environmental problems", (Bartlett, 1994, p. 183) the challenges faced by national parks cross jurisdictional boundaries, cutting through vertical tiers of governance, from supranational organisations, via national governments, to sub-national entities. There is an emerging consensus that success in mitigating the decline of national parks worldwide relies, at least in part, on close collaboration, or coordination of conservation action across the different governance levels (Abbott et al., 2015; Van Asselt & Zelli 2014; Watson, Dudley, Segan, & Hockings, 2014a; Biermann et al., 2009). In response to this clear need for collaboration, there is an internationally agreed agenda for addressing global environmental challenges, the chief expressions of which are the international environmental conventions (Timmons, Parks & Vásquez, 2004). These conventions support specific development areas that are fundamental to improving the livelihoods of local communities while contributing to the protection of the global environment. They also highlight relevant environmental challenges and provide sets of best practice principles, norms, rules and decision-making procedures for effective coordination towards improving sustainable development implementation in protected areas, including national parks (Timmons, Parks & Vásquez, 2004).

For national parks, the perceived need for collaboration at multiple governance levels (international, national, and sub-national) to ensure sustainable development implementation has undoubtedly become more acute. One of the instruments to implement sustainable development are policy frameworks (Vargas, Lawthom, Prowse, Randles & Tzoulas, 2019). Well-managed national parks need to be underpinned by appropriate policy frameworks to support sustainable development implementation (Lausche, 2011; Dudley, Ali, & MacKinnon, 2017). Policy frameworks are constructs that provide direction for activity at international, national and sub-national level (Newig & Koontz, 2014). They can be manifested as laws, policies, strategies or plans and can be used as a course of action to put an end to a social problem or a public concern (Cheung, Mirzaei & Leeder, 2010). As such, the development of policy frameworks is one part of the policy process that could enable sustainable development goals, opportunities,

obligations and resources to be recognised in a concrete form (Cheung, Mirzaei & Leeder, 2010).

Furthermore, progress towards sustainable development implementation in national parks could be supported by whole-of-government approaches where there is alignment between international, national and sub-national (local) policies (Martin, Boer & Slobodian, 2016; Watson, et al., 2014a), a phenomenon that Hsu, Weinfurter and Xu (2017, p. 422) refer to as "policy alignment". Policy alignment is important for achieving consistency, driving collaboration, and, ultimately, coherence where sub-national actors work together with other actors to achieve common goals towards global challenges (Abbott, 2015). Policy alignment can be vertical and horizontal. Horizontal policy alignment refers to the relationship between policies, laws and/or plans at the same level of governance (Young, 2002). The main goal of horizontal alignment is to make the policies, laws and/or plans mutually consistent. In contrast, vertical policy alignment refers to the relationship between policies at different levels of governance (Young, 2002). It occurs when policy frameworks that are more abstract at the international level are refined into national and sub-national level policies. The main goal of vertical alignment is to ensure that national level policies are consistent with international level policies. Vertical policy alignment can lead to convergence of policy and, ultimately, coherence in national park management where international, national and sub-national institutions work together to achieve the same collective goals (Biermann et al., 2009; Karlsson-Vinkhuyzen, 2012).

Therefore, analyses of vertical policy alignment could provide information to help improve sustainable development implementation in national parks (Watson et al., 2014a; Van Asselt & Zelli, 2014). Such analyses could assist policymakers to improve implementation of future policy by revealing opportunities where enhancements to policy documents may be made (Cheung, Mirzaei & Leeder, 2010). Enhancements may be added to future policy documents or potentially to the original documents if applied before the policy is finalised. By carefully analysing the vertical alignment of policy documents, the extent to which a policy adheres to certain international sustainable

development principles may be ascertained (Laikre, Lundmark, Jansson Wennerstrom, Edman & Sandstrom, 2016).

As a rule, international law does not establish how states are to align their policies and plans or implement their international obligations. The applicable mechanism is determined by the approach towards the relationship between national law and international law of the respective national system. Traditionally, literature on sustainability appraisal (i.e. a form of strategic assessment linked to guiding principles and the achievement of policy objectives), distinguishes two major approaches for assessing sustainability of policies and plans: objective-led appraisal and a principle-based assessment approach (Pope et al., 2004). The formal is similar in nature to strategic environmental assessment, in which the assessment is carried out to achieve specific policy goals within an explicit framework encompassing environmental, social and economic objectives. The principle-based assessment approach in contrast, is led by objectives derived from broader sustainable development principles. This approach goes beyond the mere establishment of a 'direction to target' (which is usually indicated with a positive, neutral and negative move toward sustainability) and endeavours to establish the extent of progress toward sustainability (Pope et al., 2004).

Principles in this context, refers to "fundamental standards or propositions about the strategic purpose and rationale underpinning legal rules" (Martin, Boer & Slobodian, 2016, p. 2). According to the literature on sustainability appraisal (i.e. a form of strategic assessment linked to guiding principles and the achievement of policy objectives), principles play an important role in establishing the extent of progress toward sustainability (Pope et al., 2004). While certainly not the sole solution for complex environmental problems, principles serve an essential function in assessing sustainability of laws, policies, plans and programmes, as well as developing synergies that help governance systems address heterogeneity and avoid "conflictive fragmentation" across multiple governance levels (Biermann, Pattberg, van Asselt & Zelli, 2009, p. 20). Through their function as precursors of rules, principles offer potential pathways for closer alignment of laws, policies, and plans at multiple

governance levels (Houghton, 2014). Principles are also important for bridging legal and governance processes (Houghton, 2014) and maintaining accountability and consistency over time (Karlsson-Vinkhuyzen & Kok, 2011). These functions render it appropriate to relate to the transfer of principles in research with respect to policy alignment of national park systems.

In this study, the focus is on the transfer of policy ideas, concepts, norms or principles ('soft' policy transfer) that circulate freely under conditions of greater globalisation (Stone, 2004). Furthermore, the study considers 'soft' policy transfer to take place across multiple governance levels – from the global to the local. To clarify this definition, Zambia's national park laws, policies, plans and reports are compared against a set of international park management principles set by international environmental agreements and organisations. Laws, policies, and management plans have important implications for people- environment relationships that have an impact on the effectiveness of national park governance (Dhliwayo, Breen & Nyambe, 2009). They govern and determine the relationship that local communities have with natural resources that are pivotal for their livelihood. Depending on how they are framed, they can either hinder of facilitate community participation in conservation (Fünfgeld & McEvoy, 2014). It is through laws, policies, and management plans that the role of communities in protected areas governance is defined as they provide the basis either for community participation or exclusion. It therefore follows that without appropriate policies to provide guidelines supportive to community participation, the interests and aspirations of local communities are unlikely to be addressed. Supportive institutions for community participation are also unlikely to be established (Dhliwayo, Breen &Nyambe, 2009). Similarly, park reports (e.g. annual reports) are powerful tools for interest groups and citizens in general, which allow them to assess the authority's activities and attitudes towards problems identified in the parks. Reports provide the feedback loops that can facilitate discussion between park management and other stakeholders.

Related studies undertaken around the world show that studies on policy alignment have drawn on policy documents and employed both qualitative and quantitative methods to measure quality. Such studies, which include the works of Tosun and Leininger (2017), Hsu, Weinfurter and Xu (2017) and Laikre, Lundmark, Jansson Wennerstrom, Edman and Sandstrom (2016), have applied different analytical frameworks and typologies to evaluate linkages across multiple governance levels and were used to inform this study.

In Zambia, like other countries in the Global South, 80% of the wildlife species in national parks are in decline (Lindsey, Nyirenda, Barnes, Becker et al., 2014; Frederick, 2013) despite the efforts of the Zambian Government and the technical and institutional support received from international environmental organisations to enhance their management. This has raised concerns about the effectiveness of the various pieces of legislation, policies, and plans that govern those parks (Aongola, Bass, Chileshe, Daka et al., 2009; Lindsey et al., 2014, Kalaba, Quinn & Dougill, 2014). It is unclear whether Zambia's national park laws, policies, management plans, and reports provide a strong foundation to help guide decision-making on the management and operational activities within the national parks. This is because these policy documents have not previously been subjected to rigorous analysis, i.e. analysis that examines their consistency with international park management principles (PMPs). Therefore, the study of the vertical policy alignment of Zambia's national park laws, policies, plans, and reports could generate useful information for ongoing policy discussions between government and other stakeholders, as well as, practical insights that may be transferable to other countries in the Global South.

1.2. Problem statement

As part of its commitment to the conservation of biodiversity, Zambia has signed several International Environmental Agreements (IEAs) which include measures to protect and conserve national parks (Campbell, Fiebig, Mailloux et al., 2010). By signing and ratifying IEAs, Zambia has committed to cooperate with other countries and comply with global policy frameworks in order to contribute towards protecting the global environment.

Research suggests that compliance with global policy frameworks by member states maximises conservation benefits (Watson et al., 2014a; Fauchald et al., 2014; Lausche, 2011). However, the policy frameworks provided by most IEAs on compliance actions in national parks are quite general. While this flexibility accounts for national circumstances, it leaves the definition of minimum compliance practices undefined. Identifying what and how to translate and implement global policy frameworks remains a stern challenge.

Discussions on the efficacy of IEAs emphasise the need to translate international policy frameworks into national and sub-national level approaches because it is at these levels where the efficacies of IEAs need to be evaluated (Gelcich et al., 2018; Chayes & Mitchell, 2000). Despite this need being recognised, little research has been conducted to investigate policy transfer processes across the different governance levels. Research on IEAs has mainly been focused on their formation and interactions at global-level with only a few studies focusing on their implementation at national level (Gelcich et al., 2018; Gomar, Stringer & Paavola, 2014; Ochieng, Visseren-Hamakers & Nketiah, 2012). While these recent studies have highlighted some important national level factors influencing the implementation of IEAs, their focus has been limited to areas of environmental governance such as global climate, oceans, and international trade (Oberthur & Gehring, 2011). As a result, implementation of IEAs has lagged in many countries (Gomar et al., 2014; Gelcich et al., 2018).

Furthermore, very little research has focused on countries in the Global South (Zinngrebe, 2018; Gomar, Stringer & Paavola, 2014), particularly how countries in the Global South comply with IEAs (Zinngrebe, 2018; Zhao, 2005). Most of the literature on the implementation of IEAs is predominately from the Global North and, therefore, reflects a Western bias. Specific to Zambia, limited published studies exist which document empirical evidence on how multiple levels of government respond to international policy frameworks. While few studies that do exist provide some evidence on the transfer of international policy models into national and local level policies (Lindsey et al., 2014; Kalaba et al., 2014; Aongola et al., 2009), they do not identify

specific themes or principles within international policy models that require to be considered. Therefore, they remain at an abstract conceptual level, and do not identify specific interventions that would help achieve national and international environmental commitments. For this reason, a starting point for strengthening sustainable development implementation in Zambia's national park systems to establish a better understanding of how its national park laws, policies, management plans, and reports align with the principles set by IEAs to which Zambia is signatory and therefore, obligated to implement.

1.3. Aim

The aim of this research is to examine how international principles for national park management best practice are reflected and interpreted in Zambia's national park legislation, policies, plans, and reports.

1.4. Objectives

The research objectives are to:

(i) Identify the key international principles required for effective national park management;

(ii) Determine the extent to which Zambia's national park laws, policies, and national level plans define and respond to the key international principles for national park management;

(iii) Determine the extent to which Zambia's national park management plans respond to the key international principles for national park management; and

(iv) Determine the extent to which the key international principles for national park management are implemented in Zambia's national parks through analysis of national park reports.

1.5. Importance of the research

This research is significant for four reasons. First, national parks are a critical tool for the conservation of biological biodiversity worldwide (Scanlon & Burhenne-Guilmin, 2014). Thus, the importance of ensuring their long-term success and integrity into the

21st century is vital globally. Second, the sustainability of national parks in Zambia is intrinsically tied to multiple groups of stakeholders, particularly the surrounding local communities. In Zambia, national parks are not only the most effective way of conserving biodiversity but also an important source of socio-economic development (GRZ/UNDP, 2007). Therefore, it is important for decision-makers to recognise the wide-ranging socio-economic consequences of national park policies. Third, focusing on the interaction of global frameworks with national and local national park laws, policies, and plans is a crucial step towards strengthening the integrity of Zambia's national park system because global frameworks could help Zambia meet its international and local conservation goals (Watson et al., 2014a). Finally, little research has been conducted to indicate whether Zambia's national park systems are on the right pathway to meet the challenges of the 21st century. It is necessary, then, to research national park policies and management systems in Zambia to address this research gap. It is hoped that this study will contribute towards strengthening the integrity and sustainability of Zambia's national parks system.

In addition to the previously noted reasons, the findings of this study will be of interest to a range of actors at national, regional and global levels. At national level, the output of this study will be useful to policymakers and conservation practitioners involved in national park management and planning. The study's findings will provide a good starting point for legislative and policy reforms in Zambia.

At the regional level, the outputs of this study will contribute to the debate about the implementation of regional frameworks, such as the Southern African Development Community (SADC) Regional Biodiversity Strategy, which provides guidelines for cooperation on biodiversity issues that transcend national boundaries. This strategy recognises that the state of the environment, including biodiversity, is a major determinant of the growth and development in the SADC region and the impact on the lives of its citizens. As such, the outputs of this study will make an important contribution to debates in such regional fora.

At the global level, the outcomes of this study will inform the work of major IEAs and international organisations such as the Convention on Biological Diversity (CBD), the IUCN, and United National Environment Programme (UNEP), as well as the various special committees involved in the development and monitoring of conservation policies and programmes. The outcomes study will also contribute towards addressing the United Nations Sustainable Development Goals (SDGs), particularly SDG Target 15.2 on the conservation, restoration and sustainable use of terrestrial ecosystems.

1.6. Contribution to knowledge

An important objective of this study is to understand how specific principles promoted at the global level are adopted, translated, and applied in practice. Such an understanding could allow policymakers and conservation practitioners to identify potential pathways for new and improved national park laws, policies, and plans, and ultimately contribute to sustainable development implementation (Cheung, Mirzaei & Leeder, 2010). This research represents an effort to broaden the understanding of policymakers regarding what should be considered when examining national park policies, plans and programmes within the context of sustainable development.

The study will also contribute to research on policy transfer by offering a systematic method to examine the vertical alignment between national level laws, policies, plans, and reports with global policy frameworks. Until recently, there has been a lack of methods to study degrees of policy alignment systematically. As a result, claims by policymakers about the need for enhanced policy alignment could not be verified. Following Howard (2015) and Houghton (2014), the method offered in this study provides a means to organise inquiry and compare different policy documents, and to more broadly understand (i) how well international park management principles are incorporated in the policy documents; (ii) how well they are defined; and (iii) whether they are applied in practice. This perspective, in turn, sheds light on the processes of policy transfer and implementation. The rationale for including these aspects is that in order to examine the response of domestic legal and regulatory frameworks with IEAs, it is first necessary to determine how well the principles advanced by these IEAs are

specified in the domestic laws, policies, and plans and whether they are applied in practice. Considering the lack of mechanisms to examine the implementation of IEAs, this study complements previous research (e.g. Gelcich et al., 2018; Gomar et al., 2014; Zhao, 2005) by providing a typology of methods developed for examining national level policy frameworks under the lens of international environmental principles.

1.7. Thesis outline

The thesis comprises ten chapters. Chapter One (the current chapter) introduces the research and provides an outline of the problem being researched. It also covers the research aim, objectives, contribution to knowledge, and the structure of the thesis.

Chapter Two focuses on Zambia's national park system and its challenges. Its purpose is to contextualise the empirical analysis performed in Chapters Six, Seven and Eight. Therefore, Zambia's governance structures, together with the relevant legislation and the history of the evolution and working of national park administration in Zambia, are explained.

Chapter Three presents the key concepts from literature on sustainable development, policy transfer and national park governance. The application of sustainable development in national parks is discussed and academic theory associated with policy transfer is reviewed. The chapter suggests that progress towards sustainable development could be enhanced if policies across multiple governance levels are aligned and thus, outlines the importance of policy alignment for positive environmental outcomes and how it has been evaluated in academic literature.

Chapter Four discusses the main international environmental agreements (IEAs) and organisations to which Zambia is signatory relevant to national parks. Key international principles advanced by IEAs and organisations, as well as academic literature, are considered and a set of 11 park management principles set out in the *IUCN Guidelines for Protected Areas Legislation* is identified as an appropriate analytical framework to

fulfil the research aim. The 11 IUCN park management principles are then discussed, outlining the key features and indicators for each principle.

Chapter Five introduces the research approach and analytical framework for this study. The data sources and data selection criteria are also presented in this Chapter.

Chapter Six, the first of three result chapters, presents the results drawn from the examination of the alignment of Zambia's national park laws, policies, and national level strategic plan with the 11 IUCN park management principles.

Chapter Seven continues with the theme of contrasting Zambia's national park system against the analytical framework to examine the alignment of nine Zambian national park management plans with the 11 IUCN park management principles.

Chapter Eight draws on data on the performance of eight Zambian parks, six annual reports from the Kafue National Park, and the results from Chapter Seven. The results of the analyses of the extent to which the 11 IUCN park management principles have been implemented in Zambia's national park system are presented in this chapter, though significantly short due to data limitations.

Chapter Nine discusses the research results in response to the overarching research aim and objectives. The discussion draws together key literature on sustainable development and policy transfer and the results from the preceding chapters, as well as the researcher's experience in Zambia, to comment on the vertical alignment and implementation of Zambia's national park laws, policies and plans. It highlights the barriers to the adoption and implementation of international principles, particularly a lack of information, a lack of technical capacities, inadequate monitoring and evaluation, and inadequate implementation mechanisms.

Finally, Chapter Ten presents the conclusions and recommendations arising from the study. These relate to institutional reforms needed to transform the functioning of

Zambia's national parks management agencies and actions for addressing the barriers that emerged from the analyses. The potential of the research approach used in the study and the contribution of the study to literature on policy transfer are also discussed.

CHAPTER 2. STUDY AREA

2.1. Introduction

This chapter provides background to the research with an aim of contextualising the empirical analysis of Zambia's national park laws, policies, plans, and reports performed in Chapters Five, Six and Seven. The chapter is divided into four sections. Following this introductory section, the second section describes Zambia's national park system and the challenges to its successful management. The section also describes Zambia's national parks governance structure together with the relevant legislation, including the evolution and working of its national park administration. It pays special attention to the formulation of the Zambia Wildlife Act because this provides the broad framework within which national park policy has been implemented in Zambia. The third section introduces the international environmental agreements (IEAs) to which Zambia is signatory and discusses how these have been implemented in Zambia. The final section concludes the chapter by highlighting importance of understanding how Zambia's national park laws, policies, plans, and reports have responded to international park management principles (PMPs).

2.2. Zambia's national parks

Zambia is a country with outstanding natural and cultural heritage and covers an area of 752,614 km^2 (World Bank, 2014). Zambia lies in the southern hemisphere between latitudes 8° and 18° south and longitudes 22° and 34° east. It has a sub-tropical climate characterised by three distinct seasons: a wet and hot season from November to April; a cool and dry season from May to August; and a hot and dry season from September to October. The landscape is mainly flat with an average altitude of 1200 m above sea level. About 94 percent of Zambia's land is under customary tenure system with many areas categorised as protected areas.

Since the 1950s, Zambia has been building a network of protected areas in order to protect its natural resources. Zambia's protected area network now covers more than 40% of the country's territory, making Zambia among the few countries that have

designated a high percentage of their land to conservation. In terms of sheer size, Zambia's national park system is the largest in Africa and fourth largest in the world (ZAWA, 2004). Zambia is rich in biodiversity, harbouring over 3543 vascular plant species, 770 bird species, 255 mammals and 66 amphibian species (GRZ, 2015a). Of these, 28 mammals, 17 birds and 45 amphibians are endangered, vulnerable, or threatened (GRZ, 2015a) and it is likely that many presently unknown species are also threatened.

There are currently 20 national parks covering an area of 63,580 km^2, and 35 game management areas covering 167,557 km^2 i.e. 8.5% and 22.3% of the total land area respectively. There are also approximately 490 forest reserves covering about 75,000 km^2, i.e. 10.2% of the country. Other protected area categories include two wildlife sanctuaries, two bird sanctuaries, eight wetlands of international importance for migratory birds (Ramsar sites), protected fisheries, heritage sites, game ranches, and botanical and zoological parks (GRZ, 2015a).

Among these protected area categories, only national parks (IUCN Category II), designated as sites for biodiversity conservation and tourism, provide a high level of protection and are therefore Zambia's most important protected area category (GRZ/UNDP, 2007). Unlike the other protected area categories, national parks offer legal protection from conversion and extractive activities. The other protected area categories provide a lower level of protection. In game management areas, for instance, only classified game species are protected and hunted under license and conversion to agriculture and other land uses are also allowed. Similarly, forest reserves, classified as national forests or local forests are largely unprotected and do not represent at present an effective protected area category. Figure 2.1 shows the protected areas in Zambia.

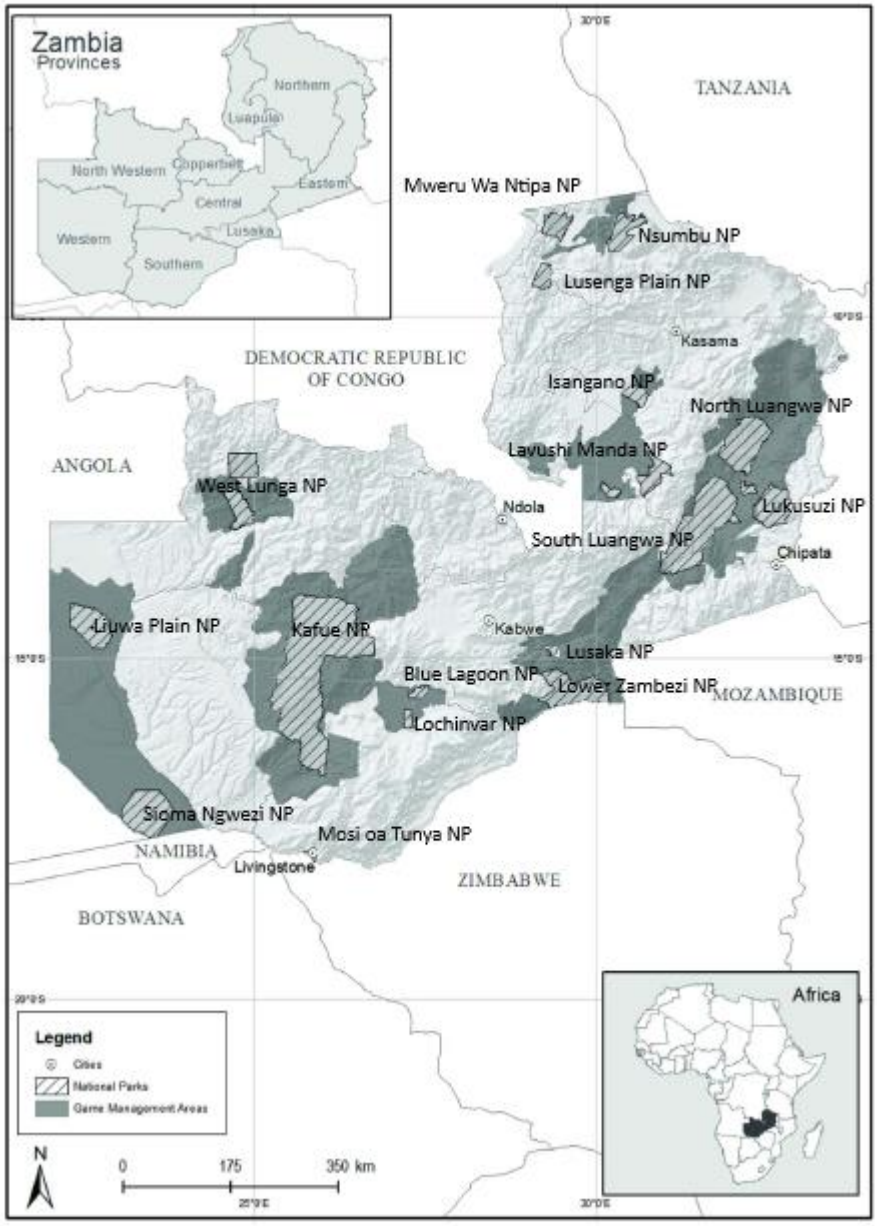

Figure 2.1 *The Zambian protected area network*
(Source: Lindsey et al., 2014)

The sheer scale of the national coverage of protected areas in Zambia highlights the importance of understanding their underlying impacts. Research (e.g. Mackenzie, 2012; Timko & Satterfield, 2008; Feng, 2008) on the impacts of national parks generates debate regarding nature (environment) and culture (society), particularly the need to manage and control interaction between the two. Proponents suggests that the creation of national parks and other protected areas is essential to global environmental stability, whereas opponents argue that, while the benefits from protected areas are

afforded to all, the costs are borne only by those proximal to the areas (Timko & Satterfield, 2008). In practice, however, the creation of protected areas has led to quite divergent outcomes. On one hand, studies (e.g. Lindsey et al., 2014; Nyirenda & Nkhata, 2013; Mackenzie, 2012) found that national parks have positive effects on nearby communities. These positive impacts were attributed to strengthened community relationships with the respective protected areas. To illustrate, in the Liuwa National Park in Zambia, collaborative governance of the park in form of a tripartite partnership of Zambia Wildlife Authority (ZAWA), Strichting African Parks Foundation (SAPF) and Barotse Royal Establishment (BRE) has led to poverty reduction through formal employment, better education, alternative livelihoods, and empowerment of local communities (Nyirenda & Nkhata, 2013).

On the other hand, other studies (e.g. Nkhata & Breen, 2009; Feng, 2008) have shown that the creation of protected areas often does not effectively respond to the changing social, political, and economic needs of communities (Egenter & Labo, 2003). According to Agrawal and Ostrom (2001), establishment of protected areas alters land-use rights, destroying traditional land-tenure systems to the detriment of traditional social life and custom (i.e. deeply held historical, national, ethical, religious, and spiritual values). This is particularly true for Zambia where the creation of national parks led to displacement of indigenous people and conversion of traditional hunting areas into restricted areas (Chomba, Mwenya & Nyirenda, 2011). This resulted in social changes such as land use intensification and resource depletion (Chomba et al., 2011). While the economic costs and/or social impacts on people displaced by protected areas have not been quantified in Zambia, Nkhata and Breen's (2009) work has shown that the social exclusions of protected area policies have led to poor social relationships between government actors and local rural communities. This has resulted in heightened human-wildlife conflicts and illegal resource use as people seek illicit ways in which to assert their traditional resource rights and livelihoods (Nkhata & Breen, 2009). Similar results have been reported in other places. In Nepal, for example, the establishment of protected areas has not only restricted traditional access rights and land use but also led to conflict and economic loss (Heinen & Mehta, 2000).

These studies confirm the importance of understanding the relationship between protected areas and their surrounding communities for successful conservation outcomes. If local people benefit from the existence of a national park, they will support the park and the surrounding environment, leading to strengthened people-environment relationships (Nyirenda & Nkhata; 2013 Mackenzie, 2012). These studies also point to the need for national park policy to account for the diverse relationships between nature (environment) and culture (society), including the demands of poverty reduction to ensure positive outcomes (Timko & Satterfield, 2008).

Zambia's national parks have been designated to protect a full range of the country's wildlife and natural resources. They provide for the maintenance of vital ecosystems, recreational enjoyment, research and sustainable non-consumptive use of resources. Zambia's national parks are also important for tourism development because they attract tourists and generate income (GRZ, 2013). The Policy for National Parks and Wildlife (1998) outlines their purposes as follows:

a) Protect wild ecosystems and the biodiversity contained in them, with special emphasis on the conservation of the large mammals and their habitats and the protection to both living and non-living objects of scientific, prehistoric and aesthetic interest;
b) Conserve water catchments;
c) Provide opportunities for the advancement of scientific knowledge and public education, with emphasis on the effects that man has had on the environment; and to provide for human benefit through:
d) Encouraging public use related to the enjoyment and appreciation of the natural values contained in the parks;
e) Providing animals and other seed stocks to repopulate depleted parts of the country; and
f) Generation of economic activity, both within the parks and in surrounding areas, to enhance rural socio-economic development (GRZ, 1998, p. 11).

Despite their significance, Zambia's national parks are faced with significant challenges. Of the 20 national parks two are degraded (GRZ, 2015a). The degradation is attributed to several factors including mining, poaching, habitat conversion, deforestation, invasive alien species (Simukonda, 2011; Watson, Becker, Milanzi, & Nyirenda, 2014b; GRZ,

2015a) and uncontrolled burning as a result of increasingly intense land use along their borders (Lindsey et al., 2014).

While Zambia national parks are surrounded by buffer zones (game management areas), which contribute to their protection, increased pressure from human encroachment is now a problem. Six of Zambia's national parks are under pressure from human encroachment as a result of increased population growth and/or settlement in the game management areas (GRZ, 2015a). The people in these areas are often extremely poor, with limited access to government services and no political power (Watson, Becker, Milanzi, & Nyirenda, 2014b). The creation of parks and the consequent loss of access to resources often means that these same communities bear substantial costs while receiving few benefits in return (Lindsey et al., 2014). Not surprisingly, local people often view national parks and surrounding game management areas as restricting their income and access to resources. They are often willing to break the park regulations to satisfy a variety of their basic needs. As a result, encroachment into and destruction of national parks, coupled by a lack of capability (within the national park management agency) to identify or address people-environment relationships, poses a serious challenge to the governance and sustainability of Zambia's national parks.

The threats to Zambia's national park system are not confined to external forces. There are reports of institutional inefficiency that lead to monitoring and evaluation being ignored by implementing agencies; unfulfilled compliance arrangements with international organisations; institutional arrangements designed to support parks not being reviewed; and park managers receiving inadequate technical, financial and institutional support to operate individual parks (Aongola et al., 2009; Lindsey et al., 2014; GRZ, 2014). Despite the poor institutional and management structures, degrading habitat and declining wildlife numbers, each year the tourism sector contributes more than 6.5% towards Zambia's Gross Domestic Product and employs 10% of the population in the formal sector alone (World Bank, 2011). Given the country's dependency upon a single commodity (copper), protecting and developing the tourism sector is of vital importance to the people of Zambia. National parks represent one example of tourism

and an area where international principles for national park management best practice may have a significant positive impact on Zambia's ecological and economic sustainability.

2.2.1. National park governance structure

A country's governance structure is integral to the performance of its national parks. This section highlights Zambia's national park governance structure focusing on the existing institutional arrangements and legal frameworks.

Institutional arrangements

Zambia has a decentralised system of governance which aims to enhance efficiency in decision-making and service provision, equity in allocation of resources and participation in development (GRZ, 2009). Four levels of governance structures are relevant to protected area management in Zambia. These include ministries, provincial governance, district councils, and traditional administration (Campbell, Fiebig, Mailloux et al., 2010).

Ministries are responsibility for overall policy-making and regulatory functions, such as national development planning and coordination and nationally significant project implementation. Provincial governance is provided by the Provincial Development Coordinating Committee (PDCC), headed by the Provincial Minister. The PDCC coordinates the activities of various government departments in the provinces (Campbell, Fiebig, Mailloux et al., 2010). At the district level, activities are coordinated by District Councils through the District Development Coordinating Committee (DDCC). The DDCC comprises representatives from the District Commissioner's office, government departments, Non-Governmental Organisations (NGOs), selected private sector organisations and technical council staff. Districts Councils are responsible for information exchange, financial management, human resource development, passing by-laws and identifying development initiatives in the districts. At a more localised level, the DDCC operates through Area Development Committees (ADCs). The ADCs represent the lowest levels of political administration and are therefore the implementing agents

of much of the policy initiatives determined by the DDCC (Campbell, Fiebig, Mailloux et al., 2010).

In addition to the political administration, there is also a hierarchy of traditional administration in the customary areas headed by local Chiefs. The Chiefs serve as a link between the District Councils and the local communities. As such they provide an important communication link that is essential for maintaining working relationships with communities around protected areas.

Protected areas in Zambia are managed by four institutions:

i. The Department of National Parks and Wildlife, Ministry of Tourism and Arts;
ii. The Forestry Department, Ministry of Lands, Natural Resources and Environmental Protection;
iii. The Fisheries Department, Ministry of Agriculture and Livestock; and
iv. The National Heritage Conservation Commission, Ministry of Chiefs and Traditional Affairs.

Among these institutions, there is no coordinating governance structure, policy, or law that brings them together to plan, implement, and monitor integrated protected area management plans. This governance vacuum has contributed, in part, to the challenges faced in implementing protected area legislation, policies and plans. There exists a lack of high-level structures to coordinate protected area management in the different ministries. It is difficult, for example, to understand the complexities of the relationship between the Department of National Parks and Wildlife (DNPW) which is designated as the management authority for fauna, and the Forestry Department which is the management authority for flora as there are no formal guidelines for intersectoral coordination.

In terms of national parks and wildlife, the main actor is the Ministry of Tourism and Art (MTA). The MTA retains the responsibility for overall tourism-related policy-making and regulatory functions including nationally significant project implementation for all

protected areas. Its role also embodies the facilitation and monitoring of the implementation of international agreements, conventions and treaties, with a view to promoting the country's conservation interests as well as meeting international obligations.

Within the MTA, the responsibility for the management of national parks is placed under the Department of National Parks and Wildlife (DNPW). The Department of National Parks and Wildlife is responsible for administering and coordinating activities in national parks, community partnership parks, bird and wildlife sanctuaries and game management areas. The Department is also responsible for preparing and implementing national park management plans in consultation with relevant stakeholders, including the general development of facilities and amenities within the parks (GRZ, 2015b, sec. 5).

Traditionally, national parks are run under a decentralised system, with four geographical regions which are further sub-divided into Area Management Units (AMU) (MTENR, 2008). Each region is headed by a Regional Manager while each AMU (park level) is headed by either a Park Manager or an Area Warden. This devolution of governance functions aims to enhance efficiency in decision-making, service provision, equitable resource allocation and public participation in national park governance. However, there are several challenges associated with the implementation of this decentralised structure as most of the management decisions (e.g. procurement, disbursement of funds, human resource allocation etc.) are still made at the national level (Ng'andwe & Chundama, 2012).

At the community level, decentralised and community-based natural resource governance is accomplished using Community Resource Boards (CRBs). Established under the Wildlife Act (1998), CRBs are local, conservation-based organisations created through partnerships between government and the community. CRBs allow for community involvement in decision making and accountability. Part V of the Zambia Wildlife Act (2015) establishes their mandate to enhance management and sustainable

use of wildlife resources in game management areas or open areas which are under their jurisdiction. The 1998 Wildlife Policy also provides for the CRBs to be run on a day to day basis by an appropriately qualified secretariat whose members are appointed by the local community. However, this key component in institutional development remains largely unimplemented despite pilots in six CRBs in the game management areas around the South Luangwa National Park showing positive results (Sichilongo, Mulozi, Mbewe, Machala & Pavy, 2012).

Some experts have laid the blame for the poor performance of Zambia's national park system directly on the DNPW, for allegedly failing to devolve some of its responsibilities to the private sector and local communities (Ng'andwe & Chundama, 2012). According to Simasiku, Simwanza, Tembo, Bandyopadhyay and Pavy (2008), the task performed by the DNPW as both implementer and regulator is too ambitious for a single institution. Additionally, concern has been raised about DNPW's limited capacity to provide business and customer-oriented services and reduce bureaucracy in tourism development (Simasiku et al., 2008). Further, the DNPW is ill equipped to implement community support initiatives required in areas surrounding the national parks (Sichilongo, Mbewe, Machaya & Mulozi, 2011; Nyirenda & Nkhata, 2013).

Legal framework

The Constitution of Zambia forms the basis of the country's legal system. It establishes the overarching rules and principles pertaining to the structure of the Zambian governance system and determines the competence and legal authority of the national, provincial and district branches of government within their specific jurisdictions. The Constitution also sets out the principles for the validity of laws made by government institutions. The salient principle is that all the Acts and norms issued by such institutions must comply with the Constitution in order to be valid and enforceable. The statutory laws issued by the Zambian Parliament provide the legal fundamentals for activities while the administrative rules and regulations provide greater detail of the laws' scope, limitations, and legal sanctions.

The Zambian Constitution (as amended by Act No. 2 of 2016) explicitly references environmental and natural resources issues. Articles 256 and 257 refer to the protection, utilisation and management of natural resources in a balanced and sustainable manner for the present and future generation (GRZ, 2016). The primary law governing national parks in Zambia is the Zambia Wildlife Act No. 14 (2015). There are, however, other sectoral laws such as the Forests Act No. 4 (2015), Fisheries Act No. 22 (2011), the National Heritage Conservation Commission Act (1989) and the Environmental Management Act No. 12 (2011) that are directly or indirectly related to national parks. Together, these laws and their corresponding policies constitute the legal framework for national park management in Zambia. A brief description of each of the laws is provided below.

Zambia Wildlife Act No. 14 (2015)

The Zambia Wildlife Act (2015) provides the legal basis for the conservation and management of Zambia's wildlife ecosystems and biodiversity and provides opportunities for the equitable and sustainable use of national parks. This new legislation also provides for the establishment of the Department of National Parks and Wildlife (DNPW) (within the Ministry of Tourism and Arts) as the main government department responsible for national park management in Zambia. The DNPW's responsibilities are to: control, manage, conserve, protect and administer national parks, community partnership parks, bird and wildlife sanctuaries and game management areas; improve the quality of life among communities in wildlife estates and maintenance of sustainable biodiversity in national parks and game management areas; reverse the decline in wildlife resources; improve wildlife resource management to a level which will secure a sustainable flow of benefits from resources; and to considerably improve the wildlife resource base investment in co-operation with the private sector and local communities.

Forests Act No. 4 (2015)

The Forest Act provides for the establishment, control and management of all protected forests in Zambia. It is aimed at protecting specifically designated forest areas which are

to be managed in order to permit as little disturbance as possible of forests ecosystems and biodiversity. The forests are categorised as national forests, local forests, botanical reserves, and private forests. The Act provides for community participation and joint forest management approaches. It also prohibits activities such as the felling, cutting, burning, injury, taking or removal of any protected flora. Section 3 vests the ownership of all trees and forest products in the President. The Act is administered by the Forestry Department of the Ministry of Lands, Natural Resources and Environmental Protection.

The Environmental Management Act No. 12 (2011)

The Environmental Management Act No. 12 of 2011, which is considered a principle legislation covering a cross section of sectors, also addresses issues relevant to national parks. This Act provides for the integrated management of the environment and natural resources in the national development context. It provides for the development of sector specific environmental management strategies and application of strategic environmental assessment to legislation, policies, plans and programmes across all sectors of national development.

The National Heritage Conservation Commission Act (1994)

The National Heritage Conservation Commission Act (1994) provides for the conservation of ancient, cultural and natural heritage, relics and other objects of aesthetic, historical, pre-historical, archaeological or scientific interest. This Act also defines the functions and powers of the National Heritage Conservation Commission, a national institution entrusted with the conservation of Zambia's natural and cultural heritage. At present the Commission has listed 1,959 archaeological (including rock-art sites), 626 historical (including buildings/structures), 129 traditional, 222 natural (including waterfalls, paleontological) sites ranging from 150 million years ago to almost the present. Such heritage is not only cardinal in promoting national identity but as a resource, is used for education and research. It also plays a significant role in promoting tourism investment and economic development.

National Biodiversity Strategy and Action Plan (2015)

Zambia's National Biodiversity Strategy and Action Plan (2015) is the principal strategy for the implementation of national commitments and domestication of international environmental frameworks. This strategy outlines in detail the principles and policies which comprise the Zambian government's response to biodiversity conservation challenges. As such, it is of central importance in examining government's construction of biodiversity conservation and the practical measures initiated to address the environmental challenges in Zambia.

Evolution of national park legislation in Zambia

In order to understand the application of Zambia's national park legislation and policies, it is important to understand how the legislation has evolved throughout the history of Zambia. Zambia's national park legislation has passed through numerous iterations and has evolved in the complex context of the country's wildlife policies (Chomba, Mwenya & Nyirenda, 2011). The earliest recorded piece of legislation relating to wildlife conservation, the Ostrich Export Prohibition, Chapter 115 of the Law, was enacted in 1912. As the nation's wildlife legislation evolved, priorities for the management of national park changed at least as often as the name of the relevant agency. The evolution of national park legislation in Zambia highlights the existence of several distinct phases of development. These phases demonstrate the gradual widening of national park objectives and an attempt to reconcile the competing demands of conservation and community development. A comprehensive examination of the evolution of the wildlife legislative process from the period 1912 to 2011 is provided by Chomba et al. (2011). Figure 2.2 show a brief historical summary of the laws and ordinances leading to the emergence of the national parks in Zambia.

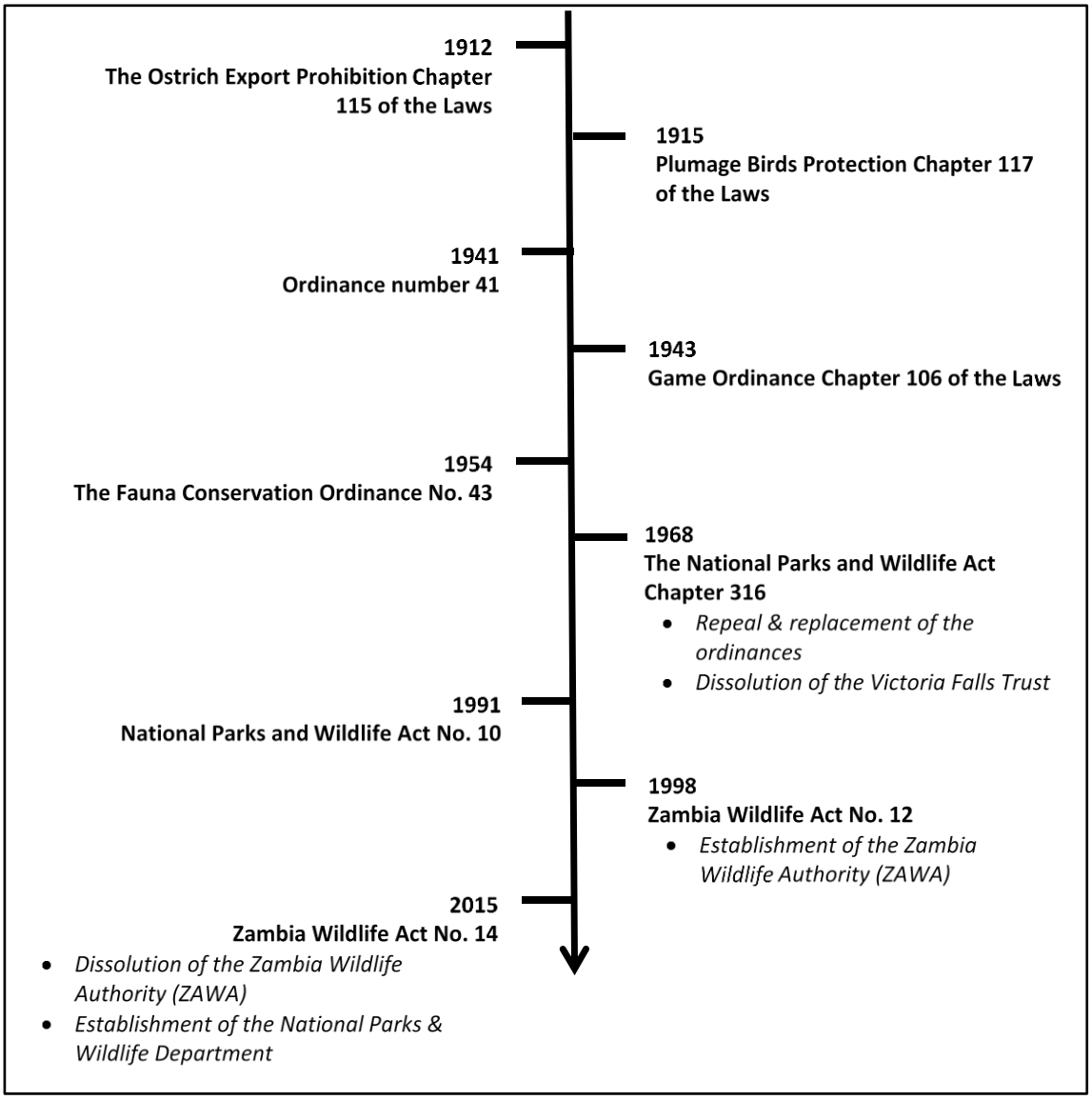

Figure 2.2 *Evolution of the laws and ordinances leading to the emergence of the national parks in Zambia*
(Adapted from Chomba et al., 2011)

During the pre-colonial phase, which spanned several thousand years before 1890, wildlife was controlled and managed by Indigenous peoples through chiefs. During this era, wildlife was used for the benefit of the community and formed an integral part of their lives. Chieftainship was the most important political institution and chiefs exercised power over their land to hunt and control hunting through their traditional committees (Simson, 1985; Chomba et al., 2011). After the colonisation of Zambia by the British Government, wildlife ceased to be under the custodianship of the chiefs and was placed under centralised state protection and management. It was during this era that the legislative mandate to establish national parks come through the enactment of

the Game Ordinance Chapter 106 of the Laws of 1943 (NRG, 1958 as cited in Chomba et al., 2011). This legislation proposed that the Governor by proclamation with the consent of the Legislative Council signified by resolution may declare any area of land to be a national park and may in like manner, define or alter the limits of any such areas. This led to the establishment of Zambia's first national park, Kafue National Park in 1950 (Chomba et al., 2011). The Game Ordinance Chapter 106 of the Laws Chapter 106 of 1943 was complimented by the Fauna Conservation Ordinance No. 43 of 1954 which led to the statutory designation of four protected area categories namely: game reserves, private game areas, game management areas, and controlled hunting areas.

The next significant phase to the evolution of Zambia's national park legislation came after its independence in 1964. Four year after independence, the Zambian government repealed and replaced both the Game Ordinance Chapter 106 of 1943 and the Fauna Conservation Ordinance Chapter 241 of 1954 with the National Parks and Wildlife Act No. 57 of 1968. This Act provided for the establishment, control and management of national parks and for the conservation and protection of wildlife and objects of aesthetic, prehistoric, historical and scientific interest within the national parks. This Act also introduced changes in the initial protected area categories, by reducing them from four to two (National park, category II of IUCN and game management area, category VI of IUCN). The National Parks and Wildlife Act No. 57 of 1968 centralised control and management of wildlife in the country by vesting the absolute ownership of wildlife in the President on behalf of the public. A national parks board was also established to advise the Minister responsible for wildlife on how best to manage and conserve national parks.

In 1991, the National Parks and Wildlife Act No. 57 of 1968 was repealed and replaced, by the National Parks and Wildlife Act No. 10 of 1991 (Chomba et al., 2011). This Act was also repealed and replaced by the Zambia Wildlife Act No. 12 of 1998. Unlike the previous legislation, the Zambia Wildlife Act No. 12 of 1998 differentiated park administration by establishing the Zambia Wildlife Authority (ZAWA), a semi-autonomous public institution with a mandate to manage the national park system and

achieve sustainability through commercial tourism and collaboration with communities (Sichilongo et al., 2012). This Act also provided for the domestication of global and regional environmental agreements to which Zambia is a party.

Despite these reforms, the pursuit of national park objectives remained largely rhetorical rather than being turned into practical realities (Sichilongo et al., 2012). National parks continued to be characterised by declining wildlife, encroachment, low management effectiveness and inadequate personnel and financial capacity in ZAWA (ZAWA, 2004; GRZ/UNDP, 2007; Simasiku et al., 2008). In recognition of these pressures on national parks and the corresponding need to make changes to the structure and management of ZAWA, further reforms were set out resulting in the enactment of the current Zambia Wildlife Act No. 14 (2015). The key question in this study, however, is whether these new legislation and policies contain provisions for the implementation of the international best practice principles to ensure that national parks fulfil their roles over the long term.

2.3. Application of international agreements in Zambia

At the international level, Zambia is party to several IEAs. By signing and ratifying these agreements, Zambia has accepted to adopt the principles and commitments found in them as well as institutional settings to give effect to those commitments in its domestic laws. However, because Zambia has a dualist legal system which considers international agreements as a separate system of law from the domestic law, introduction of national laws and policies which give effect to international agreements is necessary for international commitments to be adopted and translated into action on the ground. This implies that international agreements that have been ratified by the country cannot be applied or become part of domestic law unless formal legislative action has been taken. Thus, even if an international agreement such as the Convention on Biological Diversity (CBD) or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has been ratified, specific legislative or administrative measures are required to incorporate its provisions into domestic law.

According to Article 54(2)(b) of the Zambian Constitution, the Attorney-General is mandated to peruse treaties and agreements the government of Zambia is party to. Even so, there are no clear obligation and guidelines on the application of international agreements resulting in an ad hoc and unsystematic approach to their implementation (OSISA, 2013).

2.3.1. Zambia's international environmental commitments

In Zambia's environment and natural resources sector, policy initiatives and narratives supported and promoted by IEAs continue to influence a set of policy dynamics that at least partially explain the current policy environment for Zambia's national park system. The major IEAs with supportive relevance to national parks to which Zambia is party include the Convention on Biological Diversity (CBD) (CBD, 1992); the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971); the Convention on World Cultural and Natural Heritage (WHC) (UNESCO, 1972); and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (CITES, 1973). These agreements set legal obligations to establish national parks and other protected area categories and to achieve their effectiveness as measured against conservation objectives. A detailed description of these agreements and the key obligations relevant to national park management is presented in Chapter Four of the thesis.

International agreements, like the CBD and CITES have all promoted the idea of national parks and provided global best practice principles for national park management. However, the transfer of these principles into national legal and policy frameworks to meet the commitments made under these international agreements is marginal in many countries, including Zambia. Studies (Vanderzwaag, Hutchings, Jennings & Peterman, 2012; Yates, Payo & Schoeman, 2013; Fauchald, Gulbrandsen & Zachrisson, 2014; Hassan & Hameed, 2016) indicate variations in the way countries integrate international best practice principles in their laws and policies. In specific instances, states take actions that integrate these principles, while at other times they contest them.

Most of the literature on the implementation of international environmental commitments into national legislative frameworks comes from the Global North (Fauchald et al., 2014; Yates et al., 2013; Vanderzwaag et al., 2012). These studies focus on how different countries have addressed their international environmental commitments in their legislative frameworks. Hassan and Hameed (2016) discuss Japan's legislative efforts in response to international agreements in the area of wildlife protection while Fauchald et al. (2014) examined how Norway and Sweden have responded to their international commitments through nature conservation in general. Yates et al. (2013) examined how Northern Ireland has made admirable commitments to high level international marine conservation while Vanderzwaag et al. (2012) show how Canada has fulfilled its international and national commitments to sustain marine biodiversity. All these studies show that implementing global principles articulated in international environmental agreement can lead to effective biodiversity protection and therefore, point to the need to fully implement, operationalise, and strengthen these global principles at national and sub-national levels to achieve in-country and global environmental commitments (Vanderzwaag et al., 2012)

The limited literature focusing on how Zambia has responded to its international commitments indicates that there are weak linkages between international, national and local level policies. Kalaba et al. (2014) discussed the coherence and interplay between sectoral policies in agriculture, energy and forestry, and national programmes under United Nations Rio Conventions while Aongola et al. (2009) reviewed cases in the mining, water, forest and wildlife sectors to assess the extent to which environment and development are linked in Zambia. Both these studies showed considerable variations in the congruence of national sectoral policies and international agreements and concluded that although Zambia has ratified several international environmental conventions, measures are often not incorporated into national policies and linkages remain largely superficial.

This study seeks to examine how international principles for national park management best practice are reflected and interpreted in Zambia's national park legislation, policies,

plans, and reports. To achieve this, the study identifies a set of key international PMPs promoted by IEAs and international organisations and examines how they are considered in national and local level policy documents. Therefore, the study asks to what extent, and how do Zambia's national park laws, policies and management plans respond to international PMPs? The study further compares Zambia's national park legislation, policies, and plans and describes their similarities and differences by characterising them based on the identified set of international PMPs.

Further, to explain the integration outcomes of the identified key international PMPs, the study draws on key international and local literature and the researcher's first-hand experience working in the natural resources management sector in Zambia. Context is an important determinant of the nature and extent of the outcomes (success and/or failure) of national park management throughout the world (Bennett & Dearden, 2014). Therefore, the researcher's understanding of contextual factors that influence national park management in Zambia could facilitate development of explanatory hypotheses, as the content of the legislation and policies as well as the implementation outcomes might be explained in terms of the presence or absence of contextual factors.

The literature on policy transfer holds that global policy trends are always modified through domestic policy processes, to fit into the national institutional context (Béland, 2009; Lenschow, Liefferink, & Veenman 2005). Béland (2009) suggests that global policy ideas are subject to processes of re-contextualisation. He explains that policy ideas must be adaptable to the existing institutional context to be integrated and promoted to the public. Lenschow, Liefferink, and Veenman (2005, p. 802) add credence to this argument and highlight the need of an "institutional fit" between existing institutional arrangements and the institutional implications of the new policy ideas because institutions provide the context in which policy changes are defined. Furthermore, they assert that the final policy outcome is influenced by the policy style of the country which is determined by the country's political administrative system. Several earlier studies on comparative environmental policy support this argument (Lundqvist & Christiansen, 1996; Vogel, 1986).

This study concurs with the general literature (Béland, 2009; Lenschow et al., 2005) that the adoption and translation of international PMPs in a country's legislative frameworks is influenced by the existing institutional structures and the interaction and capacities of actors within the policy formulation processes. The actors that participate in the policy formulation process in which deliberations and decisions take place influence the choice of type of principles that are transferred. To this end, the policy formulation process through which considerable influence (power) is exercised deserves attention.

2.3.2. Policy formulation in Zambia

An important part of the institutional setting with considerable influence on the content of national policies is the policy formulation process. The policy formulation process refers to the way in which policies are initiated, developed, negotiated, communicated, implemented, and evaluated (Zulu, Kinsman, Michelo & Hurtig, 2013). Hughes (2003, p. 119) describes the policy formulation process as "a conscious goal selecting process, which is undertaken by stakeholders in a decision-making process". The policy formulation process creates an avenue for interaction between the stakeholders and the state. The outcome of the policy formulation process is what causes the potential gap between international policy and national policy. Consequently, within the Zambian context, the policy formulation process has considerable influence on the integration or omission of international principles in national policy. Zambia follows the normative policy formulation model with four different stages: formulation, adoption, implementation, and monitoring and evaluation (Simon, 2009).

i. The formulation stage

The policy formulation stage defines goals, explores alternatives, decides on the actions required to solve specific problems (Simon, 2009). In Zambia, this stage is initiated at the ministerial level and sometimes through political pronouncements by the President. Irrespective of the source, the lead ministry through the Permanent Secretary defines the goals and actions required to address the identified problems. At this stage, the course of policy action is formalised through a Cabinet Memorandum (CABMEMO). The CABMEMO is circulated to other ministries for their comments within a specified period

of 14 days after which it is submitted to the Policy Analysis and Coordination (PAC) division at Cabinet Office for administrative processes, refinement and onwards submission to Cabinet.

ii. The Adoption Stage

This is the stage when PAC submits the CABMEMO to Cabinet for decision-making after the minister has given justifications for his or her recommended actions in the CABMEMO.

iii. The Implementation stage

The implementation stage takes place when the Secretary to the Cabinet conveys the decision of Cabinet to the lead ministry, responsible for its implementation. The conveyance is copied to other ministries for their information.

iv. Monitoring and evaluation stage

The monitoring and evaluation stage determines the impact and result of the new policy (Simon, 2009). This stage focuses on determining whether the expected results of the policy are achieved and allows an in-depth analysis which steps should be taken to improve the policy. In Zambia, the lead ministry together with the PAC division at Cabinet Office is responsible for undertaking monitoring and evaluation.

This rational approach sets forth a linear sequence to follow in the development of every policy in Zambia. The justification for this approach is that policy formulation is a way of thinking about problems, analysing data, and suggesting appropriate policies (Hughes, 2003). It assumes that the policy objectives are specified, the reasons for carrying them out are ascertained, and the consequences of their outcomes are assessed. Furthermore, it is assumed that policy development process is broad-based and all-embracing, involving equitable participation of all stakeholders to ensure its legitimacy and to gain support from the beneficiaries during implementation and beyond.

In practice, however, situations rarely accommodate these assumptions and public sector institutions in Zambia seldom adhere to all the components of the policy formulation process. Saasa (1985) asserts that most stakeholders are generally ill informed about policy development issues leaving the elite to make the major decisions in policy formulation and implementation. Similarly, Mulungushi (2007, p. 83) candidly asserts that policy development, systems, and institutions are weak in Zambia and outlined the weakness to include the following:

- Incomplete institutionalisation of the responsibilities and the mechanisms for participation by organisations and representatives of civil society, local communities, as well as the private sector, in the management of issues of public interest including policy development, which have affected quality of policies as well as implementation.
- The tendency for public sector organisations to perform some functions over and above their main jurisdictions, which means that they remain un- focussed to carry out their mandates specified in the strategic plans developed under the reform programme. This is compounded by lack of monitoring mechanisms to ensure compliance.
- The definition of public policies is not consistent with goals and principles conducive to their effective management (feasibility, coordination, monitoring and assessment of objectives and results/impact assessment) and clearly not linked to the national development plans.
- Public policies and their strategies are not always, as a rule, made compatible with the resources required to make them viable objectives, particularly in the case of national plans and budgets.
- The process of defining policies on a sector-by-sector basis does not define synergies across and among policies and their impacts.
- There is insufficient coordination and guidance of the international community's involvement in the process of defining policy as it relates to the international development agenda.

The limited literature addressing policy formulation in Zambia supports Mulungushi's findings. For example, a formal assessment of the development process of the National Community Health Assistant Policy and the factors that influenced its evolution and content suggested that the policy formulation process in Zambia is not only complex but highly political and accompanied by power imbalances (Zulu et al., 2013). Zulu et al. (2013) observed that different actors exercise different degrees of power in influencing who participates, how they participate, the direction of the policy process, as well as its content. Following this argument, they concluded that the policy formulation process and the interaction of actors within this process is a key facet in understanding how policies are shaped in Zambia. Other related studies on policy development in different countries have reached similar conclusions (Erasmus & Gilson, 2008; Glassman & Buse, 2008; Varvasovsky & Brugha, 2000).

In this study, the above conclusions are important and relevant for understanding and explaining the content of Zambia's national park legislation. There is little doubt that the policy formulation process has considerable influence on the content of national policies. Consequently, the data which is analysed in this study allows for a pragmatic test of the assumption that the policy formulation process is a major explanatory factor for the content of national parks policies in Zambia, and consequently, the integration of international principles.

2.3.3. Funding Zambia's national parks

In addition to the policy formulation process, another inherent factor determining the domestic opportunity structure for change in national park management is the socio-economic context, particularly, the funding to national parks. A lack of financial resources is a most common reason why policies are not implemented (Garnett, Koenen-Grant & Rielly, 1997). Hockings, Stolton, and Dudley, (2000) maintains that a national park must have clear objectives supported by a management plan and financial resources adequate to effectively undertake the necessary management activities. Financial resources are imperative for the long-term management and sustainability of national parks. Global experiences, however, indicate that funding for national parks is grossly inadequate in many countries (Athanas, Vorhies, Ghrsi, Shadie & Shulties, 2001).

Traditionally, funding from national governments is the primary source of protected area finance and is mainly used to cover direct operational and management costs (Athanas et al., 2001; Emerton, Bishop & Thomas, 2006). Other sources of funding include revenue from tourism and donor funds. However, revenue from tourism is in most cases unreliable because many national parks rarely have a diversified funding base while donor funds tend to be tied to capital investments, are subjective, temporary and often aimed at fashionable rather than core management activities (Emerton et al., 2006). Consequently, government funding is the most reliable source over the long term in many countries (Spergel, 2001). In Zambia, national parks have not been adequately funded (Lindsey et al., 2014). Over the years, government budgetary allocations to the natural resources sector, in general, have not been commensurate with its global and national environmental responsibilities, resulting in heavy dependence on donors for support to fulfil national obligations under IEAs (Aongola et al., 2009).

Until recently, the management of Zambia's national parks was the mandate of the Zambia Wildlife Authority (ZAWA), a semi-autonomous government agency. ZAWA was established without adequate resourcing requiring it to be partially self-funding. Lindsey et al. (2014) illustrate the lack of funding to Zambia's national park system in more detail, describing how the allocation of funding affected the operations of ZAWA. The annual funding from government only covered about 15% of ZAWA's annual operational costs while the revenue from the game management areas only covered 30 – 50% thereby creating a large annual deficit (GRZ, 2007b). This model of funding overwhelmingly prevented ZAWA from achieving its potential as an institution making it heavily rely upon game management areas for its income (Lindsey et al., 2014). Consequently, ZAWA was unable to transfer wildlife user-rights to communities in game management areas or to private landowners on extensive wildlife ranches, resulting in unsustainable utilisation of resources to generate income (Lindsey et al., 2014).

Income from tourism and charges from other resources to supplement protected area budgets are also low in Zambia as compared to other countries in Africa. Lindsey et al. (2014), for instance, compared the economic output of Zambia's national park system

vis-à-vis other Sub-Saharan African countries known for wildlife (South Africa, Botswana, Zimbabwe, Kenya, Mozambique, Tanzania and Namibia). They found that the Zambian national park system compares poorly because it attracts fewer tourists and thus generates lower revenues from photo-tourism and trophy hunting than most other countries. The results indicated that Zambia received 0.9 million tourists in 2012, well below the average of 2.5 million tourists for the seven countries.

The low revenue and weak budget allocation lead to inadequate management (Balmford & Whitten, 2003). Although they are not the sole obstacles to national parks achieving their goals, they result in lost opportunities for better management (Balmford & Whitten, 2003). This study asks if the economic context in which ZAWA operated from 1998 to 2015 would provide important and interesting findings that would help explain the extent to which international principles have been integrated into Zambia's national park legislation, policies and management plans.

2.4. Conclusion

In this chapter, a description of Zambia's national park system and the challenges to its successful management, and a historical account that shows crucial phases in the evolution of Zambia's national park policy environment were presented. In this way, the chapter provides information on the different processes and dimensions (in which the dynamic interaction between global and local takes place) that affect policy transfer in Zambia's national park system. The changes that have occurred in Zambia's national park systems have generated diverse and complex outcomes which may preclude a simple relation between global policy prescriptions and communication and policy change in national park management. Indeed, these changes contribute to the construction of present-day national park systems, while influencing the way global policy mobilities in the public policy environment take place. The next chapter presents the key concepts from the literature that underpin this study.

CHAPTER 3. SUSTAINABLE DEVELOPMENT AND POLICY TRANSFER

3.1. Introduction

In recent years the concept of sustainable development has gained increased recognition as an overarching policy goal, becoming an action-guiding principle for decision-makers globally (Hugé et al., 2013). Gibson (2006, p. 171) asserts that the increased social and political support for sustainable development is, in part, "a response to widespread pressures for more effectively comprehensive, farsighted, critical and integrated approaches to decision-making on important policies, plans, programs and projects". Even so, empirical research on the diffusion of sustainable development into public sector policies, plans and programs, has been limited (Mitchell, Wooliscroft, & Higham, 2013). This study addresses this gap. By examining how a set of international principles for national park management best practice are reflected and interpreted in Zambia's national park legislation, policies, plans, and reports, the study aims to verify the existence and the effectiveness of a policy transfer process generated by the international environmental agreements and organisations concerning the sustainability of national parks. A premise of this study is that one promising avenue to support the long-term success of national park systems is to ensure the principles of sustainable development are reflected in the policy documents used in their management. Clearly articulating the principles of sustainable development set out in the global policy models in national level policy documents could help guide change toward more sustainable stewardship (Hare, Forstchen, Smith & Decker, 2018; Watson et al., 2014; Lockwood, 2010).

This chapter presents the key concepts from the literature regarding: sustainable development, national park governance, and policy transfer and alignment. Following this introductory section, Section 3.2 establishes the context of the thesis with a discussion on the meaning of sustainable development. The application of sustainable development in national parks is explained in Section 3.3. Section 3.4 reviews existing

literature on policy transfer (and related terms), exploring how policy is transferred from supranational bodies via national systems to local entities. It focuses on the agents and elements of policy transfer and how policy transfer lends itself to the concept of sustainable development. The concept of policy alignment, as one way of enhancing policy transfer across increasingly interdependent systems and addressing sustainable development challenges, is discussed in Section 3.5. The concluding section reflects on the importance of alignment for environmental outcomes and how it has been evaluated in academic literature.

3.2. Sustainable development

Sustainable development, or its close synonym 'sustainability', was brought to the forefront of international policy-making in 1987 by the Brundtland Commission which defined it as a way to ensure "... meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 43). Following this conceptualization, sustainable development has become an exceptionally popular term adopted rapidly in virtually all sectors (Gibson, 1989, 2006). Despite its popularity and rapid adoption, there has been limited consensus among scholars about the meaning of sustainable development. Early researchers such as Brown et al. (1987) acknowledges that sustainable development is difficult to measure and is rarely defined explicitly. Similarly, Gibson (1989) maintains that no one knows what sustainability means. Along the same lines, Andrews (1997, p. 19) observes that "sustainable development is primarily symbolic rhetoric, with competing interests each redefining it to suit their own political agendas, rather than serving as an influential basis for policy development". The International Institute for Environment and Development (1986) concludes that sustainable development is a slippery concept: one that is comfortable but ill-defined.

According to Hugé et al. (2013), the complexity of defining sustainable development rests with the fact that its goal is dynamic: it changes according to the context and interests involved, and encompassing many, often unclear and inarticulate interpretations. From this perspective, sustainable development means different things

to different people. Hugé et al. (2013) explain that the context within which sustainable development is used should be explicitly defined to achieve clarity of discussion. For example, from an economic perspective, sustainable development is about "the continuously satisfaction of basic human needs and higher-level social and cultural necessities such as security, freedom, education, employment, and recreation" (Brown, 1987, p. 716). In contrast, the ecological perspective of sustainable development is about the continued productivity and functioning of ecosystems (Jabareen, 2008). These conflicting views add complexity to defining sustainable development, especially from an assessment point of view.

Many scholars have defined and discussed sustainability based on the common three pillars: social, economic and ecological. This conceptualisation involves the balancing or at least accounting of considerations and values within the three pillars. While this consensual conceptualisation is popular, some authors have criticized its conventional approach (Pope, Annandale, & Morrison-Saunders, 2004; Gibson et al., 2005). Pope et al. (2004), for example, assert that defining sustainability based on the three pillars complicates its implementation and promotes trade-offs, often at the expense of the environment. Along the same lines, Gibson et al. (2005) contend that although the pillar-based approach has proven useful in grouping relevant actors and interests in sustainability discourses and in organizing sustainability indicators, it perpetuates fragmentation by emphasizing competing interests rather than linkages and interdependencies. Thus, they state the following:

> The pillar categories reproduce the deeply entrenched divisions of policy mandates and research expertise that have long frustrated more integrated thinking. And they encourage a focus on conflicts, especially between economic and ecological pillars, which are often assumed to be the foundations of warring houses. As a result, pillars-based approaches to sustainability planning and evaluation tend to concentrate attention on competing objectives, rather than on opportunities for positive accommodations of interrelated human and ecological interests (2005, p. 94).

Despite on-going debate over the meaning of sustainable development, several studies have outlined key themes at the basis of the operationalisation of sustainable

development (Berke & Conroy, 2000; Harrison, 2000; Gibson, 2006). Gibson (2006), for example, asserts that consensus has emerged on the view that sustainable development "must aim to foster and preserve socio-ecological systems that are dynamic and adaptable, satisfying, resilient, and therefore durable" (p. 173). Similarly, Gibson et al. (2005) suggest that it is advantageous to define sustainable development based on the main requirements for improvement rather than the established categories of expertise. Many such approaches have been reported in academic literature. For instance, Pezzoli (1997) carried out a trans-disciplinary review of sustainable development literature and identified holism and co-evolution, social justice and equity, empowerment and community building, and sustainable production and reproduction as the key considerations to sustainable development. George (1999) developed sustainability criteria for environmental assessment applications based on present and future equity, combining ecological and socio-economic considerations. Similarly, Harrison (2000), through a critique of the economic, technological, political, and ethical theories that are the basis for current policy, identified efficiency, equity and ethics as three key elements that should constitute sustainable development. While the criteria, or elements identified in these studies are not the same, the studies reflect broad agreement on the key themes for understanding sustainable development.

As a pioneer of sustainability discourse, Gibson (2006) has developed a set of sustainability principles for application in decision-making. Gibson's work is based on a synthesis of arguments drawn from sustainability literature and practical experience and it integrates considerations from ecological systems theory, corporate greening initiatives, growth management planning, civil society advocacy, ecological economics, community development and a host of other field.' (Gibson 2005, p. 95). The core principles for sustainability as suggested by Gibson include the following:

i. *Livelihood sufficiency and opportunity* – Ensure that everyone and every community have enough for a decent life and opportunities to seek improvements in ways that do not compromise future generations' possibilities for sufficiency and opportunity.

ii. *Intra-generational equity* – Ensure that sufficiency and effective choices for all are pursued in ways that reduce dangerous gaps in sufficiency and opportunity (and health, security, social recognition, political influence, etc.) between the rich and the poor.

iii. *Intergenerational equity* – Favour present options and actions most likely to preserve or enhance the opportunities and capabilities of future generations to live sustainably.

iv. *Resource maintenance and efficiency* – Provide a larger base for ensuring sustainable livelihoods for all while reducing threats to the long-term integrity of socio-ecological systems by reducing extractive damage, avoiding waste and cutting overall material and energy use per unit of benefit.

v. *Socio-ecological civility and democratic governance* – Build the capacity, motivation and habitual inclination of individuals, communities and other collective decision-making bodies to apply sustainability principles through more open and better-informed deliberations, greater attention to fostering reciprocal awareness and collective responsibility, and more integrated use of administrative, market, customary, collective and personal decision-making practices.

vi. *Precaution and adaptation* – Respect uncertainty, avoid even poorly understood risks of serious or irreversible damage to the foundations for sustainability, plan to learn, design for surprise and manage for adaptation.

vii. *Immediate- and long-term integration* – Attempt to meet all requirements for sustainability together as a set of interdependent parts, seeking mutually supportive benefits.

These principles represent key areas of consensus within the sustainability literature. Together, they offer the opportunity to develop frameworks to better understand the concept of sustainability within any specific setting (Gibson, 2006). The set of principles suggested by Gibson though not pillar-based, the elements draw from the usual ecological, economic and socio-cultural categories. Gibson's principles focus on what must be achieved, and what key actions are involved, to move consistently towards

greater sustainability. Such conceptualisation of sustainability, which diverts from a focus on definitions offers new opportunities of exploring the potential of how the concept can be operationalized (Gibson, 2005). It resonates well with the guidance provided by Shearman (1990, p. 1) that "it is not sustainability that requires definition or clarification, but rather its implications for any given context to which it is applied".

Another useful conceptualisation of sustainable development is provided by Berke and Conroy (2000). Through a review of several definitions of sustainable development in literature, Berke and Conroy (2000), suggest four key characteristics that can be used to derive a more precise definition of sustainable development: Reproduction, balance (among environmental, economic, and social values), linkages between local and global concerns, and dynamic process. While Berke and Conroy (2000) acknowledge the legitimacy of the perceived shortcomings in defining sustainable development, their conceptualisation of sustainable development is relevant to this study and therefore, worth setting out here:

- Reproduction – following Campbell's (1996, p. 306) definition of sustainable development as 'the long-term ability of a system to reproduce', Berke and Conroy (2000) consider 'reproduction' to mean not just duplication of the status quo, but also a fostering of revitalization. Accordingly, they suggest that 'planners must foresee and shape the scope and character of future development, identify existing and emerging needs, and fashion plans to assure that those needs will be met and that communities will be able to continuously reproduce and revitalize themselves' (p. 23). By this definition, built environments become more liveable; ecosystems become healthier; economic development becomes more responsive to the needs of place rather than furthering the profits of a powerful few; and the benefits of improved environmental and economic conditions become more equitably distributed.

- Balance - Plans should reflect an appropriate balance among environmental, economic, and social values. Achieving such balance requires coordination, negotiation, and compromise (in the plan development process). When all values are not represented, sustainability cannot be promoted by a plan. If environmental values are not accounted for, then the basic life support process upon which a community depends cannot be sustained. If economic

development values are not represented, then the fundamental source of community change and improvement is denied. If social values are not reflected in a plan, then places will be created that do not meet the life and work needs of local people, and do not fairly serve all interest groups.

- Linkage between local and global concerns - Sustainable development requires that communities reach beyond their individual interests in future development to account for global (and regional) needs. Local plans should acknowledge that communities' function within the context of global (and regional) environmental, economic, and social systems. Moreover, just as communities should not act in only their own interests, individual citizens and interest groups should be required to account for community, regional, and global interests.

- Dynamic process- Sustainable development should be a dynamic process that extends from the formulation of a plan. Sustainability requires communities to pursue an evolving and ever-changing program of activities, including a continuous process of evaluating current and emerging trends, an ongoing means of encouraging citizen participation and negotiating conflicts, and an updating of plans. These activities should be oriented toward searching for ways to continuously move communities in the direction of becoming more sustainable.

From the above discussion over the meaning sustainable development or sustainability, it can be argued that there is now an emerging consensus on the fundamentals of what constitute sustainable development. This argument resonates well with the guidance provided by Gibson (2006, p. 1) that it is now time to prepare for comprehensive adoption and more consistent application of the requirements of sustainable development in all sectors.

This study focuses primarily on one aspect, i.e., the place of sustainable development in national park governance. The study identifies the key international principles required for effective (sustainable) national park management and examines the extents to which these global principles are reflected in Zambia's national park laws, policies, plans and reports. Sustainable development is simply accepted here following Berke and Conroy's (2000) conceptualization as

> [a] dynamic process in which communities anticipate and accommodate the needs of current and future generations in ways that reproduce and balance

> local social, economic, and ecological systems, and link local actions to global concerns (p. 23).

The focus towards sustainable development in national park governance begs the question, what constitutes a 'sustainable' national park? Determining what constitutes a 'sustainable' national park thus leads to a debate on principles and cultural norms, and on desired social and economic outcomes. This in turn leads to questions about the role of national parks, how they are managed, relationships between national park managers and the surrounding communities. These issues are the focus of the next section.

3.3. Implementing sustainable development in national parks

There are several reasons why the concept of national parks is important to this thesis. National parks represent the most appealing of species and landscapes: they are the most popular tourism destinations for tourists; they generate higher revenues compared to other protected area categories; and are the most common and accepted type of protected area worldwide (Ahmend, Giraldo, Oltremari, Sanchez & Yerenda, 2003). A national park is defined as a "large natural or near natural area set aside to protect large scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities" (Dudley, 2008, p. 16). As evident from this definition, national parks have multiple functions which gives them added prominence as an important tool for sustainable development. This range of functions constitutes the key tasks of national park systems, albeit with different emphases depending on the national context, the historical period, the specific sector and the institution concerned. Given their many benefits, national parks are important instruments for meeting the international environmental commitments, particularly for reducing the rate of biodiversity loss.

While it seems straightforward to assume that national parks significantly add to the conservation of biodiversity – a crucial pillar of sustainable development, the picture is, however, quite elusive. Many national parks, particularly in the Global South, are in

decline (Dudley, 2008). Local population growth, poverty, long-standing economic stagnation, and the wholesale arrival of western tourists are straining delicately balanced environmental systems and jeopardizing fragile biological resources (Dudley, 2008). In addition, most parks are not well-planned or/and well-managed to maximize their contribution to the conservation of biodiversity (IUCN, 2004). As a result, most parks have become mere islands, no longer capable of meeting their ecological and socio-economic goals.

As developments in and around national parks usually depend on eco-tourism and on the management of visitor flows (Dudley, 2008; Thomas & Middleton, 2003), the park management must cope with two potentially conflicting aims: the conservation of biodiversity and tourism development by offering specific national park experiences for visitors. Finding a balance between these conflicting aims remains a stern challenge. With the growing population and continued economic uncertainty in the Global South, it is likely that local communities will continue trying to better themselves and that national parks will be working within an increasingly unpredictable social and economic environment (Thomas & Middleton, 2003). As such, the simultaneous achievement of social, economic, and conservation goals of national parks will remain problematic (Dudley, 2008). Despite this complexity, however, conservation efforts should not be impeded as these conflicting aims can be made congruent in order to complement each other by the choice of management approach (Getzner et al., 2014). One promising avenue to addressing the complexity associated with fulfilling the conservation, economic and social objectives of national parks is to build partnerships and foster exchange of knowledge and co-learning between national park managers and the surrounding local communities (Getzner et al., 2014). The use of adaptive and community-based management approaches may be especially significant for the broad range of positive outcome required for national parks (Dudley, 2008). Adaptive and community-based management approaches (approaches that help build capacity for learning and adapting such as co-management, adaptive management scale- matching and stakeholder participation in decision-making), provide ways for dealing with complex systems including challenges of scale (Berkes, 2002).

Indeed, national park management agencies at all levels have had to devise ways for achieving the multiple goals and integrating sustainable development into everyday decision-making. While acknowledging that this is a complex task in practice (Gjertsen, 2005), a great deal of research and experience on the optimal requirements for delivering sustainable development in national park governance now exists (Edgar et al., 2014; Muhumuza & Balkwill, 2013; Bennett & Dearden, 2014; Font, Cochrane & Tapper, 2004; Christie et al., 2003). Vertical policy alignment, the linking and coordination of policies between different levels of government, can help facilitate the needed coherence to achieve the common goals towards sustainable development (Biermann et al., 2009; Karlsson-Vinkhuyzen, 2012).

According to Font, Cochrane and Tapper (2004) a sustainable national park, has six interdependent pillars:

i. A programme/project design based on a logical framework analysis of strategic goals, strategic objectives, outputs, outcomes, indicators, means of verification, who is responsible, and critical assumptions. Accompanying the logical framework should be a detailed implementation schedule, monitoring and evaluation plan and an indicator tracking table;
ii. Adequately trained and experienced human resources to carry out the duties and responsibilities of the various programmes in the protected area;
iii. A pristine environment endowed with a wide range of high value ecosystems, habitats, genes, species of flora and fauna. In addition, attractive and high value landscapes and a diverse geological set-up will complete the rich biodiversity;
iv. A reliable budget (that is sustainable supply of funds);
v. Participation of local communities, NGOs, the private sector, development agencies and other relevant stakeholders in conservation activities of the protected area is crucial for success; and

vi. Innovative national policies and legislation, strategies, programmes, sub-programmes and projects that support nature conservation are vital for an efficient and effective protected area.

These pillars are interdependent and are the ultimate ingredients for successful national park governance. Building on Font, Cochrane and Tapper (2004), Muhumuza and Balkwill (2013), suggest that a supportive legal and policy environment, effective management, and successful local development that addresses the needs of local communities and visitors are the key preconditions for national parks to meet their goals and ultimately, the implementation of sustainable development national park policies. More specifically, Muhumuza and Balkwill (2013) report that the degradation of the parks in Africa is a consequence of weak national policies governing the parks, poor park management and insufficient financial resources. Bennett and Dearden (2014) support these views and conclude that increased attention to the planning and provision of appropriate governance, management and local development, in consideration of contextual factors, can lead to more beneficial national park outcomes and consequently assure their long-term success.

For Muhumuza and Balkwill (2013), governance institutions and processes should provide a supportive legal and policy framework for effective management and enable the achievement of sustainable development outcomes. This, however, requires strong leadership. According to Ross (2010, p. 1104), when strong leadership is present, "policies flourish, when it disappears, policies like sustainable development flounder". Ross further asserts that while the legal and policy framework can have little influence on ensuring leadership, "it can provide symbolic evidence of the importance of sustainable development, as well as suitable and lasting protection against a lack of leadership in the short term by protecting certain values and imposing certain substantive and procedural obligations" (2010, p. 1105).

Second, Muhumuza and Balkwill (2013) maintains that management is required to support sustainability and thus the long-term viability of national park-related

development while also monitoring, evaluating, and providing feedback to governance bodies. Finally, Muhumuza and Balkwill (2013) maintain that successful local development that addresses the needs of visitors and local communities is important as it provides the finances needed for both governance and management. Local development also facilitates support for national park management and thus contributes to the effectiveness and sustainability of governance structures. Successful local development also entails improving relations with other stakeholders interested in the management of national parks and increasing their participation in everyday decision-making. Stakeholders here refer to "various institutions, social groups and individuals who possess a direct, significant and specific stake in the protected area" (Borrini-Feyerabend, 1996, p.8). They may include, *inter alia*, local communities, government agencies, civil society organisations, tourists (both local and international), academics and international organisations. Stakeholders have different and sometimes conflicting interests which originate from different sources, including institutional mandate, economic interest, dependence for livelihood, and a need for enhanced recreational experience (Thomas & Middleton, 2003). Therefore, stakeholder involvement is essential for building consensus around the goals of a national park and results in increased sense of ownership for the users, and greater support for sustainable development (Thomas & Middleton, 2003).

Following the above considerations, a 'good' national park is assumed to be one that addresses the wide range of interests of different stakeholders i.e. one that takes full account of its current and future environmental, economic, and socio-cultural impacts, addressing the needs of visitors, the industry, the environment, and surrounding communities. National park sustainability also depends on the adaptive behaviour of the different stakeholders, the vulnerability and resilience of ecosystems, and the ability of the social system to cope with conflicting demands and feedback (Thomas & Middleton, 2003). Overlooking any of these requirements in national park governance will compromise the operational integrity and long-term success of a national park.

3.4. Policy transfer

Literature on the sustainable development of national parks suggests that new policy models, espoused by global institutions like the IUCN, have considerable potential to contribute to their long-term success (Lausche, 2011). Consequently, understanding the processes through which these new policy models, are interpreted and applied at the local level is critical (McLean & Borén, 2015). Policy transfer-related activities play a major role in determining how new policy models and global concepts such as sustainable development are transformed into concrete action. This study seeks to examine how a set of key international principles for national park management best practice are interpreted in Zambia's national park legislation, policies, plans, and reports. This follows recent calls in the literature to performs deep analyses of "how the local institutional structures behave and respond to sustainability policies, how they develop or receive these policies and how these policies spread (or not) between institutions" (McLean & Borén, 2015, p. 1490). It is also an attempt at a thicker description of the problems inherent in translating global concepts in different local contexts. The theory of policy transfer offers a great deal to the analysis of how policy-making operates, how policies, policy models and policy knowledge/expertise circulate, and is applied in this study.

Policy transfer is widely understood as "a process by which knowledge of policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of similar features in another" (Dolowitz & Marsh, 1996, p. 344). Since its emergence in the mid-1980s, the theory of policy transfer has developed into a core method in a range of social science disciplines and has been extensively employed to classify and explain a multitude of processes (such as Europeanisation, globalisation and policy innovation) occurring both within and between different political contexts (Evans, 2017). Policy transfer now represents a distinct research focus (Marsh & Sharman, 2009). In this section, the theory of policy transfer is explored to illustrate the process by which policies notably from international organizations diffuse/travel to national and sub-national entities for sustainable development and to position this study.

According to Benson and Jordan, (2011), three major strands of the literature dealing with policy transfer are now apparent. The first strand of literature mainly focusses on developing theories that underpin policy transfer to provide understanding of the concept (e.g. Bennett 1991; Dolowitz & Marsh, 1996). This strand of literature explores the different degrees of transfer, the factors that restrict or facilitate policy transfer processes and how these processes relates to 'success' and 'failure' of transfer. The model of policy transfer developed by Dolowitz and Marsh (2000) is an example from this strand of literature. It integrates multiple domains of policy-making activity by classifying all possible occurrences of transfer - voluntary and coercive, temporal and spatial. It also includes seven questions about policy transfer including who engages in policy transfer, for what reasons, what is being transferred, from where, to where, what restricts or facilitates the process, and how this process relates to the outcomes of transfer (Dolowitz & Marsh, 2000). This strand of literature can contribute to understanding how sustainable development policy models for national parks can be effectively transferred from the global to the local level.

The second strand of literature discusses the conceptual refinements in the scholarly field of policy transfer – referring to key conceptual innovations or re-assessing influential contributions to the literature (e.g. Peck & Theodore 2012; Temenos & McCann, 2012; Stone, 2012; 2016). More broadly, this strand of literature focuses on defining policy transfer, particularly how it is distinguished from other related concepts. It explores the processes of policy transfer across international, national and local administrations with an overall objective of providing clarity on policy transfer research, its achievements and evolution. Overall, this strand of literature shows that policy transfer research has been conceptually diverse, covering a wide range of topics including policy around social welfare (Dolowitz et al., 2000), education (Britez, 2012); development assistance (Stone, 2004), urban planning (Dolowitz & Medearis, 2009), climate change (Hsu et al., 2017), and environmental planning (Betsill & Bulkeley, 2004; Holzinger & Knill, 2008; Jordan et al., 2003). Each of these fields provide a slightly

different take on how best to understand policy transfer research and have all contributed to clarifying its (conceptual) evolution.

The third strand of literature focuses specifically on promoting policy transfer as the underlying concept for guiding and stimulating policy innovation. This strand of literature mainly discusses policy transfer between countries as a process in which policies implemented in one political system are examined for their potential utilization within another political systems (e.g. Rose, 2005). This literature explores policy transfer as one way to explain policy convergence (Holzinger & Knill, 2005) alongside globalisation (Evans, 2009; Stone, 2010) and actions by non-state actors.

Across the three threads of literature, there is broad consensus on the definition of policy transfer as defined by Dolowitz and Marsh (1996). However, the empirical and theoretical assessment of policy transfer is generally hampered by the diversity of its related terms (and sometimes synonymous). Commonly used terms are policy convergence (Holzinger & Knill, 2008; Cairney et al., 2009), policy diffusion (Marsh & Sharman, 2009), policy learning (Carroll & Common, 2013), lesson-drawing (Rose, 2005; De Jong, 2009), policy mobility (Stone 2001; Prince, 2012) and policy translation (Mukhtarov, 2014). Each of these terms is used to describe, and sometimes to explain, different aspects of the complex system of interactions and relationships across transnational, regional, national, and local spaces. According to Britez (2012), each of these terms is designed to underscore the contemporary dynamics of policy ideas being produced in one space but transferred in their application and utilisation to another. The challenges in the assessment of policy transfer becomes most apparent when focusing on the concepts of policy diffusion and mobility.

Policy diffusion is often seen as an umbrella concept that largely subsumes similar concepts used in academic literature. Diffusion is generally characterised as "the socially mediated spread of policies across and within political systems, including communication and influence processes which operate both on and within populations of adopters" (Rogers, 1995, p. 13). According to Rogers (1995), policy diffusion is

triggered by a broad range of causal factors including, *inter alia*: (i) learning, when governments draw lessons from other places; (ii) competition, that is associated to the race for innovations that are supposedly able to make certain territories more attractive (e.g. for the private sector or tourism); (iii) emulation, when government voluntarily adopt policy models defined in international agreements or supranational regulations; and (iv) coercion, that is associated with the adoption of policy models communicated in the international system (Busch & Jorgens, 2005).

Attempts have been made to distinguish policy transfer from related terms such as policy diffusion (Bulmer et al., 2007; Bulmer & Padgett, 2004; Dolowitz & Marsh, 2000). In most studies (e.g. Dolowitz & Marsh, 2000; Jordana & Levi-Faur, 2005; Elkins & Simmons, 2005), two main differences are highlighted. First, policy transfer and policy diffusion differ in their rational and voluntary nature. The relevance of knowledge and the role of intentional processes (agency) are emphasized in the policy transfer literature. In contrast, structural, interest-based and non-intentional processes are included and emphasized in policy diffusion literature.

Second, differences exist with respect the methodological approach employed in studying the two concepts. Policy transfer is dominant in case study, qualitative-oriented research while policy diffusion is used more frequently in the quantitative research literature. Evans (2017) explains that policy diffusion literature is generally descriptive, typically focusing on explaining the general patterns of the spread of innovations within or across political systems over time. Policy transfer literature, on the other hand, is more purposeful and involves investigating the underlying causes and contents of policy exchange (Evans, 2017). Several other studies have made similar observations.

Notwithstanding these differences, both policy transfer and policy diffusion literatures aim to describe and explain that policies are the result of interdependent decisions. They both explain that that both concepts denote processes which, under certain circumstances, might lead increased similarities in outcomes over time (Knill, 2005).

Linked to the concepts of policy transfer and policy diffusion is the notion of policy 'mobility'. Policy mobility which has emerged in recent years, primarily through the work of geographers (McCann, 2008, 2011a; Peck 2011, Cook & Ward, 2011; Prince, 2010), refers to "the apparent movement of policy from one place to another in terms of the various material, institutional and social agencies, objects, connections, and infrastructures that make that movement possible" (Prince, 2010). The central question underlying studies on policy mobility refers to the geographical context (i.e. the context that policy is mobilized from and the context it is mobilized to, along with the context it is mobilized through). Prince (2010) explains that the question of geographical context is pivotal for policy mobility studies because "both the context that policy is mobilized from and the context it is mobilized to, along with the context it is mobilized through, are important aspects of policy mobility". Along the same lines, McCann and Ward (2012, p. 112) explain that studies on policy mobility focus on how "policies are constructed and mobilized, mutating as they move from one place to another, being assembled, disassembled, and reassembled along the way." By focusing on the geographical context, mobility studies attend to a range of scales, interests, actors, and relations within and beyond the state to analyse the social process of globalized policy-making. Studies on policy transfer, by contrast, focus on changes in national policy characteristics.

While acknowledging the existence and relevance of the related terms, this study systematically uses the concept of policy transfer, but incorporates insights from studies that use related terms such as policy diffusion and mobility. The concept of policy transfer can be successfully reinterpreted and reapplied in different ways to inform understanding of related contexts and processes (Benson & Jordan 2011). It is useful for analysing the impact of processes of globalization on policy formation at different levels of governance; from the global to the local (Evans, 2017). Reflective of the aim and objectives of this study (see Section 1.3), it is more feasible to focus on the transfer of ideas into a country's policy documents than their mobilities. Indeed, as defined in the mobilities literature, an account of policy mobilities would require attending to a

range of scales, sites, interests, actors and relations within and beyond the state to fully analyse the social process of globalised policy-making (McCann & Ward (2012. Such a discussion goes beyond the scope of this thesis.

3.4.1. Agents of policy transfer

Several agents of policy transfer have been identified in the literature. Dolowitz and Marsh (1996, p. 345) originally identified six types of agents/actors that might conceivably engage in transfer activities: (i) elected officials; (ii) political parties; (iii) bureaucrats/civil servants; (iv) pressure groups; (v) policy entrepreneurs/experts; and (vi) supra-national institutions. Similarly, Stone (2010), identified advocacy networks, transnational philanthropic institutions, think tanks, and epistemic communities as non-state experts engaged in promoting norm transfer across national borders. Stone (2010) reports that all these actors influence policy transfer processes. However, it is the influence of international organisations that has proven most popular of all, particularly among European scholars. International organisations are increasingly producing and communicating knowledge and policy advice about policy and institutional reforms at the national level. For example, it has become increasingly evident across countries that environmental policies follow global models of environmental change promoted by the international environmental conventions (such as the UNFCCC, CBD, and CITES) and international organisations such as the IUCN. International organisations now play a major role in creating broader societal norms and values and have a long-term influence on international relations and international political outcomes. In this sense, international organisations have a major influence on international sustainable development processes and outcomes (Stone, 2010).

In addition to these non-state agents of transfer, Betsill and Bulkeley (2004) discern a secondary level of agents of policy transfer occurring within horizontal and vertical actor networks and identify sub-national institutions such as regional and local governments as important transfer agents. Transnational corporations (Dolowitz and Marsh, 2000), intergovernmental organisations and global financial institutions (Dolowitz and Marsh, 2000; Evans, 2009; Stone, 2004) have also been identified as significant agents of transfer under conditions of greater globalisation and devolution. In their review of

public policy literature, Benson and Jordan (2011) conclude that policy transfer involves many more agents than was originally understood.

3.4.2. Elements of policy transfer

Dolowitz and Marsh (1996, pp. 349–350) outlined several elements that could in theory be transferred namely, "policy goals, structure and content, policy instruments or administrative techniques; institutions; ideology; ideas, attitudes and concepts; and negative lessons." Building on Dolowitz and Marsh (1996), Benson and Jordan (2011) provides a simple binary distinction between soft and hard forms of transfer. 'Soft' forms of transfer involve the transfer of ideas, ideologies and concepts: elements of policy that circulate freely among non-state actors under conditions of greater globalisation (e.g. Stone, 2004). 'Hard' forms of transfer involve the transfer of policy instruments, institutions and programmes between governments (e.g. Dolowitz, 2003; Jones & Newburn, 2006). Following Stone (2010), Benson and Jordan (2011) emphasize the importance of 'softer' forms of transfer and observe that these currently constitute a popular focus of emerging work. Nevertheless, they acknowledge that 'soft' and the 'hard' forms of transfer coexist and complement one another.

In this study, the focus is on 'softer' forms of transfer, particularly "the policy ideas, concepts, norms or principles produced in one space but transferred in their application and utilisation to another" (Dolowitz & Marsh 1996, p. 344). Furthermore, the study considers 'soft' policy transfer to take place across multiple governance levels – from the global to the local. To clarify this definition, Zambia's national park laws, policies, plans and reports are compared against a set of international park management principles set by international environmental agreements and organisations. Accordingly, policy transfer is here considered to encompass voluntary or pressured adoption of non-obligatory international norms (principles) and is considered to take place between autonomous actors that can make sovereign decisions. It is not restricted to merely imitating policies developed at the international level but can include profound changes in the content of the exchanged policies.

3.4.3. Policy alignment

One way of enhancing policy transfer across increasingly interdependent governance systems is in terms of what policy scholars have referred to as 'alignment.' Alignment as a concept is ambiguous and multi-dimensional and has been defined in several different ways. It is harnessed to serve a variety of purposes and therefore, articulated differently depending on the issue under consideration (Savage and O'Connor, 2018). Across the public policy literature, alignment is widely used as a means of understanding the coordination dimensions of actions across multiple governance levels (Chan, van Asselt, Hale, Abbott et al., 2015). It is discussed in relation to diverse aspects of policy and governance including, inter alia, the alignment of processes and procedures (Baker, 2004), alignment between policy instruments and mixes (Rayner, Howlett & Wellstead, 2017), and alignment of the form and content of policies (Looney, 2011). This study follows the definition by Chan et al. (2015), arguing that alignment can be defined as a way of coordinating actions across multiple governance levels to achieve coherence. In this way, as Savage and O'Connor (2018) point out, "alignment shares much in common with other concepts, such as 'harmonisation', 'integration' and 'co-ordination' which are used in flexible ways to argue for coherency and consistency across political, policy and process dimensions, including across different levels of governance" (p. 5).

Brown (2009, p. 38) specifies that policy alignment "implies linking discrete levels of governance, from local to international, and institutions across different levels." Similarly, Berger and Steurer (2008, p. 31) define policy alignment as "the co-ordination of various policies between the different levels of government". The EU Committee of the Regions (2009, p. 64) identifies "co-ordination in objective-setting, competence distribution and development of provisions and measures across multiple tiers of government" as the content of vertical policy alignment, notably to achieve a successful implementation of global commitments. Along the same lines, Berger and Steurer (2008, p. 31) argue that policy alignment is about "the co-ordination of various policies between the different levels of government", with the aim of achieving policy coherence. These definitions typically address the core characteristics of the policy alignment. The operational definition of policy alignment used in this study, following

several previous definitions and incorporating their differences in perspective is: the linking (Brown, 2009) and coordination of policies between different levels of government (Berger & Steurer, 2007), with the aim of achieving policy coherence. This definition emphasizes the need for consistency, as stipulated by Underdal (1980), were all policy components, including across different levels of governance, are in accord with each other.

3.4.4. Importance of alignment for environmental outcomes

Several studies on environmental governance and public policy advocate for close policy alignment between global intergovernmental organizations, nation states, and subnational entities as one way for achieving policy coherence for sustainable development (Abbott et al., 2015; Chan et al., 2015; Hale & Roger, 2014; Jordan et al., 2015; Van Asselt & Zelli, 2014; Biermann et al., 2009; Brown, 2009; Berger & Steurer, 2007). This is so because policy misalignment (that is, the tendency to develop sectoral policies independently from one another and in an isolated manner vis-à-vis other levels of governance) is considered as one of the obstacles to sustainable development. Abbott et al. (2015), for example, argue that greater alignment between intergovernmental organizations like the United Nations Framework Convention on Climate Change (UNFCCC), nation states, and non-state and sub-national entities is central to building resilient climate systems. Along the same lines, Biermann et al. (2009) assert that aligned policies produce synergies that help governance systems avoid 'conflictive fragmentation' while Van Asselt and Zelli (2014) assert that close policy alignment enable multiple institutions to work towards the same collective goals. Alignment of policy goals, processes, content, and more, is framed in such studies as a means for achieving consistency, driving collaboration, and, ultimately, better policies, new efficiencies, and superior outcomes (Savage & O'Connor, 2018). Close policy alignment is also advocated for as a solution to apparent problems in federal systems characterised by conflicts and inconsistencies between state and federal agendas (Biermann et al., 2009).

May, Sapotichne and Workman (2006) have also argued for close alignment between international, national, and subnational governance tiers for sustainable development.

Using the term 'coherence', these authors argue that increased policy coherence correlate with greater policy stability and more regular policy supplies, and inversely, that policy inconsistency is commonly used for explaining gaps in policy acceptance and implementation (May et al., 2006 pp. 381, 398, 400). May et al. (2006, p. 399) especially underline the role of policy-making institutions as "important intermediaries in shaping the policy coherence of policy domains because of their role in shaping the interplay of issues and interests". In this sense, policy alignment is advanced as an important instrument for transnational organisations sending impulses into the national governance systems to impact international political processes, and subsequently, outcomes related to sustainable development. Arguments for policy alignment are also highlighted in relation to accountability processes and conflicts, including efficient resource allocation, information sharing, and adoption of common goals (Broekhoff et al., 2015; Andonova et al., 2009).

At the same time, however, some studies challenge the general expectation of policy alignment (Savage & O'Connor, 2018; Hollander, 2010). These studies emphasize the differences in national institutions and structures for domestic actors and tend to privilege divergence over convergence of policy across different governance levels. For example, Savage and O'Connor (2018) argue that, the benefits of misalignment or 'messier' policy processes, many of which have long been understood as benefits of federal systems, rather than roadblocks to more effective governance are often absent in debates about policy alignment. Hollander (2010, p. 157) expresses similar views in relation to Australian federalism, stating that "the concern for administrative efficiency", which is central to calls for alignment and harmonisation, often "fails to appreciate the potential of a less tidy policy framework". They argue that the merit of such frameworks should not be underestimated, as these may sometimes be the most feasible or appropriate for the governance of cross-cutting problems.

Based on these critiques, the counter arguments for policy alignment posit that the primary rationale underlying standards-based governance systems rests upon alignment which must involve technical and social dimensions - both of which are of significant

relevance to sustainable development (Looney, 2011). Indeed, several recent academic contributions to environmental governance and public policy research advocate for close policy alignment (Abbott et al., 2015; Chan et al., 2015; Hale & Roger 2014; Jordan et al., 2015; Van Asselt & Zelli, 2014). Furthermore, major global policy documents on sustainable development, from the World Conservation Strategy in 1980 up to the outcome documents of the World Summit on Sustainable Development in 2002, have called for increased policy alignment, notably to achieve successful implementation of global commitments (Happaerts, 2012). More recently, debates on the concept of alignment have been given new impetus by the adoption of the Sustainable Development Goals (SDGs) in 2015 which has established a clear global mandate for greater integrated policy-making and coordinated action at different levels of governance, from global to local. In this study, the focus is on cases where alignment is offered as one potential solution to the challenges central to sustainable development. It is assumed that for a country's national park system to operate successfully, its national and sub-national (local) governance structures and policies must be aligned.

3.4.5. Evaluation of vertical policy alignment

There has been a great deal of work on tools to increase policy alignment. Tools of coherence are organisational concepts which, translated into structures, processes and methods of work, have helped bring greater policy alignment in governments from different political and administrative traditions. However, as Van Asselt and Zelli (2014) intimate in their discussion about the need for greater policy alignment in governments, there is very little research that focuses upon the substance of policy documents. Research on policy alignment focuses exclusively on *processes* of policy-making and consequences, almost completely ignoring the *substance* of policies. Yet, this is an important issue, because a country's integrative capacity depends, in part, on the substance/content of its policy documents as these establish the type of rules and avenues that allow movement of ideas between systems of governance. Policy documents provide a means of understanding much, although by no means all, the international dimensions of national policy goals, making them a potentially useful source of evidence about policy transfer.

Recent studies on policy alignment either concentrate on the interplay between international agreements and regimes (Oberthür & Gehring 2006; Abbott et al., 2016), or they focus on analysing interactions and connections between institutions (Van Asselt, 2014). They rarely go beyond descriptive accounts, particularly in relation to policy for sustainable development. Frameworks for analysis of policy documents are rare (Cheung, Mirzaei & Leeder, 2010).

A few studies have developed frameworks for evaluating policy alignment for sustainable development, though none of these are commonly used. Radin (2003), for example, has developed a framework comprised of four key instruments for intergovernmental relations:

(i) *behavioural instruments*, which mostly involve targeted communication in order to prevent intergovernmental conflicts;
(ii) *research and capacity-building instruments*, involving "empowerment";
(iii) *programmatic instruments*, using financial resources and the redesign of programs and grant types; and
(iv) *structural instruments*, which use patterns of responsibilities, authorities and leadership to shape intergovernmental relations; these instruments are mostly institutional and can involve commissions or other institutionalized mechanisms aimed at co-ordination. (pp. 610–614).

For Radin, investigating intergovernmental relations and the type of resources required to build these relations is important because existing intergovernmental linkages within a country determine how interaction on sustainable development takes place, and thus whether vertical policy alignment can be successful. Similarly, Berger and Sedlacko (2009) in their contribution on how vertical policy integration for sustainable development should take place in the European Union, present a typology of the involvement of subnational and local authorities. They identify four different types of involvement:

(i) *links between national sustainable development strategies and subnational sustainable development activities*: the sustainable development activities of both levels are linked, but no co-ordination happens;

(ii) *involvement in general consultation processes for sustainable development*: in this category, subnational governments are one of the many stakeholder groups that are consulted for the preparation or evaluation of the national sustainable development policy;

(iii) *membership in sustainable development councils and/or committees*: subnational governments can, among others, be involved in the multi-stakeholder councils or interministerial or interdepartmental committees governing the national sustainable development policy; and

(iv) *institutionalized mechanisms for better co-ordination on sustainable development*: these are the most comprehensive mechanisms of vertical policy integration (pp. 5–10).

Hsu, Weinfurter and Hu (2017) present an analytical framework for examining linkages between sub-national climate actors in the fragmented, post-Paris climate regime. Drawing on Andonova et al. (2009), Hsu, Weinfurter and Hu (2017) identify three key elements that catalyse sub-national climate actions and can be used to examine different modes of vertical and horizontal policy alignment:

(i) *Information sharing:* Information sharing is often the main resource higher levels of government channelled through transnational climate governance (TCGs) steering constituents towards network goals. This process assumes a governance function when the knowledge shared is recognized as authoritative and directs network constituents (Andonova et al., 2009). National governments are also primary vehicles of information that initiate policies and actions at lower jurisdictional levels.

(ii) *Capacity building:* Technical capacity and financial resources are frequently cited as key hurdles to implementing local climate action. In the absence of strong

vertical linkages, TCGs can provide resources (e.g., finance, expertise, labour, technology, and monitoring) to enable action. The primary indicator used to gauge capacity building and implementation is funding, determining whether financing is primarily provided by national governments or through participation in TCG networks.

(iii) *Regulative/rule setting:* In traditional governance systems, rule setting and compliance enforcement reside in a hierarchical, sovereign power (Andonova et al., 2009). TCGs can contribute to climate change governance by validating a set of norms and establishing rules to guide and constrain constituents. To evaluate rule setting and regulative linkages, focus is on participation in monitoring, reporting, and verification systems through national governments and TCGs.

While the frameworks presented by Radin (2003), Berger and Sedlacko (2009), and Hsu, Weinfurter and Hu (2017) offer useful elements to understand vertical policy integration for sustainable development, they are less suited to assess the strength of the alignment between policy intentions and policy outcomes. This is because they do not provide clear criteria or elements on which the degrees of alignment could be distinguished, making it impossible to apply the frameworks systematically. From this perspective, Rütten, Luschen, von Lengerke et al. (2003a) have called for more attention to selecting criteria that enables policymakers to review how closely policy intentions are reflected in their documents, because these provide an easily understood and persuasive connection between policy determinants and policy outcomes (p. 411). Therefore, Rütten et al. (2003a) develop a framework for policy analysis based on several criteria categorised in five broad themes: goals, resources, monitoring and evaluation, obligations and opportunities. Subsequently, they used this framework to examine health policies in Australia (Rütten, Luschen, von Lengerke et al., 2003b). Rütten et al. (2003a) criteria-based approach to evaluation of policy alignment replicates the general approaches to evaluation in other fields. Its focus on identifying criteria for policy formulation enables the approach to be adapted for a wide range of policy analyses studies. Its utility has been demonstrated in other literature (e.g. Cheung, Mirzaei &

Leeder, 2010). However, like in many other policy evaluation frameworks (Radin, 2003; Berger & Sedlacko, 2009; Hsu, Weinfurter & Hu, 2017), Rütten et al. (2003a) criteria-based approach to policy evaluation focuses on addressing regulatory gaps. Implementation gaps, whose consequences reach beyond law and into the realm of governance, are not addressed. Policy alignment is solely discussed in terms of constitutive elements of law. This limits the evaluation of policy alignment to legal processes. Also, the relationship between legal and governance considerations remains unclear.

To bridge this gap and make the connection between legal and governance considerations, this study offers a systematic method for examining policy alignment, by providing an analytical framework consisting of principles advanced by international environmental agreements and organisations. The international principles form the basis on which to base evaluation. This effort complements the work on role of international legal and non-legal principles by Houghton (2014) and Howard (2015). Principles offer points of convergence to addressing both the regulatory gaps and implementation gaps – an essential function in linking legal and governance considerations in policy evaluation. In addition, given the fundamental problems of identifying *which* and *whose* goals on which to base evaluation (O'Faircheallaigh, 2002), the principle-based approach advanced in this study could encourage consensus-mediating the diverse goals and interests of stakeholders at multiple governance levels.

The different frameworks for evaluating vertical policy alignment for sustainable development discussed above, demonstrate the complexities of policy processes. While no single framework can be said to prevail above the others in all contexts, they all have varying strengths and weaknesses which make them more suitable than others in different situations. An evaluation of the alignment of policy documents, proposed in this study, most closely fits within criteria-based approach suggested by Rütten et al. (2003a). This study examines the vertical alignment between national park laws, policies and plans and global national park management principles advanced by international organisations. Building on Rütten et al. (2003a) approach, this study identifies a set of

key international principles which depict the specific and substantive elements of national park legislation, policies and management plans. What makes this approach unique is that it directs attention to different elements regulation and governance; recognising the need for both perspectives to co-exist both in theory and in practice.

3.5. Conclusion

The aim of this chapter is to present the key concepts from the literature that underpin this study. To fulfil this aim, the chapter presented a review of the concept of Sustainable development and discussed what constitutes a sustainable national park. It also outlined theoretical ideas regarding the concept of policy transfer and policy alignment. Furthermore, it presented how diverse, yet limited, the available literature is on policy alignment. For example, there is limited systematic research on policy alignment that focuses on the substance of policies. There is also a lack of specific examples of policy alignment from the Global South, particularly, studies showing how global policy models, norms or principles for best practice are expressed in localized ways, how they are translated through practice, and how that translation in turn feeds back into further circulation. This is the gap that this thesis addresses. Therefore, this study will serve as a case study that explores the transfer of global policy models into national and sub-national policy documents in a developing country context. understanding the alignment (or misalignment) between national level policies and global policy models would allow policymakers and other practitioners to develop policies and future strategies that consider the specific contextual factors that influence implementation outcomes.

Zambia offers an ideal opportunity to examine the alignment between the global, national and local level environmental policy frameworks in a developing country context. Its national park legislation and policies have undergone several revisions from 1912 to 2015. However, these pieces of legislation and policies have not been previously subjected to rigorous analysis, one that examines their consistence with international principles for national park management best practice, and their consequent implementation outcomes. This provides an opportunity, pursued in the following

chapters, to examine how Zambia's national park laws, policies, plans and reports have responded to global principles for national park management. The next chapter provides background on the global principles for national park management that were used to examine how Zambia's laws, policies, plans and reports.

CHAPTER 4. INTERNATIONAL PRINCIPLES FOR PROTECTED AREAS MANAGEMENT

4.1. Introduction

This chapter provides background on the key principles for protected areas management and why these principles are so important to consider for effective management. The chapter begins with definitions and explanation of terms frequently used in this study. This is followed by a review of global environmental frameworks relevant for national park management along with an elaboration of the main international environmental agreements (IEAs) and the principal obligations set forth in each of them that would normally be implemented through national protected areas legislation. With this baseline, the key national park management principles (PMPs) advanced by IEA and international organisations, along with a set of key features and indicators for each principle, are identified and reviewed.

4.2. National park management principles

This study draws attention to national park management principles (PMPs) as mechanisms for the development of national park laws, policies, and plans to strengthen the protection of national parks. Effective national park laws, policies, and plans can be distinguished by adherence to a set of principles for strategic national park planning and management, and a coordinated set of measures to ensure their implementation. The PMPs established by international conventions and organisations can play a significant role in establishing consensus, generating commitment and integrating governance processes within national legal and policy frameworks (Houghton, 2014). The mention of international PMPs into national level legal and regulatory frameworks for national park management is considered, at least in part, a solution to strengthening national park management and preventing their further degradation (Watson et al., 2014a). Before exploring this premise, a note on some definitions is warranted.

The meanings of 'principles', 'fundamental principles' and 'park management principles' have been extensively considered and are briefly elaborated here. The term 'principle' or its close synonyms 'norm', 'concept', 'value' is understood to refer to a generalisation that is accepted as true and that can be used as a basis for reasoning or conduct (Lang, 1999). There are several other definitions of the term 'principles'. However, Finnemore's definition (1996, p. 22), which considers principles to be "shared expectations about appropriate behaviour held by a community of actors," captures two components common to most definitions: principles are intersubjective and associated with action. Principles guide people's decisions and actions, organisation's policies and procedures, and political entities' laws and doctrines. Simply put, principles serve as models for what constitutes acceptable practice. In this study the term 'Principle' refers to "a fundamental standard or proposition about the strategic purpose and rationale underpinning legal rules" (Martin, Boer & Slobodian, 2016, p. 2).

The term 'fundamental principles' is understood to mean principles from which other principles are derived. Fundamental principles relate to the underlying shared beliefs and concerns of nations and/or organisations and their mandate as they seek to undertake environmental conservation and management. An example would be the 27 principles of the Rio Declaration on Environment and Development (e.g. Principle 1 - "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature"). Fundamental principles are distinguished from 'guidelines' which are understood as the operational version of the fundamental principles which are intended to inform the legislative process of drafting, formulating or revising laws (King, Gill, Allender & Swinburn 2011; Bai, 2014). Fundamental principles run through laws and are established to make clear the legislative intent. While applicable to a wide range of conservation activities, fundamental principles lack enough precision to permit their application with any degree of confidence in concrete cases and therefore require further development and some anchoring in international laws to produce concrete legal obligations (Lang, 1999).

In respect to the conservation and sustainable use of biodiversity in national parks, international environmental organisations have established several management principles to provide a sound basis for national park legislation and management. Such principles have been recognised and included in international environmental frameworks for adoption or adaptation by member states. Lockwood's (2010) generic explanation of principles is a useful one to note here: the term 'principles' is explained to refer to normative statements that make claims about how protected areas should be managed. In the same vein, Lausche (2011) describes principles as the essential, underlying factors that form the foundations of successful management, while the Secretariat of the Convention on Biological Diversity (2004a) asserts that principles are constitutive elements of international frameworks for advising governments, resource managers, local communities and other stakeholders about how they can ensure sustainable conservation and use of biodiversity.

This study focuses on 'park management principles'. This term is not precisely defined by the studies and international documents referred to above; there is no broadly agreed definition. For this study, the term 'park management principles' (abbreviated as PMPs) is understood to refer to approaches that through experience and research have proven to reliably lead to desired outcomes in different national parks worldwide. The following section reviews the IUCN's PMPs along with a set of measures for each principle that will, in turn, provide a yardstick against which the state and robustness of Zambia's national park laws, policies and plans will be examined. Before discussing the IUCN PMPs, which will inform the analytical framework applied in this study, it is acknowledged that a number of these principles are based on international policy guidance derived from a series of international environmental conferences, organisations and/or agreements. It is to these that attention now turns to provide an historical context and background to the principles, as well as to strengthen the rationale for their use in this study.

4.3. International policy and guidance

National parks and other protected areas are recognised by the international community as a cornerstone of efforts to protect biodiversity (Steiner, Kimball & Scanlon, 2003; Timko & Satterfield, 2008). This upsurge of recognition is strongly related to the influence of the United Nations in initiating policies, strategies, conventions and programmes for managing environments in the wake of the recognition of biodiversity as a global concern, calling for global responses (Worboy, Lockwood & De Lacy, 2001).

Whereas in the past, national park policy formulation and implementation were primarily local or national matters, today, national environmental politics have increasingly become intertwined with global levels of governance (Economy & Schreurs, 1997). International organisations and agreements, expert groups, and Non-Governmental Organisations (NGOs) now play a central role in influencing environmental policy outcomes by promoting the implementation of different sets of principles and measures for strategic planning and management. Agenda setting, and policy formulation and implementation have become increasingly internationalised (Economy & Schreurs, 1997).

A series of conferences, agreements, and organisations have helped shape a new direction for international environmental law and policy (Noor, 2011). These international environmental conferences, agreements, and organisations have articulated non-binding obligations and principles dealing with protected areas for subsequent adoption by their member states (Noor, 2011). The major environmental conferences, agreements and organisations to which Zambia is signatory are discussed below.

4.3.1. International environmental conferences

The Stockholm Declaration of the United Nations Conference on the Human Environment (1972) is one of the early international texts to outline, among many other features, principles for environmental legislation. Although it did not explicitly reference national parks, it initiated recognition of the need to “protect and improve

the human environment"- a concept that is fundamental to the sustainability of national parks (UN, 1972, p. 37). The Stockholm Declaration contains 26 common principles that aim "to inspire and guide the peoples of the world in the preservation and enhancement of the human environment" (UN, 1972, p. 3). Three of the principles (Principle 2, 3 and 4) are of relevance as foundation concepts for the sustainable development of national parks:

> *Principle 2* - The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.
>
> *Principle 3* - The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.
>
> *Principle 4* - Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development (UN, 1972, p. 4).

In 1983, the World Commission on Environment and Development (WCED) (the Bruntdland Commission), an independent commission of the UN General Assembly, was created and mandated to propose long-term environmental strategies for achieving sustainable development to the year 2000 and beyond. The Bruntdland Commission brought biodiversity conservation into the framework of sustainable development. It defined sustainable development as a way to ensure "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). Following this conceptualisation, sustainable development has become an overarching policy goal and has been presented as a fundamental principle for decision-makers globally (Hugé, Waas, Dahdouh-Guebas, Koedam, & Block, 2013). Significantly for national parks, the Bruntdland Commission called for governments to think about "parks for development" and argued that parks should simultaneously serve the dual purpose of environmental protection and development. Furthermore, it

argued that sustainable development objectives should be incorporated into national legislative, policy and planning frameworks, and governments should ensure that their major economic and sector agencies are made directly responsible and fully accountable to have policies, programmes and budgets that support ecological as well as economic development (WCED, 1987, p. 314).

The views expressed by the Stockholm Declaration and the WCED have been supported by a series of other global initiatives (Lockwood, 2010). Of importance is the Rio Declaration on Environment and Development (UNCED) (1992), Agenda 21 (UNEP, 1992) and the World Summit on Sustainable Development (WSSD) Plan of Implementation (UN, 2002). These instruments contain declarations of sustainable development principles which are widely regarded as the foundations of international environmental law (Scanlon & Burhenne-Guilmin, 2004). The Rio Declaration contains a preamble and 27 international environmental law principles that guide the international community in its efforts to achieve sustainable development (UN, 1992). Among these 27 principles, Principle 10, 15 and 17 relating public participation, precaution, and environmental impact assessment respectively, have direct relevance to the sustainable development of protected areas, including national parks.

Agenda 21 is an action plan that draws on the 27 principles of the Rio Declaration and addresses the social and economic aspects of the conservation and management of resources. It outlines conceptual innovations, programmes and actions that promote a balanced use of environmental assets on a global, regional and local scale. Agenda 21 includes a chapter on the conservation of biodiversity which outlines, *inter alia*, the main strategies and activities relevant to protected areas (UN, 1992, sec. 2, para. 15). More specific to national parks, Agenda 21 urges governments to "establish, expand and manage as appropriate to each national context, protected area systems of conservation units for their environmental, social and spiritual functions and value" (Agenda 21, Chapter 11.13b). Agenda 21 continues to be one of the most useful reference documents that guide governments in several spheres to plan and execute actions that

promote the sustainable use and conservation of natural resources (Chaves, Santos & Rocha, 2014).

Similarly, the World Summit on Sustainable Development (WSSD), through its WSSD Plan of Implementation, reaffirmed the principles contained in the Rio Declaration and outlines key practical steps that need to be undertaken to address global concerns (Steiner et al., 2003). This plan further elaborated the concept of sustainable development as consisting of three overlapping pillars: environmental, social, and economic sustainability (UN, 2002).

Along the same lines, the United Nations Sustainable Development Goals (SDGs), adopted in September 2015, integrate environmental concerns, acknowledging that healthy ecosystems are fundamental to human well-being. SDGs provide more extensive political targets for member states. For instance, SDG Target 15.1 prescribes that member states should ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services in line with obligations under international agreements by 2020 (UN, 2015).

4.3.2. International Environmental Agreements (IEAs)

Zambia is also signatory to a diverse array of IEAs with relevance to national parks. IEAs are formal documents that describe the environmental challenges addressed, the commitments of the governments involved, and the institutional mechanisms to be established (Ambalam, 2014). The term 'agreements' refers to the documentation of legally binding arrangements among two or more states (Aust, 2000). Aust (2000) notes that when used as part of the phrase 'international environmental agreement', the term usually corresponds closely to the 1969 Vienna Convention on the Law of Treaties' definition of a treaty, i.e., "an international agreement concluded between states in written form and governed by international law" (Articles 2[1]).

By signing and ratifying an IEA, states are expected to apply its provisions through legislation or other appropriate means, as indicated in the text of the IEA (Ott, Klay, Wymann von Dach & Kakridi, 2005). States are also required to report regularly on the

implementation of the ratified IEA. In this regard, the development of national laws that give effect to international principles is critical to translating international commitments into action on the ground.

The roles and effectiveness of IEAs have been extensively discussed in recent literature (Ambalam, 2014, Fauchald et al., 2014; UNEP, 2006; Heinen & Chapagain, 2002). According to Fauchald et al. (2014), IEAs have been developed in response to the recognition that some environmental challenges cross national boundaries and require international cooperation if they are to be addressed effectively. To this end, their primary role is to enhance biodiversity conservation by promoting the adoption of global standards and codes of practice, providing technical advice and the disseminating information (Fauchald et al., 2014; UNEP, 2006; Heinen & Chapagain, 2002). Through these means IEAs aim to increase the capacity of member states to meet their domestic and international environmental obligations. IEAs also serve as a link to global financial mechanisms that provide financial capital to respond to national and international environmental challenges (Steiner et al., 2003).

Much of the evidence on the effectiveness of IEAs on local practice comes from in-depth case studies representing diverse environmental challenges (Miles, Underdal, Andresen, Wettestad et al., 2002; Breitmeier, Young & Zürn, 2006). These studies make extensive use of procedures known as process tracing and thick description to explore counterfactuals (conditional statements), analysing what would have happened in specific areas in the absence of the agreement in question. Prominent examples include work by Miles et al. (2002, as cited by Underdal, 2008, p. 59) who analysed a dataset of 37 agreements and reported that 50% of them produced behavioral changes while 35% played a significant role in terms of problem solving. The work by Breitmeier et al. (2009, as cited by Underdal, 2008, p. 59), using a dataset encompassing 172 cases, also reported that, in situations where problems improved slightly or considerably, international agreements had a significant or very strong influence 52% of the time. These findings demonstrate the importance of IEAs.

On the contrary, IEAs have also been criticised as being too descriptive and functioning too strongly in a standardising and top-down manner which does not adequately reflect the diversity and complexity of the environmental issues at stake (Ott et al., 2005; Strange, 1983). This is because member states appear to have difficulties operationalising the agreement objectives, principles, and measures, and introducing them coherently in all sectors and at all levels. Nevertheless, it has been argued that pushing aside IEAs due to implementation difficulties would mean that their great potential for improving environmental governance would be left untapped (Ott et al., 2005).

The IEAs to which Zambia is party that impact directly or indirectly on the goals and remits of its protected areas, particularly national parks, are reviewed in this study (Table 4.1). These include the Convention on Biological Diversity (1992); the Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971); the Convention Concerning the Protection of the World Cultural and Natural Heritage (1972); and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973). A summary of the overall objectives of these IEAs, including the dates of their adoption and the dates when they were ratified by Zambia, is shown in Table 4.1.

Table 4.1 *Major international environmental agreements with relevance to national parks that have been ratified by Zambia*

Agreement	Overall Purpose	Date of Adoption	Date Ratified by Zambia
Convention on Biological Diversity (CBD)	To ensure the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.	5 June 1992	28 May 1993
Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention, WHC)	The protection of globally outstanding cultural and natural heritage.	16 November 1972	4 June 1984
Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)	The conservation and wise use of all wetlands and their resources	2 February 1971	28 December 1991
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	To ensure that international trade in specimens of wild animals and plants does not threaten their survival.	3 March 1973	22 February 1981

Convention on Biological Diversity

The Convention on Biological Diversity (CBD) is currently ratified by 196 countries and has three main objectives: biodiversity conservation; sustainable use of its components (species, genetic resources, ecosystems); and fair and equitable sharing of benefits arising from the use of genetic resources (CBD, 1992, Article 1). In the CBD, protected areas, including national parks, are significant instruments for sustainable development. This is illustrated by the inclusion of provisions which address aspects relating to their establishment, management, monitoring and evaluation. The CBD calls on all its member states to develop national protection programmes that include considerations of biodiversity in governmental legislative and policy decision-making processes. Article 8 of the CBD contains specific references to protected areas. It contains a recommendation that a system of protected areas be established and sets out

obligations that specify requirements and objectives to be met by the member states (Lausche, 2011). Member states are also expected to:

(i) establish a system of protected areas or areas where special measures need to be taken to conserve biodiversity;

(ii) develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biodiversity;

(iii) regulate or manage biological resources important for the conservation of biodiversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;

(iv) promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas; and

(v) cooperate in providing financial and other support for in-situ conservation, particularly to developing countries (CBD, 1992).

The CBD is supplemented by other commitments related to protected areas which have evolved through numerous decisions taken at its Conference of Parties (Harrop & Pritchard 2011). These commitments are comprehensively summarised within the Programme of Work on Protected Areas (PoWPA) and the Strategic Plan for Biodiversity 2011–2020 (Strategic Plan) (CBD, 2010). PoWPA, a defining framework for protected area management and cooperation between governments, donors, NGOs and local communities (CBD, 2012), was adopted at the 7th Conference of Parties to the CBD in 2004 (CBD/COP 7, 2004). Its objective is to achieve and maintain efficiently-managed, ecologically-representative national and international systems of protected areas, and to integrate these in a global network. PoWPA also emphasizes the need for closer linkages between protected areas and land use in their surrounding areas, as well as the desirability of exploiting opportunities for the multiple use of protected areas. A primary focus of PoWPA is protected area management effectiveness.

The Strategic Plan, produced at the 10th Conference of Parties in 2010 (CBD/COP 10, 2010), sets out 20 targets (the Aichi Biodiversity Targets) which serve as aspirations for the achievement of the CBD's central vision. For instance, Aichi Target 11 focuses

specifically on protected areas, and prescribes that 17% of terrestrial and inland water areas, and 10% of coastal and marine areas, should be "conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas" by 2020 (CBD/COP 10, 2010).

Convention on Wetlands of International Importance especially as Waterfowl Habitat

The Convention on Wetlands of International Importance especially as Waterfowl Habitat, commonly referred to as the Ramsar Convention, was established in 1971 and is one of the oldest global environmental agreements (Ramsar, 2014). Ramsar's mission is "the conservation and wise use of all wetlands through local regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world" (Ramsar, 2015, p. 1). It sets out four obligations relevant to protected areas legislation:

(i) Designate at least one wetland for inclusion in the List of Wetlands of International Importance (Ramsar List) (Article. 2[1]).
(ii) Formulate and implement national land use planning to promote conservation of the site (Article. 3[1]).
(iii) Promote the conservation of wetlands and waterfowls by establishing nature reserves on wetland, whether they are listed or non-listed, and provide adequately for their widening (Article. 4[1]).
(iv) Consult with other Contracting Parties about implementing the Convention, especially about transboundary wetlands, shared water systems, and species (Article. 5).

Convention on International Trade in Endangered Species of Wild Fauna and Flora

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments to ensure that international trade in specimens of wild animals and plants does not threaten their survival (CITES, 1973). Thus, it is both a conservation and trade agreement. CITES was adopted in March 1973 and entered into force on 1st July 1975. It specifically focuses on saving listed endangered and threatened species from extinction by imposing strict international trade controls on any proposed shipments of listed flora and fauna or their parts. The species covered by this agreement are listed in three CITES appendices according to the degree of protection they need. CITES Appendix I include species threatened with extinction. Trade in these species is strictly regulated, requiring both export and import

permits (Article. III). CITES Appendix II includes species not necessarily threatened with extinction but which may become so unless trade is regulated (Article. IV). CITES Appendix III contains species which any party identifies as within its jurisdiction and requiring cooperation of other parties to control trade (Article. V). The CITES agreement is legally binding for its member states. It provides a framework to be respected by all member states requiring individually prepared and implemented domestic CITES enabling legislation.

Convention Concerning the Protection of the World Cultural and Natural Heritage

Adopted by UNESCO in 1972, the Convention Concerning the Protection of the World Cultural and Natural Heritage (WHC) aims to promote cooperation among nations to protect heritage around the world that is of outstanding universal value for current and future generations (WHC, 2015). The WHC recognises protected areas are a primary means for member states to meet their obligations to protect natural heritage sites (Lausche, 2011). Member states, party to the WHC, agree, *inter alia*, to:

(i) recognise that it is their responsibility to ensure the identification, protection, conservation, presentation and transmission to future generations of cultural and natural heritage of outstanding universal value (Article. 4);
(ii) take appropriate legal and other measures necessary for the rehabilitation of cultural and natural heritage of outstanding universal value situated in their territories (Article. 5);
(iii) refrain from any deliberate measures which might damage the cultural and natural heritage of other Member States (Article. 6[3]); and
(iv) submit to the World Heritage Committee an inventory of cultural and natural heritage sites suitable for inclusion in a World Heritage List (Article. 11).

4.3.3. International environmental organisations

In support of the international instruments and conventions discussed above, numerous international nature-oriented or environmental organisations have played a significant role in the development of global principles for effective national park management. International environmental organisations are agencies established by national governments which operate beyond the formal control of national governments and are collectively controlled by multiple governments via multilateral mechanisms (Biermann

& Bauer, 2004). International environmental organisations have environmental protection as a specific policy purpose and have been the most influential proponents for the creation and sustainable management of protected areas globally (Biermann & Bauer, 2004). At the international level, the most prominent international environmental organisations include, *inter alia*, Fauna and Flora International (FFI, established 1903); the International Union for Conservation of Nature, which later became the World Conservation Union (IUCN, established 1947); the World-Wide Fund for Nature (WWF, established 1961); and Conservation International (CI, established 1987). These organisations have instigated major international, regional, national and local legislation and enforcement mechanisms to promote biodiversity conservation (Bennett & Ligthart, 2001). For example, the IUCN, whose mission is to "[I]nfluence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable" (IUCN, 2017), has led the worldwide conservation movement and produced the international protected area classification system (Hockings et al., 2001; Scanlon & Burhenne-Guilmin, 2004; Lausche, 2011; IUCN, 2012;). The IUCN has continued to promote the establishment and effective management of a worldwide representative network of marine and terrestrial protected areas (Holdgate, 1999).

4.4. National park management principles with legal application

Despite the mention of national parks in many IEAs and organisations, a comprehensive set of key principles for their management does not yet exist. Many studies have, however, attempted to identify overarching categories of principles applicable to national park management (Hunter, Salzman & Zaelke, 2002; Birnie & Boyle, 2002). For example, Hunter, Salzman, and Zaelke (2002) identified four categories of emerging principles of international environmental law: principles shaping global environmental and developmental instruments; principles relating to transboundary environmental disputes; principles for developing national environmental law; and principles governing international institutions. Based on these categories, they identified a duty to implement effective environmental legislation, polluter and user pays principle, pollution control, public participation, and access to information as the key principles

for developing national environmental law. Similarly, Timko and Satterfield (2008, p.309, 315), through a detailed review of relevant literature and analysis of the management plans from 14 national parks in Canada, Australia and South Africa, distinguished between "principles for evaluating social equity" and "principles for ecological integrity". Among the former they included resolution of land tenure and ownership, maintenance of livelihood opportunities, and participation in park governance. In the latter group were conservation of ecosystem processes and adaptation to and mitigation of threats and stressors. Along the same lines, Muhumuza and Balkwill (2013) identified effective management, good governance and local development as prerequisites for national park management while Lockwood (2010) identified legitimacy, transparency, accountability, inclusiveness, fairness, connectivity and resilience as the procedural requirements for sustainable national park governance.

The need to identify overarching categories of principles applicable to national park management cumulated in the IUCN collecting all these range of principles and publishing its *Guidelines for Protected Areas Legislation* in 1980 under the authorship of Lausche (1980). Three decades later, the original guidelines were updated to provide focused guidance to policymakers working closely with protected area authorities as well other stakeholders involved in the legislative process. The updated IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011) include the following 11 principles:

i. Perpetual integrity
ii. System planning
iii. Management by conservation objectives
iv. Management plans
v. Precautionary approach
vi. Management of invasive alien species
vii. Management of climate change
viii. Taking an international perspective
ix. Good governance
x. Public participation
xi. Social equity and justice

While recognising that the IUCN *Guidelines for Protected Areas Legislation* was published in 2011, it is significant in the context of this thesis to note that the principles highlighted within the IUCN guidelines are a collection from the past five decades and therefore, were already in place before 2011. The principle outlined in the IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011) are based on a synthesis of legal and technical information and guidance relevant for protected areas legislation, particularly from IEAs and declarations. The principles "have been selected specifically because they need to be supported by and incorporated, subject to local legal practice, into contemporary protected areas legislation" (Lausche, 2011, p. 19). Emanating from an expert international body, these IUCN principles are also based on political consensus, linking political and scientific ideas, and are focused on facilitating implementation of international environmental obligations made by member states. Though non-binding, the overwhelming endorsement of these IUCN principles worldwide indicates that they represent widespread legal norms and thus hold the increased authority of recognised customary international law (Lausche, 2011). As such, they provide a strong foundation for national policy formulation and goals, which sets out the rationale for specific objectives and substantive elements of national park legislation, policies and management plans.

Despite their endorsement globally, the IUCN principles have some potential weaknesses. A common criticism of the IUCN principles is that they are too broad and all encompassing, creating ambiguity in terms of their definitions and causing a gap to occur between their rhetoric and policy initiatives (Fünfgeld & McEvoy, 2014; Vanderzwaag et al., 2012). This lack of clarity also results in a varied range of policy choices which can be contradictory and incoherent. Furthermore, implementation of the IUCN principles is difficult to assess as most of them are not clearly specified with indicators in authoritative documents (Vanderzwaag et al., 2012). There is limited consensus on the indicators for measuring the IUCN principles. For example, IUCN principles, such as precaution and the ecosystem approach, are open to interpretation,

leaving considerable room for discretion in implementation. This poses challenges for asserting the legal status of the IUCN principles.

In practice, as with identification and assessment of the key international principles, there are grounds for challenging almost every candidate set of principles. Not all principles are globally endorsed by governments, even if they are applicable worldwide for protected area management (Vanderzwaag et al., 2012). The IUCN principles are derived from international environmental agreements and thus have not been the subject of a process of authoritative intergovernmental adoption. A good example concerns the precautionary principle. The status of the precautionary principle as a matter of international law has been a subject of intense academic debate and legal argument (Cooney, 2004). While many researchers have supported the application of the precautionary principle (Fauchald et al., 2014; Yates et al., 2013; Vanderzwaag et al., 2012; Lausche, 2011) as a generally accepted principle of international law, there has not been any consistent body of authoritative statements from legal tribunals that have supported this view (Cooney, 2004). This raises the question of whether the inclusion of the precautionary principle among the key international principles for national park management may be interpreted as signifying that this principle is not by legal right a global principle. Furthermore, the international principles seldom address national parks directly. This means that they are seldom helpful sources of practical guidance on national park management and need to be translated into a form that is more useful for practice.

Notwithstanding the above criticisms, the IUCN principles are an important and meaningful starting point towards reform of protected areas management policies and strategies. They reflect an articulation, however vague, that can contribute to principle-based assessment approaches to sustainability (Pope et al., 2004). Martin, Boer and Slobodian (2016) support this view and assert that provided the principles are specified based on evidence, and that evidence is objective, then a credible basis for evaluation can be formed. Furthermore,

In addition, several international policy-related studies have shown that implementation of global principles, such as the above IUCN principles, can lead to effective protected areas management (Fauchald et al., 2014; Yates et al., 2013; Vanderzwaag et al., 2012). Vanderzwaag et al. (2012), for example, applied many of the above principles in their assessment of Canada's marine protected areas legislation and policy documents. Their principle-based assessment approach proved extremely effective in guiding decisions on how to strengthen Canada's policy framework for sustaining marine biodiversity. The work of Fauchald (2014) is also based on similar global principles, but additionally, he attempts to define the way international environmental regimes influence domestic rules and management systems for protected areas, studying the distinction between legal (hard law) and non-legal (soft law) norms in international environmental law. Fauchald (2014) observed that that the non-legal pathway, such as the implementation of global principles, is important mainly as a support for domestic policies that correspond to existing national principles and discourses. In addition, he observed that a high degree of regulatory (legal) hardness, can also contribute to increasing the level and consistency of implementation of domestic policies. Other related studies have reached similar conclusions, further validating the usefulness of implementing global principles such as those of the IUCN (Borrini-Feyerabend, Dudley, Jaeger, Lassen et al., 2013; Leverington, Costa, Pavese, Lisle, & Hockings, 2010; Hassan & Hameed, 2016).

Therefore, the IUCN principles can be applied to gauge a country's national park laws, policies and plans and fairly examine their robustness in meeting its international obligations. It should be noted, however, that these principles are not prescriptive nor are they meant to provide a model. Rather, they are a representative synthesis of approaches that have proven to reliably lead to desired outcomes to national park management over the past five decades (Lausche, 2011).

This study takes the principles listed in the IUCN *Guidelines for Protected Areas Legislation,* particularly those in the section "Management Principles with Legal Application", as a point of departure for identifying the key PMPs, addressing research

objective (i). The IUCN *Guidelines for Protected Areas Legislation* published under the authorship of Lausche (2011) is the most relevant international document for the purpose of this research. It provides practical state-of-the-art guidance for strengthening protected areas legislation and was developed with the intention "to cover the full array of core legal principles and considerations for the legal drafter and the protected area authorities to draw upon, within the context of the country's international law obligations, local legal practice, and specific protected areas goals and needs" (Lausche, 2011, p. 3). A copy of the introduction section of the IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011) is attached as Appendix A

The fact that the IUCN integrated the views from the international environmental conferences and the four IEAs listed earlier in the development of the list of principles is a logical conclusion simply from considering the goals of the IUCN, purpose of its guidelines, and the processes followed to develop them. However, to test if and how the 11 PMPs outlined by the IUCN are reflected in the international environment declarations and agreements to which Zambia is signatory, a survey of the IEAs and declaration was undertaken.

4.4.1. Analysis of international environmental declarations and agreements

A representative survey of the main text of the international environmental declarations and agreements to which Zambia is signatory was undertaken to test the proposition that the 11 IUCN PMPs are a collection from the international environment agreements and declarations and therefore, were already in place before 2011, These included the Stockholm Declaration (1972), the Rio Declaration (1992), Agenda 21 (1992), the World Summit on Sustainable Development (2002), the CBD (1992), Ramsar (1971), the WHC (1972) and CITES (1973). The survey focused at detecting the presence or absence of the 11 PMPs suggested by the IUCN within the main text of the declarations and agreements. This process also involved reading through the declarations and agreements to identify content that explicitly and implicitly referred to the principles. The results of the survey are presented in Table 4.2.

Table 4.2 Prevalence of the IUCN park management principles within the main text of international environmental declarations and agreements to which Zambia is signatory

International Declarations /Agreements	IUCN Principles for National Park Management										
	Perpetual Integrity	System Planning	Management by Conservation Objectives	Management Plans	Precautionary Principle	Management of Invasive Alien Species	Management of Climate Change	Taking an International Perspective	Good Governance	Public participation	Social Equity and Justice
Stockholm Declaration (1972)								✓	✓	✓	✓
Rio Declaration (1992)	✓			✓	✓			✓	✓	✓	✓
Agenda 21 (1992)	✓	✓		✓	✓		✓	✓		✓	
World Summit on Sustainable Development (2002)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Convention on Biological Diversity (1992)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar) (1971)	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Convention Concerning the Protection of the World Cultural and Natural Heritage (WHC) (1972)	✓			✓	✓	✓	✓			✓	✓
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973)	✓	✓				✓	✓	✓	✓	✓	✓

Key: ✓ = Included/mentioned.

As shown in Table 4.2, the examination of the content of the major IEAs and declarations shows considerable concurrence with the principles outlined by IUCN. Most of these principles (particularly the adoption of the precautionary approach, the development of management plans, and the promotion of public participation) are explicitly referenced and emphasised by the international environmental declarations and agreements. This confirms that the 11 PMPs outlined by the IUCN were distilled from the international conventions and declarations listed in Table 4.2. A point to note is the absence of the mention of invasive alien species and climate change in some of the declarations, particularly the Rio Declaration. This is perhaps not surprising because aspects of invasive alien species and climate change only came to the international fore in the early 1990s. Despite these omissions, there is considerable agreement between the list of principles provided by the IUCN and the content of the international agreements and declarations. This supports the proposition that the principles provided by the IUCN are reflected by the major environmental declarations and agreements to which Zambia is signatory and were already in place prior to 2011.

In response to research objective (i), this study adopts the 11 IUCN principles suggested by the IUCN as the essential key PMPs and hereafter these will be referred to as the 'IUCN principles'. These IUCN principles will be used as a yardstick to examine whether Zambia's national park laws, policies and management plans provide a solid foundation for national park management, addressing research objectives (ii) and (iii), and their implementation will be explored through analysis of national park reports to address research objective (iv).

Taken together, the 11 IUCN PMPs are critical to effective national park management and must be reflected in national legislation, policies and plans to ensure success. While each principle is distinct, the interconnected nature of national park systems means that the principles relate to each other. As noted above, these principles are not prescriptive and not meant to provide a model. Even where the broad meaning is similar, the extent of implementation for each principle may differ from one place to another. As with many environmental policy challenges, the IUCN principles also display a great degree

of interpretive flexibility. This implies that the meaning of the principles and how they can be effectively integrated into law and policy is, to a large extent, subject to normative judgment, interpretation, and negotiation, which is left to individuals and groups involved in the policy formulation process (Fünfgeld & McEvoy, 2014). As such, the application of these IUCN principles into diverse socio-cultural, ecological and economic contexts requires them to be open to interpretive flexibility. A detailed description of the principles is provided in the IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011), but the definitions and core content of each principles are summarised below.

4.4.2. Perpetual integrity

The IUCN principle of perpetual integrity of protected areas refers to the need of providing safeguards, by the best means available, to ensure their long-term success (Lausche, 2011). At their core, protected areas are intended to provide long-term, or perpetual, conservation of nature with associated ecosystem services and cultural values (Lausche, 2011; Davey, 1998). The phrase 'long-term' here implies that "protected areas should be managed in perpetuity and not as a short-term or temporary management strategy" (Dudley, 2008, p. 9). Perpetuity is "the state or quality of lasting forever" (Oxford Dictionary, 2017, May 26). Legally, it means forever or something that is perpetual and unending. Within the context of protected areas management, the term is understood as securing long-term conservation status of an area using the best available means (Lausche, 2011).

Perpetuity is an admittedly challenging target, and one that requires close attention in protected areas legislation, particularly as it is not possible to foresee all future events that may threaten their legal status (Lausche, 2011). To help secure and maintain the integrity and long-term success of protected areas, two elements of protected areas legislation are essential (Lausche, 2011, p. 17): a requirement that all areas designated as formal protected areas should involve "the highest possible policy-making body"; and a "requirement that any decision to reduce or degazette an established site must involve a policy-making body of equal or higher status than the body that designated the site".

In addition to these two requirements, there are other legal protection features that can also help secure and maintain the integrity and long-term success of protected areas. These features relate to the voluntary nature of the arrangement and the legal status of the lands, waters or resources involved (Lausche, 2011). Prominent among them is a requirement for land tenure rights of the entities involved to be clearly defined. Good land tenure information is critical to effective protected area management (Brandon, Redford & Sanderson, 1998). Tenure is "the form of rights or title under which property is held and that determines how an individual or group may use, share, sell, lease, inherit, or otherwise control property and resources" (Brandon et al., 1998, p. 381). Tenure is most commonly used to describe land but may also be applied to describe the systems of rights and rules related to other natural resources, such as water, trees, and wildlife (Brandon et al., 1998). As such, clearly defining and understanding the land tenure status of an area is necessary to ensure the conservation commitments made are carried out with legal certainty (Lausche, 2011). Conversely, unresolved tenure issues can add to the social and political complexity of protected area management, affecting advances in other management goals, such as zoning and the development of effective management plans (Brandon et al., 1998, Martin & Rieger, 2003).

4.4.3. System planning

System planning is defined as an organised way of carrying out macro-level conservation planning for protected areas (Lausche, 2011). It is recognised as a key management principle for effective nature conservation because it improves the probability of substantial progress in conservation and promotes an integrated approach to linking conservation with other human endeavours (Dudley, 2008). According to Lausche (2011, p. 20), taking a system planning approach aids in

i. understanding the role of an existing site in fulfilling national biodiversity goals, so that management objectives can be designed for that role;
ii. filling gaps in protected areas coverage in order to more adequately represent the full range of biodiversity and other features of natural and cultural value in a country;

iii. opening the process to new governance types in cases where high-value areas may be situated on non-state lands and managed for conservation by indigenous peoples, local communities or private landowners; and
iv. identifying and understanding external factors which may present immediate and long-range threats to conservation.

Detailed explanation of system planning, its uses, importance and characteristics as well as the factors that may lead to ineffective system plans is provided by the IUCN-WCPA (Davey, 1998).

A commonly recommended approach to protected area system planning is the ecosystem approach (EsA). This approach has increasingly been referred to by various international organisations as one of the underlying management principles for protected areas. The CBD recognises the EsA and describes it as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way, and which recognises that people with their cultural and varied social needs are an integral part of ecosystems" (CDB, 2004, p. 6). The IUCN, in its Fifth World Park Congress (WPC) also referred to this concept, stating that "protected areas should be managed in keeping with the ecosystem approach as defined by the CBD" (IUCN-WPC 2003, p. 175). The ecosystem approach is also a key recommendation from the Ramsar Convention which calls on all parties to implement integrated land use planning in the context of wetland conservation (UNESCO 1994, Art. 3[1]).

The CBD's (2004b, p. 6) definition of the ecosystem approach stresses four criteria: (i) protecting or conserving the environment; (ii) using scientific information in "systems planning" (i.e. understanding that management of an area must take into account the multiple, complex interactions that occur within it); (iii) ensuring "sustainable use" (assessing an appropriate level of consumption of ecosystem services that does not endanger the health of the ecosystem); and (iv) recognising the human or societal component of the system as essential. Based on these criteria, an ecosystem approach

is about integrating the conservation of natural resources with social and economic needs and objectives in a manner that sustains the health of ecosystems on which they depend.

With respect to the application of the ecosystem approach, the CBD in its Decision V/6 specifies 12 sub-principles (Table 4.2). These 12 sub-principles of ecosystem management have been the focus of most academic literature (Christensen, Bartuska, Brown, Carpenter et al., 2002; Long, Charles & Stephenson 2015) on the implementation of the ecosystem approach. For example, Long et al. (2015) have listed in increasing frequency of importance the key principles of the ecosystem approach based on recent academic literature. While such efforts have been interesting conceptually, there has been a lack of practical assistance in applying the EsA in the field (Shepherd, 2004). To fill this gap, the IUCN Commission on Ecosystem Management has developed guidelines on the main characteristics of each of the 12 principles management to provide conceptual clarity and guide implementation (Shepherd, 2008). The guidelines emphasise several considerations with potential for use in EsA provisions in protected areas management (Table 4.3).

Table 4.3 *The 12 ecosystem approach principles, grouped into five steps by the IUCN's Commission for Ecosystem Management*

Step 1. Key stakeholders and area		
Stakeholders	Principle 1	The objective of management of land, water and living resources are a matter of social choice.
	Principle 12	The ecosystem approach involves all relevant sectors of society and scientific disciplines.
Area analysis	Principle 7	The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
	Principle 11	The ecosystem approach should consider all forms of relevant information.
	Principle 12	The ecosystem approach involves all relevant sectors of society and scientific disciplines.
Step 2: Ecosystem structure and function		
Ecosystem structure and function	Principle 5	Conservation of ecosystem structure and functioning, to maintain ecosystem services, should be a priority.
	Principle 6	Ecosystems must be managed within the limits of their functioning.
	Principle 10	The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biodiversity.
Ecosystem management	Principle 2	Management should be decentralised to the lowest appropriate level.
Step 3: Economic issues		
	Principle 4	Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context and to: i. Reduce market distortions that adversely affect biodiversity; ii. Align incentives to promote biodiversity conservation and sustainable use; and iii. Internalise costs and benefits in the given ecosystem.
Step 4: Adaptive management over space		
	Principle 3	Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
	Principle 7	The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
Step 5: Adaptive management over time		
	Principle 7	The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
	Principle 8	Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
	Principle 9	Management must recognize that change is inevitable.

Source: Shepherd (2008, p. 5)

4.4.4. Management by conservation objectives

Management by conservation objectives refers to the specifications of the overall targets for the species and/or habitat types for which a protected area is designated (Lausche, 2011). Protected areas have a wide range of management aims because they are not uniform entities (Dudley, 2008). The management objectives for modern protected areas range from strict nature preservation to controlled harvesting (Pressey, 1996). The IUCN promotes an internationally applicable system of six categories of protected area management. The categories reflect the full spectrum of management objectives of protected areas which can be applied to the entire protected areas system. These categories are specific enough to differentiate different types of protected areas, but broad enough to include all types of protected areas.

Today the IUCN categories are increasingly recognised and applied nationally and internationally as a global standard for defining and recording protected areas, and as such are increasingly being incorporated into national legislation (Dudley, 2008). The IUCN *Guidelines for Applying Protected Area Management Categories* (Dudley, 2008, p. 6) explains that the categories are mainly used as (i) guidelines for applying protected area management categories, (ii) improving information management about protected areas, and (iii) helping to regulate activities in protected areas. They provide a framework, for categorising the variety of protected area management types, as well as a tool for countries to provide a formal structure for planning and international reporting (Lausche, 2011; Dudley, 2008).

In this context, protected areas legislation should reflect the IUCN principle of management by conservation objectives which requires the management of a specific protected area to be in accordance with the goals and objectives for which the site was designated. The legislation should also provide that protected areas recognised as part of the national system will be assigned one of the defined management categories, based on the conservation values and objectives of each site (Dudley & Stolton, 2008). This is necessary because the system goal is normally too general to guide the

management of individual sites (Lausche, 2011). The IUCN protected area management categories are summarised in Table 4.4.

Table 4.4 *IUCN protected area categories and their definitions by management objectives*

Category	Definition by management objectives
Category Ia: Strict nature reserve	Strictly protected areas set aside to protect biodiversity and possibly geological or landform features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of conservation values. Such protected areas may serve as indispensable reference areas for scientific research and monitoring.
Category Ib: Wilderness area	Protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed to preserve their natural condition.
Category II: National park	Protected areas are large natural or near-natural areas, set aside to protect large-scale ecological processes along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.
Category III: Natural monument or feature	Protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.
Category IV: Habitat/species management area	Protected areas aim to protect species or habitats, and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of species or to maintain habitats, but this is not a requirement of the category.
Category V: Protected landscape/seascape	A protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
Category VI: Protected area with sustainable use of natural resources	Protected areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Source: Dudley (2008, p. 13–23).

4.4.5. Management plans

Most international organisations give formal recognition to the need for a management plan as an essential tool for effective protected area management (Lausche, 2011). A management plan is understood to be a document which sets out the management

approach and goals, together with a framework for decision-making, to apply in a protected area over a given period (Thomas & Middleton, 2003). A basic principle of protected area management is that every park should have a management plan that guides and controls the management of park resources, the conservation of biodiversity, the uses of the area, and the development of park facilities. Most significantly, the CBD, through its Programme of Work for Protected Areas (PoWPA), recognises the need for management plans and urges all contracting parties to ensure that all protected areas are effectively managed based on long-term management plans (CBD, 2014, Decision VII/28). The WHC also recognises management plans as an important tool to achieve the goals of the convention. Accordingly, parties to the WHC are obliged to have effective management plans in place for natural and cultural sites nominated or designated as world heritage sites (UNESCO, 2008).

4.4.6. Precautionary principle

The precautionary principle "provides that where knowledge is limited and there is lack of certainty regarding the threat of a serious environmental harm, this uncertainty should not be used as an excuse for not taking action to avert that harm" (Lausche, 2011, p. 33). The precautionary principle has emerged over recent decades as a widely and increasingly accepted general principle of environmental policy, law, and management (Cooney, 2004). Most international environmental organisations recognise the precautionary principle as an underlying element of the broader framework of sustainable development. This principle originates from the Rio Declaration on Environment and Development and states that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (UN, 1992, p. 3). Precaution is viewed as a duty to foresee and assess environmental risks, to warn potential victims of such risks, and to behave in ways that prevent such risks. According to Cooney (2004, p. ix), "the core concept of precaution can be viewed as a mechanism to counter a widespread regulatory presumption in favour of allowing development/economic activity to proceed when there is a lack of clear evidence about its impacts." Another important element of the precautionary principle is that it shifts the burden of proof onto those carrying out the risk-imposing activity, requiring them

to prove that the certain activity will not be detrimental to the environment (Gullet, 2000). This means that the evidentiary burden lies heaviest on those carrying out the potentially harmful activity, while those advocating for the environment only need to show that environmental harm is plausible (Martin, Boer & Slobodian, 2016).

With reference to protected area legislation, the precautionary principle is important, particularly in decision-making for the design and management of protected areas (Lausche 2011). It serves as a guide for considering the effects of human activities and provides a framework for the sustainable development of humans, biodiversity and ecosystems (World Health Organisation, 2004). The CBD also recognises the precautionary principle in its preamble (CBD 1992, p. 1). It extensively incorporates the precautionary principle in decisions related to the management of invasive alien species (Decision VI/23) and biosafety challenges such as the transboundary movement of genetically modified organisms. Similarly, the IUCN has endorsed the precautionary principle and encourages its application to appropriate legal, institutional, and policy frameworks for effective biodiversity conservation and natural resources management (IUCN-WCPA, 2007). The IUCN has also developed guidelines for applying the precautionary principle (Cooney, 2004). Related to this, the IUCN emphasises broad stakeholder participation, use of the best available information, and adaptive management (i.e. a systematic process of continually improving management policies and practices by learning from the outcomes of existing programmes) for effective application of the precautionary principle (IUCN-WCPA, 2007; Lausche, 2011).

4.4.7. Management of invasive alien species

Invasive Alien Species (IAS) are recognised as a key threat to biodiversity (CBD Secretariat, 2001). The number, extent and impact of IAS have been increasing (Hulme, 2009; McGeoch, Butchart, Spear et al., 2010). Therefore, monitoring introduction pathways, new introductions, the spread of alien species within parks, and the success of management intervention is crucial to the successful management of this threat to biodiversity (Foxcroft, Richardson, Rouget & MacFadyen, 2009). The IUCN has defined IAS as “an alien species that is able to survive and reproduce or spread outside of human intervention/cultivation and whose introduction and/or spread has a negative impact

on biodiversity or ecological functions within a protected area" (Tu, 2009, p. 38). Similarly, the CBD defines IAS as species, sub-species or lower taxa, (including any part, gametes, seeds, eggs, or propagules of such species), introduced outside their natural past or present distribution and whose introduction and/or spread threaten biodiversity (CBD 2002). Article 8(h) of the CBD requires all contracting parties to "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats and species" (CBD 1992, p. 6). With respect to protected areas, the CBD through its Conference of Parties and meetings of its subsidiary bodies has referenced IAS in separate thematic decisions and produced guidelines and principles for the prevention, introduction and mitigation of the impacts of alien species (CBD Secretariat, 2001). The Ramsar Convention through its Conference of Parties, despite not referencing IAS in its main convention text, recognises the threat of IAS particularly to coastal and inland wetlands. Subsequently, it urges all contracting parties to adopt legislation or programmes to prevent the introduction of "new and environmentally dangerous alien species" into their jurisdiction (Resolution VII/14, 1999). The IUCN-WCPA, WWF and The Nature Conservancy also reference IAS and emphasise the need to strengthen the integration of IAS issues into management regimes and protected areas legislation. For example, the IUCN integrates IAS into all parts of its programmes and themes, including protected areas and biodiversity policy, and has developed guidelines on invasive species for use by international organisations, states and protected area practitioners (Tu, 2009).

4.4.8. Management of climate change

Climate change and its predicted impacts, including changing and more extreme patterns of drought, storms and flooding, changes in the ecosystem distribution and quality. The implications of these impacts for species survival is widely recognised as a major global challenge influencing the conservation and sustainable use of protected areas (Dudley, Stolton, Belokurov, Krueger et al., 2010). For the effective conservation of flora and fauna, protected areas legislation should incorporate climate change considerations to enable practitioners to respond to its impacts. These considerations should include adaptation and mitigation measures. Adaptation refers to actions taken to help communities and ecosystems cope with changing climate condition while

mitigation refers to efforts to prevent the loss of carbon that is already present in vegetation and soils and capturing (or sequestering) additional carbon dioxide from the atmosphere in natural ecosystems (Dudley et al., 2010).

4.4.9. Taking an international perspective

There is not a specific established and definitive elaboration of the idea of 'taking an international perspective' in the literature. This is most likely because it is a working idea that depends on the circumstances of each country (B. Lausche, personal communication, May 4, 2017). The IUCN in a publication under the authorship of Lausche (2011) uses the term 'international' to generally mean outside 'national' so the scope could be bilateral, regional, or global. The IUCN discusses the idea of taking an international perspective within the context of "management principles with legal application" (Lausche, 2011, p. 19). It emphasises that conservation scientists or managers should advise on biodiversity and conservation needs within their protected area system, considering events, obligations, and/or natural processes that may impact from outside, ranging from the next country, to regional and global. This is mainly a reminder to think about protected area design and management in this broader context, rather than in isolation. From this perspective, taking an international perspective, as a guiding principle for design, establishment, and management, should be explicitly recognised in protected area legislation, policies and plans to legitimise efforts to monitor and account for ongoing regional and global developments with existing or potential impacts on the protected area system over the near to long term.

The IUCN, as presented in the work of Lausche (2011) outlines some biophysical inter-connections that inevitably trigger a perspective beyond purely national. Examples include protected area-related ecosystem functions or protected endangered species where the ecosystems or habitats are shared across borders; invasive species that may be transnational and require cross-country controls; migratory species; and climate change impacts and adaptation. With such kind of challenges, it is important that scientific analysis and conservation management requirements are not defined in a vacuum, but rather include consideration of external natural connections, impacts, and/or influences (B. Lausche, personal communication, May 4, 2017).

Similarly, an international perspective needs to be taken when it comes to complying with obligations and following guidance under international or regional law and programmes. Some key examples for both terrestrial and marine protected areas and protected area law include the Convention on Biological Diversity, the Convention on Migratory Species, the Ramsar Convention, the World Heritage Convention, and the UNESCO Man and Biosphere Programme. Specifically, in the marine area, another example is where a regional perspective may be needed if a country is a party to a Regional Seas Programme (Lausche, 2011).

In summary, the international perspective needed is both ecological, legal, and policy oriented. Because of the underlying presupposition discussed above, improved international and regional collaboration across borders with shared resources or ecosystems, offers a way forward for developing harmonised environmental laws and responding to regional threats. Taking an international perspective also presents opportunities for meeting national conservation goals (Lausche, 2011). National protected area laws, policies and plans, then, need to recognise and incorporate an international perspective.

4.4.10. Good governance

The term 'governance' or 'good governance' is firmly entrenched by many international organisations as an important principle for protected area legislation (Lausche, 2011). Even so, there is no internationally agreed definition for the principle of Good Governance. Some organisations have developed definitions useful for their own operations. For instance, The Institute on Governance (2001, p. 7) defines governance as a dynamic interaction involving "structures, functions (responsibilities), processes (practices) and organisational traditions that the board of an organisation uses to accomplish the organisation's mission". According to the United Nations Programme Development (UNDP, 2007), governance is a system of values, policies and institutions by which a society manages its economic, political and social affairs through interactions within and among the state, civil society and private sector. In this sense, the principle of good governance is broadly understood as a "mode or model of governance that leads

to the social and economic results sought by citizens" (Institute on Governance 2003, p. 8). Governance affects management effectiveness, cost and benefit sharing and has implications for community, political, and financial support.

The World Summit on Sustainable Development (WSSD), through its Johannesburg Plan of Implementation, was among the first initiatives to formally recognise good governance as essential for sustainable development both at national and international levels (UN, 2002; Lockwood, 2010). Drawing on the WSSD, the CBD also explicitly reiterates the importance of good governance through its Programme of Work on Protected Areas (PoWPA) which includes equity, participation, and benefit sharing as critical components of protected areas establishment and management (PoWPA, Element 2). The concept of good governance has also been supported by other international agreements such as the Ramsar Convention and CITES in their Conference of Parties.

The IUCN-WPC explicitly requests governments to endorse and promote good governance through appropriate legislation as a key concept of protected area management. It offers a broad set of nine sub-principles for good governance in the context of protected areas (Dudley, 2008):

- *Legitimacy and voice:* having social dialogue and collective agreement on protected area management objectives and strategies, based on freedom of association and speech, with no discrimination related to gender, ethnicity, lifestyles, cultural values or other characteristics.
- *Subsidiarity:* attributing management authority and responsibility to the institutions closest to the resources at stake.
- *Fairness:* sharing equitably the costs and benefits of establishing and managing protected areas and providing a recourse to impartial judgment in case of related conflict.
- *Do no harm:* making sure that the costs of establishing and managing protected areas do not create or aggravate poverty and vulnerability.

- *Direction:* fostering and maintaining an inspiring and consistent long-term vision for the protected area and its conservation objectives.
- *Performance:* effectively conserving biodiversity whilst responding to the concerns of stakeholders and making wise use of resources.
- *Accountability:* having clearly demarcated lines of responsibility and ensuring adequate reporting and answerability from all stakeholders about the fulfilment of their responsibilities.
- *Transparency:* ensuring that all relevant information is available to all stakeholders.
- *Human rights:* respecting human rights in the context of protected area governance, including the rights of future generations.

These are important aspects for possible incorporation into national laws and policies as they form part of decision-making requirements and processes for protected area design and management. In protected areas legislation, these aspects of good governance can also be applied through provision on access to information, public participation, and social equity (Lausche, 2011).

Access to Information is the principle that the public can obtain information held by state bodies for the purpose of being informed about the activities of the state. The right to access to information is a fundamental human right enshrined in Article 19 of the Universal Declaration of Human Rights (1948) which states that

> Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers (UN, 1949, p.4).

Protected areas legislation should identify essential elements for the effective implementation of the Access to Information principle. In many countries, general requirements for this principle are either contained in stand-alone legislation or in the principal protected areas legislation, with the details provided in operational documents (Lausche, 2011). While the content of these legislation and regulations may vary from

one country to another, several similar thematic areas form the basis of any comprehensive legislation. These include maximum disclosure, routine publication, processes to facilitate access, costs, independent administrative body and right of review, and exceptions (CPA, 2004).

Protected areas legislation can facilitate the implementation of the Access to Information principle by integrating provisions that allow the public to request and receive information and government agencies to establish mechanisms for record-keeping and dissemination (Lausche, 2011). Provisions for access to information relate generally to transparency in government decision-making processes. Access to information promotes transparency in decision-making and in turn enhances legitimacy, accountability and overall performance (Lausche, 2011). However, justifications for transparency of government information often relate to the involvement of citizens in decision-making (public participation). This is because meaningful access to, and utilisation of information with respect to establishing and managing protected area systems and sites raises the level of public participation and more informed decision-making (Lausche, 2011). As such, the need for access to information is closely linked to and is accepted as an integral element of meaningful public participation.

While the elements of good governance become grounded into legislation through provisions in access to information, public participation, and social equity, the latter two principles are separately described below.

4.4.11. Public participation

The IUCN defines public participation in protected areas decision making as "participation in initial exploratory meetings; the identification or verification of boundaries; defining conservation objectives and other purposes; laying out rights and responsibilities of all parties; defining management, enforcement and incentive structures; and negotiating a formal contractual agreement" (Lausche, 2011, p. 162). Public participation is an important strategy for gaining community support for protected areas (Ervin, Sekhran, Dinu et al., 2010). It is a stated priority of sustainable development principles and is widely referenced by international organisations

(Howard, 2015). The public participation principle is based on the fundamental human right to hold and express opinions, and to seek, receive and impart ideas (Bottriell & Cordonier Segger, 2005). Probably the most common articulation of public participation in the management of the environment is Principle 10 of the Rio Declaration:

> Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, everyone shall have appropriate access to information concerning the environment that is held by public authorities. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided (UN, 1992, Para. 30, p. 2).

In protected areas management literature, there are several definitions for public participation. The term 'participation' is also used synonymously with several other similar terms such as 'consultation', 'collaboration', 'partnership', 'public', 'citizen', and 'community', further complicating the many definitions (Berner, Amos & Morse, 2011; Howard, 2015). However, there are only minor differences among most of the operative components of each of the terms. Most of international environmental organisations consider public participation to comprise three key elements: (i) the right to information; (ii) the right to participate in the decision-making process; and (iii) the right to justice (Sumudu, 2006). For example, the CBD (1992), the WHC, Ramsar (1971) and CITES (1973) also explicitly recognise these three elements as key for the application of the public participation principle. This understanding of the public participation principle also coincides with that advanced by the Sustainable Development Goals (SDGs) in terms of broadening and strengthening the involvement of local communities, civil society and other stakeholders in decision-making processes for biodiversity and terrestrial ecosystems conservation.

4.4.12. Social equity and justice

The IUCN principle of social equity and justice refers to the requirement for stakeholders involved in or affected by the establishment and management of protected areas to "be respected and engaged in protected area design, establishment and management, and should have legal recourse if their rights are violated" (Lausche, 2011, p. 46). The social

equity and justice principle in conservation also refers to the need for fair distribution of the benefits and costs of conservation among different social groups and individuals (IUCN, 2000b). Most international organisations recognise the need to fully embrace the social equity and justice principle to promote sustainable and equitable conservation and use of natural resources. This principle recognises that social groups and individuals have different needs, interests, rights to and responsibilities for resources, and that they experience different impacts of conservation and development interventions (IUCN, 2000b).

The CBD and the IUCN highlight their commitment to promote social equity and justice in conservation and natural resource management in their mission statements. The rationale rests on the recognition that social equity and justice are not only matters of basic human rights, but also a way to increase the efficiency and sustainability of institutional efforts.

Among international environmental organisations, the social equity and Justice principle is understood to include three dimensions. The first dimension, 'distribution' is about the costs and benefits that affect human wellbeing; while the second, 'procedure', is about the inclusiveness of decision-making processes (Boone, 2008). The third, 'recognition' requires emphasising on stakeholders' rights, interests, concerns and grievances necessary in order to achieve procedural equity and shape people's perceptions of equity (IAIA, 2016).

4.5. Conclusion

The overall sustainable development agenda has not yet reached a level of maturity where it possible to map out a comprehensive set of global principles to be applied. Strategic choices over the form in which global principles are defined and applied, including methodological approaches, are all intertwined. This chapter has highlighted some key principles for national park management and why these principles are so important to consider for the sustainable development of national parks.

The sustainable development of national parks has been explored through several environmental initiatives including the principles advanced by international environmental agreements and organisations. The mention of globally recognised principles, such as those suggested by the IUCN, into national and local policy documents is one promising avenue towards the sustainable development of national parks. 11 key IUCN park management principles (PMPs) that may be used to examine any country's national park documents are presented in this chapter in response to research objective (i). While debates about their comprehensiveness, content and application exist, there is consensus on their implementation leads to more effective protected areas management. Several international environmental declarations, agreements, and organisations have endorsed these principles, and many countries, particularly from the Global North, have used them to examine the robustness of their legislative and policy frameworks. This chapter is, therefore, significant because it not only identifies but also confirms the value of IUCN PMPs as a yardstick against which to examine the alignment of national level policy documentation with global environmental policy models. The next chapter describes the methods that were used to examine how Zambia's laws, policies, plans, and reports respond to the IUCN PMPs described in this chapter.

CHAPTER 5. RESEARCH METHOD

5.1. Introduction

In the previous two chapters, the governance of Zambia's national parks and the challenges to their successful management, and the global environmental organisations and agreements relevant for national park management were discussed. The latter focused on identifying a set of key international park management principles (PMPs) with emphasis on how these can contribute to the long-term success of national parks. In this chapter, the research methodology underpinning this study is explained and a framework for the examination of national park laws, policies, plans and reports is developed. The methodology, which is based on several policy themes and indicators, follow Rütten, Luschen, von Lengerke et al. (2003a), Bardin (2011) and Dağhan and Akkoyunlu (2015).

In this study, a mixed-method approach consisting of a literature review and thematic content analysis was applied to address the research aim and objectives. First, a comprehensive literature review is warranted to identify the key international park management principles expressed in international policy documents. Second, a thematic content analysis consisting a variety of quantitative and qualitative approaches was used to quantitatively detect trends such as word frequency and grammatical patterning, and qualitatively ascertain, interpret, and explain the status of transfer of a set of international park management principles into national and sub-national level document. Lately, to make informed judgments on the quantitative and qualitative data generated from the thematic content analysis, the study approach included and acknowledged the importance of the researcher as a key research instrument. Together, these selected methods were critical to understanding how the texts of several policy documents align with a set of international park principles.

This chapter is structured as follows. Section 5.2 discusses the research methods used. It starts with the description of the research design, followed by the explanation of general theories for thematic content analysis and the value of using an approach that

combines quantitative and qualitative analysis techniques. The specific analytical approach used in the study is explained in Section 5.3. This includes a discussion of the data used and the data collection processes followed. The limitations of the study method and research ethical considerations are presented in sections 5.4 and 5.5 respectively. Section 5.6 concludes the chapter with remarks on the appropriateness of the methodology in realising the research objectives.

5.2. Research design

The aim of this study is to examine how international principles for national park management best practice are reflected and interpreted in Zambia's national park legislation, policies, plans, and reports. Consistent with this aim, four objectives, outlined in section 1.4, were developed to guide the analysis. The study is predicated on the idea that the mention of international park management principles (PMPs) into national and local laws, policies, plans, and reports is one promising avenue towards sustainable national park management. The study also presumes that the consistent interpretation of these principles at global, national and local levels is a prerequisite for sustainable national park management (Zinngrebe, 2018; Howard, 2015). Furthermore, the study is grounded in the idea that the use of internationally recognised principles avoids the conflicts between states and international regimes over how global commitments can be ensured in the face of national sovereignty (Betti, 2011).

To address the research aim and objectives, a mixed method approach consisting of a literature review and quantitative and qualitative thematic content analysis methods was used. First, the key international PMPs were identified through a comprehensive literature review of information from international environmental agreements and organisations (research objective [i]). The literature review involved reviewing how concerns regarding national park sustainability are formulated in major international environmental declarations, as well as other international documents (strategies, recommendations, and guidelines) relevant to national parks. From these, a set of 11 key international park management principles, suggested by the IUCN, were selected

due to their relevance to the aim of this study. The findings that emerged from this methodological phase are presented in Chapter Four.

Next, Zambia's national laws, policies, and plans were examined for references to the IUCN PMPs (research objectives [ii]). This examination assumed that, unless a country's domestic laws, policies, and plans coherently interpret and make strong provisions for the international principles, their support and implementation at subsequent levels will be weak. The findings that emerged from this methodological phase are presented in Chapter Six.

In the final step, the park management plans under which the national parks are being managed were examined for references to the IUCN PMPs (research objectives [iii]). The findings that emerged from this methodological phase are presented in Chapter Seven. In addition, the parks' goals in relation to the IUCN PMPs were compared with evidence of their implementation derived from national park reports to determine the extent to which they had been achieved in practice (research objective [iv]). By critically comparing and analysing the data, it was possible to generate a comprehensive picture of the level of transfer and implementation of the IUCN PMPs and provide a deeper understanding of how Zambia's laws, policies, plans and reports respond to international principles. The findings that emerged from this additional methodological phase are presented in Chapter Eight.

Thematic content analysis, consisting of both quantitative and qualitative analyses techniques, was used to provide descriptive statistics of texts contained in a sample of policy documents used for the management of Zambia's national park system. Thematic content analysis, as its name states, involves describing content based on themes. This approach was warranted because the research aim needed to be addressed both in quantitative and qualitative terms: quantitative because the research sought to determine the extent to which the 11 IUCN PMPs are considered across a range of legislative and policy texts; and qualitative because the trends which were identified quantitatively were insufficient in themselves unless they could be interpreted and

explained. Combining quantitative and qualitative analyses facilitated a complete and more synergistic utilisation of data than would have been achieved using separate quantitative and qualitative data collection and analysis (Bryman & Bell, 2007). This method is discussed in detail in the following sub-sections.

5.2.1. Content analysis

Content analysis refers to a family of procedures for the systematic, replicable analysis of text. Krippendorff (2004, p. 24) defines content analysis as "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use". Content analysis can also be an unobtrusive research approach in that it can be used to analyse naturally-occurring data (Berger, 2000). According to Hsieh and Shannon (2005, p. 1278), content analysis is a "research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns". As a research method, content analysis involves the classification of parts of a text through the application of a structured, systematic coding scheme from which conclusions can be drawn about the message content (Rose, Spinks & Canhoto, 2014).

Content analysis can be used with either quantitative or qualitative data and in an inductive or deductive way depending on the purpose of the study (Elo & Kyngäs, 2008). Inductive content analysis is used when there is insufficient or fragmented former knowledge about the phenomenon under study while deductive content analysis is used when the structure of analysis is operationalised based on previous knowledge and the purpose of the study is theory testing (Lauri & Kyngäs, 2005). In inductive content analysis, the analytical constructs (categories) are derived from the data and, as such, analysis moves from the specific to the general, so that instances are observed and then combined into a larger whole or general statement (Chinn & Kramer, 1999). On the other hand, in deductive content analysis, categories are derived from existing theories or practices and therefore analysis moves from the general to the specific (Krippendorff, 2004). Elo and Kyngäs (2008, p. 107) describe deductive content analysis as useful if "the general aim is to test previous theory in a different situation or to compare

categories at different time periods". This study was deductive in nature as its categories were derived from the 11 PMPs outlined by the IUCN.

Elo and Kyngäs (2008) suggest that both inductive and deductive analysis processes are represented as three main phases: preparation, organising and reporting. The preparation phase is similar in both approaches and involves selecting the unit of analysis (categories). This can be, for instance, a word, theme or sentence depending on the research question. Preparation also involves making sense of the data and obtaining a sense of the whole with the aim of becoming completely familiar with it (Polit & Beck, 2004). In the organising phase of a deductive content analysis, a categorisation matrix is developed, and the data is coded according to the selected categories. The reporting phase involves describing the analysis process and the results in detail to provide a clear understanding of how the analysis was carried out, and its strengths and limitations (Elo & Kyngäs, 2008).

Content analysis has an established position in discursive research and offers several major benefits. It is a highly flexible method that can be applied to a wide variety of text sources (Harwood & Garry, 2003). It can be applied in qualitative, quantitative, and sometimes mixed-method research frameworks (Elo & Kyngäs, 2008) and employs a wide range of analytical techniques to generate findings and put them into context. Helped by the availability of computer software programmes, content analysis can also cope with large amounts of data (Elo & Kyngäs, 2008). Within a discursive study, content analysis is well-suited to identifying and confirming silences in discourse or revealing what is not talked about. This may include both topics that are marginalised or completely ignored, and words or phrases that are censored (Bennett, 2015). As such, content analysis can help identify silences and, thereby, serve as a starting point for informing policy and improving practice.

Despite its advantages, content analysis has some potential weaknesses. It has been criticised for being an overly simple method that does not lend itself to detailed statistical analysis and for not being sufficiently qualitative in nature (Morgan, 1993). Its

flexibility in terms of research design also presents some potential weaknesses in terms of the sampling and coding process. Document selection, development of the coding scheme, sampling process and coding are all subject to bias (Insch, Moore & Murphy, 1997). Abstraction of content from its context can also create problems. Meaning can be lost, for instance, when a word or phrase is taken in isolation of other parts of the text. To overcome some of these weaknesses, a thematic content analysis, consisting of both quantitative and qualitative analyses techniques, was used in this study.

5.2.2. Thematic content analysis

Thematic content analysis is an interpretative application of content analysis in which the focus of analysis is on thematic content that is identified, categorised and elaborated based on systematic scrutiny (Banister, Burman, Parker, Taylor & Tindall, 1994). According to Fereday and Muir-Cochrane (2006), thematic content analysis is a form of pattern recognition within the data, with emerging themes becoming the categories for analysis. It involves a careful, more focused re-reading and review of the data. It enables the researcher to code, categorise and analyse the selected data based on its characteristics, and uncover themes pertinent to a phenomenon in a systematic manner. Furthermore, thematic content analysis facilitates translation of qualitative observations, provides access to discoveries and insights generated, and enables communication and dissemination of ideas and results (Fereday & Muir-Cochrane, 2006).

Thematic content analysis is the method most suited to the objectives of this research study, which involved identifying a set of key international principles for national park management best practice and analysing how they are considered in national and sub-national level policy documents in Zambia. The reason for selecting the thematic content analysis is to examine in depth whether specific themes contained in international policy models targeted at national parks are implicit in Zambia's national parks' policy documents. Thematic content analysis is advantageous because it is an exploration, elaboration and systematisation of the significance of identified phenomena. it is an illuminating representation of the meaning of delimited themes or problems. Furthermore, thematic content analysis is a safe method because necessary

or missing information can be added by the researcher, forcing in-depth examination of the material by specifying category criteria and assessing their success in measuring qualitative phenomena (Rosnow & Rosenthal, 1996). Finally, thematic content analysis requires little more than common-sense and logic to develop a coding system and its application requires minimal capital investment.

5.2.3. Researcher's role

Research cannot be undertaken without a priori knowing of the subject to be investigated (Willig, 2008). As such, the role of the researcher as a research instrument, or the researcher's critical reflexivity, is crucial. In its broad sense, reflexivity "requires an awareness of the researcher's contribution to the construction of meanings throughout the research process, and an acknowledgment of the impossibility of remaining 'outside' one's subject matter while conducting research" (Willig 2008, p. 10). Reflexivity is therefore, a crucial consideration in qualitative studies because of the need to disclose the researcher's views, values, and motivations towards the subject under investigation.

In this study, reflexivity is acknowledged by highlighting the researcher's awareness of how his values and experiences influence the collection, analysis, interpretation, and explanation of the data used to produce a coherent picture of Zambia's national parks system. Over the last five years, the researcher has worked as Natural Resources Management Officer in the Ministry of Lands, Natural Resources and Environmental Protection in Zambia. This role involved collecting and compiling technical information to facilitate preparation, implementation and review of natural resources policies, plans, and programmes. In this role, the researcher has had first-hand experience working on local and national conservation projects and programmes, some of which have had adverse outcomes. This experience not only provided the motivation to undertake a study aimed at improving understanding of sustainable development implementation in Zambia's national parks but also the insight and understanding that enhanced his ability to critically analyse the data gathered in this study.

In addition, the researcher has been an active member of several international environmental organisations, including the IUCN and the Convention on Biological Diversity where he has served as Zambia's National Focal Point for the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (Nagoya Protocol). His active participation in several international meetings and technical expert groups provided further experiential knowledge in the environment and natural resource sector that has been applied alongside the literature review and the quantitative and qualitative data analyses performed in this study. This experience at international level, combined with experiences working at national and local level, provided unique multiple-perspectives and a deep appreciation of the topic researched - an advantage rarely available to a single researcher.

In view of the above, the researcher's standpoint vis-à-vis the subject matter being studied is clear. He stands explicitly for the idea that conservation should not compromise poverty reduction. This position recognises that while conservation agencies have conservation as their primary goal, they should, at a minimum, not increase poverty or undermine the livelihoods of the poor. Examples of strategies resulting from this position might include codes of conduct for conservation organisations, social impact assessment of protected areas, and adherence to principles such as social equity and justice. The researcher acknowledges that this standpoint in favour of conservation may, consciously or unconsciously, introduce bias in the study approach and interpretation of results. As such, the researcher also engages in self-criticism, where one stands back and reflects on, deals with, and reports potential sources of bias and error in relation to their social and cultural values.

5.3. Analytical approach

There is no set formula prescribing thematic content analysis because under this approach, methodological choices are driven by the problem at the centre of the research (Hewitt, 2009). According to Phillips and Hardy (2002) "researchers need to develop an approach that makes sense in light of their particular study and establish a set of arguments to justify the particular approach they adopt" (p. 74). Phillips and

Hardy (2002) further assert that a review of past similar studies can be useful in developing an appropriate method for a research project. In this context, this study drew upon similar studies (Rütten et al., 2003a; Bardin, 2011; Dağhan & Akkoyunlu, 2015) focusing on public policy themes to develop an analytical approach.

Thematic content analysis employed both quantitative and qualitative procedures. The quantitative analysis included enumerating the frequency with which each of the IUCN principles (including a range of synonyms iteratively identified) occurred in each document while the qualitative analysis focused on examining the text located by the search words to examine what was expressed (in the text surrounding those principles or their synonyms/synonymic phrases) concerning each of the IUCN principles, thus deepening the analysis. This included determining whether the text expressed any goals for the principle and whether these goals encompassed strategies (action steps) for implementation, and/or whether means for monitoring and evaluating implementation were included.

Thus, by combining quantitative and qualitative analyses, the quantitative side allowed identification and coding of relevant texts, while the qualitative side of the analysis facilitated a comprehensive understanding of individual texts, enhancing the conceptual validity of the study. This approach facilitated critical engagement not only with the various themes (international principles) under study but also with their variability and contingency in national and local level policy documents, thus increasing the robustness of the study results. The analytical approach assumed in this study followed the three stages of thematic content analysis suggested by Bardin (2011): pre-analysis, exploration, and interpretation. These three stages also guided the construction of the methodological framework (Table 5.1) elaborated below.

The study also drew on other policy related studies that have used a similar approach. Cheung, Mirzaei and Leeder (2010), for example, analysed the main policy documents governing health service provision for the care of people with chronic disease in New South Wales, Australia. They developed a set of criteria for assessing the internal validity

of policy documents (in an Australian context) and employed thematic content analysis to appraise the extent to which the policy statements align with intended outcomes. Similarly, Tosun and Leininger (2017) assessed how national governments and their competent ministries interpret and implement the Sustainable Development Goals (SDGs). Drawing on policy documents from six countries (Benin, Colombia, Ethiopia, Qatar, Turkey, and Switzerland). They relied on qualitative content analysis and coded direct textual references to climate change, energy, agri-food, health, and water provisions in the documents to determine the interlinkages between the SDGs. The results of the study showed that at the national level, the links among the different goals and the idea of policy linkages are subject to divergent interpretations. In another policy related study, Laikre, Lundmark, Jansson et al. (2016) explored concerns regarding genetic variation in international and national policies that governs biodiversity and evaluated if and how such policy is implemented in management plans governing Baltic Sea Marine Protected Areas (MPAs) in Sweden, Finland, Estonia, and Germany. They performed qualitative and quantitative thematic content analysis of 240 documents and found that agreed international and national policies on genetic biodiversity are not reflected in management plans for Baltic Sea MPAs.

Table 5.1 *Methodological framework*

Specific Research Objectives	Methods			
(i) Identify the key international principles required for effective national park management	Literature review on international environmental organisations and agreements relevant to national park management.			
		Research Phases		
		Pre-analysis Phase	Exploration Phase	interpretation Phase
(ii) Determine the extent to which Zambia's national park laws, policies, and national level plans define and respond to the key international principles for national park management;	Quantitative and qualitative thematic content analyses of Zambia's national park laws, policies, and national level plans	✓	✓	✓
(iii) Determine the extent to which Zambia's national park management plans respond to the key international principles for national park management; and	Quantitative and qualitative thematic content analyses of Zambia's national park management plans	✓	✓	✓
(iv) Determine the extent to which the key international principles for national park management are implemented in Zambia's national parks through analysis of national park reports	Quantitative and qualitative thematic content analyses of national park reports.	✓	✓	✓

✓ = Phases included in addressing each research objective.

Table 5.1 shows the research objectives, methods and the three main research phases undertaken in this study. It shows that a literature review is used to address research objective (i), while thematic content analysis was used to address research objectives (ii), (iii) and (iv). The table further shows that three phases of thematic content analysis (pre-analysis, exploration and interpretation) are applied in addressing research

objectives (ii), (iii) and (iv). While these phases are distinct, in practice the analysis involved moving back and forth throughout the process and each phase encompassed the consideration of several elements. The following sub-sections explain the three phases and how they were applied in this study.

5.3.1. Pre-analysis

Pre-analysis involves defining the objectives of the content analysis, selecting the material according to its relevance in relation to the research goal, reading through the material to be analysed, and organising the material for analysis (Bardin, 2011). In this study, pre-analysis involved three main tasks: (i) identifying and collating international documents relevant for national park management from which the key international principles could be derived; (ii) identifying and collating national park laws, policies, and national level strategic plans used for the management of Zambia's national parks; and (iii) identifying and collating existing national park management plans and reports.

Accordingly, three levels of data sources were used in this study: international, national and local (park) level. The sources selected were consistent with the national park management structure in Zambia upon which the study focused. The data sources at each of the three levels are discussed below.

Data sources and data collection procedures

The primary sources of data for the analyses undertaken in this study were national park law, policies, plans and reports (policy documents). Policy documents play an integral role in the complex social process through which discourses and subject positions are created, recreated and circulated. According to Allan (2008, p. 11), the subject positions discursively produced by policy documents have "far-reaching effects – by shaping perceptions of self and others in relation to the social world". Cheung et al. (2010, p. 406) argue that "the development of policy documents is one part of the policy process that enables goals, opportunities, obligations and resources to be recognised in a concrete form and, through careful analysis of the documents (policy document analysis), the extent to which a policy adheres to certain principles, such as stakeholder and legislative support and goal clarity, may be ascertained". Cheung et al. (2010)

further contend that the analysis of policy documents is one potential way to examine the extent to which the policy conforms to influential principles critical for successful implementation. Similarly, Allan explains that:

> The focus on written text of policy does not imply that context is not crucial to meaning making. Rather, the approach highlights the discursive power of policy by investigating written text of policy documents as primary data sources situated within a larger socio-political context (2008, p. 11).

From this perspective, national park laws, policies, plans and reports do play a role in defining international park management principles and in determining how they are adopted and translated into practice. They offer insight into the wide range of perspectives about the management principles being promoted within the public sphere. In this study, a comprehensive collection of national park policy documents from a cross-section of sources was made in order to gain an understanding of how sustainable development is implemented in Zambia national parks. In total, 40 documents were analysed with 17 of them representing the international level, 7 the national level, and 16 the sub-national (park) level. The analyses of the policy documents involved three main aspects: (i) Identifying the key international principles of national park management; (ii) examining Zambia's national park laws, policies, and national level strategic plans against the key principles; and (iii) examining Zambia's national park management plans and reports against the key principles of national park management and the extent to which they are achieved in practice.

International documents

The major environmental principles relevant to national park management at the international level are set out by IEAs and environmental NGOs (Martin, Boer & Slobodian, 2016). IEAs and environmental NGOs play an important role in raising awareness about biodiversity conservation in national parks and lobbying governments for political action (Noor, 2011). A wide range of these organisations also play a leadership role in defining parameters of action for national parks, and increasingly provide detailed policy guidelines relating to national park management. Therefore, international level data, consisting mainly of convention texts and guidelines, were obtained from the IEAs to which Zambia is signatory and NGOs, particularly the IUCN.

Websites of these IEAs and NGOs were systematically searched to identify and describe the relevant principles for national park and the criteria that would be expected to be visible if these principles were being integrated at subsequent levels. In this study, a set of 11 key international PMPs were identified from the IUCN (Chapter 4). The main documents from international organisations and agreements that informed the identification and definition of key PMPs and their indicators are shown in Table 5.2.

Table 5.2 *Description of the international level documents examined for objective (i)*

Document Name	Description
The Stockholm Declaration, 1972	A Declaration of the United Nations Conference on the Human Environment, adopted on June 16, 1972. It is the first document in international environmental law to recognise the right to a healthy environment, providing is a set of 26 principles for the preservation and development of the human environment.
The Rio Declaration, 1992	A document produced at the United Nations Conference on Environment and Development in 1992. It consists a set of 27 principles designed to guide the economic and environmental behaviour of both nations and individuals.
Agenda 21, 1992	A non-binding action plan adopted at the United Nations Conference on Environment and Development (UNCED) in 1992. It draws on the 27 principles of the Rio Declaration and addresses the social and economic aspects of the conservation and management of resources.
The Johannesburg Plan of Implementation, 2002	An international action plan adopted at the World Summit on Sustainable Development in 2002. It sets out in more detail the action that needed in specific areas, including biodiversity conservation.
The Convention on Biological Diversity (CBD), 1992	Text of the CBD, a multilateral agreement on the conservation of biological diversity (or biodiversity); the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources. Article 8 of the CBD is the main provision concerning protected areas.
The Programme of Work on Protected Areas (PoWPA), 2004	A framework for action to achieve the goals of the CBD adopted at the 7th Conference of Parties to the CBD in 2004 (CBD/COP 7, 2004). It deals with direct actions for planning, selecting, establishing, strengthening and managing protected areas; ways and means to improve governance, participation and equity; and enabling activities relating to protected areas.
The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity, 2004	A framework for assisting governments, indigenous and local communities, resource managers, the private sector and other stakeholders, about how to ensure that their uses of biodiversity will not lead to its long-term decline.
The Strategic Plan for Biodiversity 2011 – 2020, 2010	A 10-year strategic plan that sets out 20 targets (the Aichi Biodiversity Targets) which serve as aspirations for the achievement of the CBD's central vision.
Ramsar Convention, 1971	Text of the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, an international treaty for the conservation and sustainable use of wetlands.
The Ramsar Handbook, 2010	The handbook provides a framework for the management of wetlands of international importance. It includes relevant guidance as adopted by the Parties to the Ramsar Convention, supplemented by additional material from

	COP information papers, case studies and other publications in order to illustrate key aspects of the guidelines.
World Heritage Convention, 1972	Text of the A single Convention Concerning the Protection of the World Cultural and Natural Heritage adopted by the General Conference of UNESCO on 16 November 1972.
The Operational Guidelines for the Implementation of the World Heritage Convention, 2008	Guidelines to facilitate the implementation of the World Heritage Convention by setting forth the procedures for the protection and conservation of World Heritage properties.
CITES Convention, 1973	Text of CITES is a multilateral treaty to protect endangered plants and animals. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild, and it accords varying degrees of protection to more than 35,000 species of animals and plants.
The IUCN Guidelines for Protected Area Legislation, 2011	IUCN guidelines published under the authorship of Lausche (2011). The guidelines reflect new developments and emerging issues in international environmental law, and an improved scientific understanding of the role of protected areas in nature conservation, including conserving biodiversity, maintaining ecosystem functions and supporting sustainable development.
The IUCN Guidelines for Applying Protected Area Management Categories,2008	IUCN guidelines published under the authorship of Dudley (2008). They provide clarity on the meaning and application of the protected area categories by describing the categories and discussing their application biomes and management approaches.

National documents

At the national level, Zambia's national laws, policies and national level strategic plans were examined based on the 11 IUCN PMPs. The rationale for examining the documents produced at this level assumed that unless a country's national level laws, policies, and strategic plans make strong provisions for the international principles, their support and implementation at subsequent levels will be weak. National level documents included (i) Acts or Laws (legal documents issued by the legislature—in Zambia by the Parliament—which sets out broad outlines and principles in, for example, environmental protection); (ii) policies (legal documents issued by the Executive which specify the regulations for implementing Acts); and (iii) national strategies (long-term plans issued by a ministry for example, which set out the direction of a policy for a sector such as forestry or wildlife management). These documents were publicly available on the Zambian Parliament website (www.parliament.gov.zm) and from relevant government ministries. The criteria for the selection of these documents included (i)

relevance to national park management and the research objectives; (ii) being currently in force; and (iii) availability. In total, seven documents relevant to national park management were selected: three Acts, three policies, and one national level strategic plan. Table 5.3 shows the national level documents selected for this study.

Table 5.3 *Categories and description of national level documents examined for objective (ii)*

Document Category	Document Name	Description
Laws	Zambia Wildlife Act No. 14, 2015	The principal law providing the legal basis for the conservation and management of Zambia's wildlife ecosystems and biodiversity and provides opportunities for the equitable and sustainable use of national parks.
	Forests Act No. 4, 2015	The principle law that provides for the establishment, control and management of all protected forests in Zambia.
	Environmental Management Act No. 12, 2011	The principal environmental legislation covering a cross section of sectors. It provides for the integrated management of the environment and natural resources in the national development context.
Policies	National Parks and Wildlife Policy, 1998	A main policy that provides for the establishment, control and management of national parks as a tool for the conservation, protection, and enhancement of wildlife ecosystems and biodiversity.
	National Forestry Policy	The principal policy that provides a framework for sustainable forest management to enhance forest products and services, contributing to mitigation of climate change, income generation, poverty reduction, job creation and protection and maintenance of biodiversity.
	National Policy on Environment	An overarching policy that provides a framework for the management of Zambia's environment and natural resources to achieve sustainable development.
Strategy/Action Plans	Zambia's Second National Biodiversity Strategy and Action Plan	The principal strategy for the implementation of national conservation commitments and domestication of international environmental frameworks.

Park documents

The final level was an examination of Zambia's national park management plans and reports against the 11 IUCN PMPs. These included the management plans under which Zambia's national parks are being managed and the annual reports on the performance of the parks. A comprehensive search for park management plans and annual reports was undertaken with the help of staff in the Department of National Parks and Wildlife in Zambia, email and phone contacts with Park Wardens and Managers and staff in

projects and private organisations operating in Zambian national parks. These individual contacts were made because not all the national management plans and annual reports were available online or at the Department of National Parks and Wildlife.

A total of nine management plans, six annual reports (all from of the Kafue National Park) and five consolidated annual reports (from the, then, Zambia Wildlife Authority which is now the Department of National Parks and Wildlife) were accessed. The search for park management plans and annual reports revealed that a comprehensive set of park annual reports from the different parks, with progress on agreed targets which reflect the extent to which the park management plan objectives have been achieved, are not regularly filed. Of the 20 national parks in Zambia, only Kafue National Park was found to have filed annual reports over the past five years. For most of the parks, the annual reports were either not filed or not completed. Six national level annual reports were found. These included the *Zambia Wildlife Authority Consolidated Annual Reports* for the years 2011, 2012, 2013, 2014 and 2015 and the *Department of National Parks and Wildlife Annual Report* for 2016. While these six 'consolidated' annual reports were found at the national level, they were limited in terms of content and application because they did not include information on each of the parks. As such, these reports could not provide a sound basis for examining how Zambia's national parks are performing in general, and could therefore, not be used in this study.

Because the annual reports found proved to be unsuitable, another source of data had to be identified from which evidence of implementation of the IUCN principles in Zambia's national parks could be derived. The Management Effectiveness Tracking Tool for Protected Areas in Zambia (METTPAZ) report (GRZ, 2007a) provided the most comprehensive information on the performance of each of the national parks in Zambia. The METTPAZ was a nation-wide study conducted in 2007 "to develop baseline information on the management effectiveness of Zambia's protected areas system against which progress can be measured", undertaken by the then Zambia Wildlife Authority (ZAWA) and the United Nations Development Programme (UNDP) (GRZ, 2007b, p. xv). The METTPAZ was carried out based on IUCN-WCPA framework for

Protected Areas Management Evaluation Assessments (Hockings et al., 2008). The IUCN-WCPA framework comprises a set of 30 questions that assess the key elements of protected area management (context, planning, inputs, process, outputs and outcomes). Furthermore, the 2007 METTPAZ report presents data on 19 of the 20 national parks in Zambia (excluding Lusaka National Park which was established in 2014) and 35 game management areas. It provided detailed information on the performance of each of Zambia's national parks and was informed by field research and expert opinion including working group discussions, training workshops, and consultations with stakeholders at national and site level. As such, the 2007 METTPAZ report provides in-depth information on the performance of Zambian national parks that could be used to examine how the 11 IUCN PMPs are applied in practice. A full list of the park level documents used in this study is shown in Table 5.4.

In addition to the main data sources outlined above, this study also drew on other documentary data to provide a more comprehensive understanding on the studied national park laws, policies, plans, and reports. For instance, various national reports describing the socio-cultural, economic, political and historical contexts within which the laws, policies and plans are produced, were drawn upon to contextualise and discuss the research results (see Chapter Nine).

Table 5.4 *Types and descriptions of park level documents examined for objectives (iii) and (iv)*

Document Type	Document Name	Description
Management Plans	Blue Lagoon National Park GMP 2004 - 2014	A management plan providing the general framework for tourism development, community participation, public-private partnerships, joint-management, and natural resource conservation for the Blue Lagoon National Park.
	Kafue National Park GMP 2011 - 2022	A management plan providing the framework for tourism development, community participation, public-private partnerships, joint-management, and natural resource conservation for the Kafue National Park.
	Lochinvar National Park GMP 2005 - 2015	A management plan providing the general framework for tourism development, community participation, and conservation of both natural and cultural resources inside and outside the Lochinvar National Park.
	Lower Zambezi National Park GMP 2008 - 2018	A management plan prescribing the necessary management objectives, zoning scheme and management actions aimed at achieving a balance between the conservation of biodiversity and the non-consumptive use of wildlife resources in the Lower Zambezi National Park
	Lusaka National Park GMP 2005 - 2015	A management plan that provides guidelines for the management and tourism development for the Lusaka National Park.
	Lusenga Plains National Park GMP 2010 - 2020	A management plan representing the strategic management investment plan and budget for the management, use, and development of Lusenga Plains National Park.
	Mweru-Wa-Ntipa National Park GMP 2010 - 2020	A management plan providing the management and development philosophy of Mweru-Wa-Ntipa National Park.
	North Luangwa National Park GMP 2004 - 2014	A management plan which sets forth the basic management and development philosophy of North Luangwa National Park and provides the strategies for solving the problems and identified management objectives of the park.
	Nsumbu National Park GMP 2010 - 2020	A management plan providing the guidelines for the conservation and management of natural resources, tourism development, and community participation in natural resource management for Nsumbu National Park.
Annual Reports	Annual reports for the Kafue National Park (2005 – 2011)	Six Annual reports on the activities undertaken in Kafue National Park for the years 2005, 2006, 2007, 2008, 2010, and 2011
General Reports	Management Effectiveness Tracking Tool for Protected Areas in Zambia, 2007	A report on the management effectiveness of Zambia's protected areas based on the six management components of the IUCN-WCPA Framework.

GMP = General Management Plan

5.3.2. Exploration stage

The exploration stage involves defining the unit of analysis, i.e. the smallest part of the content in which an element can be identified. That is, the portion of text to which the code is associated (Bardin, 2011). The unit of analysis can be a word, paragraph or theme. Besides the unit of analysis, the exploration stage involves defining the codes. The codes may arise from reading the text, which are called in-vivo codes, but may also be defined based on the literature, known as constructed code, or a combination of these two types.

In this study, the key words relevant to each key principle were iteratively built and used as the unit of analysis while the coding categories (codes) were derived from literature (existing theories or practices). The 11 IUCN PMPs identified in Chapter Four were used as the coding categories. The processes used to build a final list of key words and the develop an analytical framework based on the 11 IUCN PMPs are elaborated below:

Selection of keywords

To build a reliable keyword list, several tools and techniques were applied. The possible keywords that refer to each of the IUCN PMPs were generated by:

- Reviewing the definitions and the key features of each of the IUCN principles to figure out an initial list of possible keywords.
- Using the keywords in the initial list to look for related terms and semantic relationship to identify more keywords.
- Searching the documents for each of the identified keyworks and utilizing the surrounding words to understand the underlying meaning of the keyword.
- Reading through the text and selecting the most relevant and applied keywords. Each keyword was considered relevant if it was discussed in relation to the IUCN principle being considered.

Developing the analytical framework

An important requirement for thematic content analysis is that a coding frame, with sufficiently precise and mutually exclusive categories, is developed to limit the subjectivity of the coder throughout the coding process (Feltham-King & Macleod,

2016). Thus, criteria of what the categories entail are important to guide the coding process. Neuendorf (2002) refers to such a researcher-developed guide as a content analysis codebook. It is a specialised dictionary which defines the words and phrases pertinent to a study to ensure consistent content analysis during the coding process.

Since there was not an existing framework for the examination of the key PMPs, an analytical framework with a set of criteria for describing each of the 11 IUCN PMPs was developed (Table 5.5). The framework specified each key principle, their key features, and indicators identified from different IUCN guidelines on protected areas management. Principles are, herein, defined as rules or theories that something is based on. The key features of a principle refer to the essential elements that must be present to operationalise a given principle and indicators refer to the quantitative or qualitative signs or measures that can be used to shows whether any given principle is present or not. The analytical framework also included key words relevant to each key principle. Together, these components of the framework allowed a systematic examination of the laws, policies, management plans, and reports against the 11 IUCN PMPs. The development of the analytical framework went through several iterations and the final format used is shown in Table 5.5.

Table 5.5 *Analytical framework for examining national park laws, policies and management plans*

Key Principle	Operational Definition	Key Features	Objectives & Targets	Indicators	Key Words for Search
Perpetual integrity	Securing long term conservation status of an area using the best available means (Lausche, 2011).	• Secure conservation status over the long term • high policy-level designation	Ensure the long-term conservation status of a protected area.	Presence of an official declaration of protected area status obtained at the appropriate level	Perpetual, perpetuity, integrity, long-term,
		• Clearly defined land tenure rights	Develop a legal framework of the park that provides for secure land tenure arrangements and support and participation by stakeholders.	Reference to resolve land tenure conflicts	
System Planning	An organised way of carrying out macro-level conservation planning for protected areas (Lausche, 2011).	• Plan within ecosystem/large-scale context including connectivity needs	Management actions are carried out at the appropriate spatial and temporal scales to conserve and restore ecosystem structures and their functioning, and their connectivity needs.	Mention of spatial and temporal scales of treatment and the relationships between protected areas and other relevant categories of land	Ecosystem, integrated, holistic, comprehensive, large-scale, ecological, social and economic impacts
		• Long-term science-based system planning	Conservation of ecosystem structures and their functioning and key processes are emphasised to maintain ecosystem goods and services. And support connectivity needs	Mention the use of scientific knowledge	
		• Consider multiple, complex ecological, social and economic interactions that occur within an area	Multiple, complex interactions that occur within the park are considered, including interests and activities of other government sectors and affected communities and the public.	Mention of ecosystem connectivity opportunities and needs	

Table 5.5 *Analytical framework for examining national park laws, policies and management plans (Continued)*

Key Principle	Operational Definition	Key Features	Objectives & Targets	Indicators	Key Words for Search
Management by conservation objectives	The principle that management of a specific protected area should be in accordance with the goals and objectives for which the site was designated (Lausche, 2011).	• Recognition that the management should be in accordance with the goals and objectives for which the site was designated.	Ensure that management is in accordance with the goals and objectives for which the site was designated.	Mention of the goals and objectives for which the site was designated	Management categories, conservation objectives
		• Recognition of the IUCN management categories as way to translate conservation objectives for management	Ensure that sites recognised as part of the national system are assigned one of the defined IUCN management categories.	Mention of the management zones and land use patterns that conform to the established zones	
Management plans	Setting realistic but flexible goals, building mechanisms for achieving them including a framework for decision-making to apply in a protected area over a given period (IUCN, 2011).	• Clear description of the requirements for the plan development process	A basic description of the key requirements to consider including with respect to the process of plan preparation and approval	Existence of management plans	Management plan(s)
		• Clear monitoring & evaluation plan	Performance for monitoring and evaluating progress toward goals and objectives, and effectiveness of specific management approaches are provided in the management plan.	Presence of monitoring and evaluation plan	
Precautionary principle	A duty to foresee and assess environmental risks, to warn potential victims of such risks, and to behave in ways that prevent such risks (UN, 1992).	• High standard of proof requirements including placing the evidentiary burden on proponents	Requirement of unambiguous evidence that an activity will not cause harm before allowing it to proceed and requirements for proponents of potentially harmful activities to demonstrate that such activities are safe or acceptable, rather than those opposing the activities being required to argue that they are harmful.	Mention of approaches that demand high standard of proof from development proponents	Precaution, risk, uncertainty, prevention
		• Adaptive management	Integration of park design, management, and monitoring to provide a framework to systematically test assumptions, promote learning, and supply timely information for management decisions.	Mention of the use of adaptive management	

Table 5.5 *Analytical framework for examining national park laws, policies and management plans (Continued)*

Key Principle	Operational Definition	Key Features	Objectives & Targets	Indicators	Key Words for Search
Management of invasive Alien Species	Preventing the introduction of, and controlling species, sub-species or lower taxa, (including any part, gametes, seeds, eggs, or propagules of such species), introduced outside their natural past or present distribution and whose introduction and/or spread threaten biological diversity (Shine et al., 2000; CBD, 2002).	• Recognise the threat of invasive alien species	Enhanced database on the invasive behaviour or invasive potential of species is available and shared with other stakeholders.	Mention of and information on invasive alien species	Invasive alien species
		• Prevent the intentional or accidental introduction of Invasive alien species	Site specific management strategies to mitigate (prevention, early detection and rapid response) against the threats of alien species within and around the national park are undertaken (removal and discouragement of introduction of IAS).	Presence of IAS control strategies	
Management of climate change	Adaptation to and mitigation of climate change and its predicted impacts, including changing and more extreme patterns of drought, storms and flooding, changes in the ecosystem distribution and quality, and the implications of these for species survival in protected areas (IUCN, 2010).	• Clear objectives, targets and management strategies	Develop specific goals and objectives for improving climate resilience.	Mention of climate change	Climate change, adaptation, mitigation
		• Recognition of the threat of climate change	Develop control strategies to address the degree of exposure and sensitivity that species and systems face under different climate change scenarios.	Presence of climate change adaptation and mitigation goals and measures	
Taking an international perspective	Considering the relative restrictiveness compared with other countries, and how harmonised the management is with international norms, especially across borders with shared resources or ecosystems, when considering the long-term success of in-situ conservation at the national level	• Regional and global coordination and collaboration	The park management is effectively connected with governing bodies at different levels of governance.	Presence of goals to promote regional and global collaboration	International, global, regional
		• Recognises compliance with global and regional conventions as essential	The park management's direction and actions are consistent with directions set by higher-level governance authorities.	Presence of goals that promote compliance with regional and global conventions	

***Table** 5.5 Analytical framework for examining national park laws, policies and management plans (Continued)*

Key Principle	Operational Definition	Key Features	Objectives & Targets	Indicators	Key Words for Search
Good governance	A system of values, policies and institutions by which a society manages its economic, political and social affairs through interactions within and among the state, civil society and private sector (UNDP, 2007).	• Accountability	The park management and staff have clearly defined roles and responsibilities that incorporate explicitly applying good governance principles.	Existence of staff roles, reporting and answerability mechanisms	Governance, Accountability, performance, transparency, accountability, subsidiarity
		• Performance	Increase cost effectiveness in the achievement of objectives and accountability from high policy level to field level	Mention of staff requirements for wise-use of park resources	
		• Transparency	Governance and decision making are open to scrutiny by stakeholders and have mechanisms for feedback	Presence of goals that promote information disclosure to all stakeholders	
		• Subsidiarity	Develop mechanisms for sharing authority and resources and devolving or decentralising decision-making authority and resources where appropriate.	Management of park by local institution	
Public participation	Facilitating and encouraging public awareness and participation by making information widely available and providing effective access to judicial and administrative proceedings, including redress and remedy (UN, 1992).	• Participation in decision-making processes	Increase or enhance local community representation in park management board.	Mention of public participation in decision making	Participation, involvement, consultation, collaboration, community, public, citizen, stakeholders
		• Co-management partnerships	Create co-management partnerships with community-based organisations.	Existence of co-management partnerships	
		• Meaningful access to information	Information on the governance of the park is available and accessible to all stakeholders in a meaningful and timely manner.	Existence of mechanisms that facilitate access to information	
Social equity and justice	Building mechanisms for fair distribution of the benefits and costs of conservation among different social groups and individuals and recognition of their rights, interests, concerns and grievances (IUCN, 2000).	• Maintenance of livelihood opportunities	Enhance community involvement in compatible resource use.	Reference to access and benefit/cost sharing	Social equity, benefit sharing, fair distribution, dispute resolution
			The equitable distribution of the benefits and costs of decisions and actions identified and considered.	Existence of dispute resolution mechanisms	
		• Effective dispute resolution mechanisms	Establish mechanisms to ensure stakeholders have legal recourse if their rights are violated.	Presence of goals that promote access to resources	
		• Intra- and intergenerational equity	The needs of future generations are considered.	Reference to the needs of future generations	

5.3.3. Interpretation stage

The interpretation stage involves coding the data and drawing inferences from it (Bardin, 2011). It connects the knowledge learned through the coded data from the documents to how it relates with the phenomena of the researcher's interest. In this study, two main tasks were undertaken in the interpretation stage: Data coding based on the analytical framework (Table 5.5) and data analysis (quantitative and qualitative).

Data coding

Coding is "a way of indexing or categorizing the text in order to establish a structure of thematic ideas in relation to it" (Gibbs, 2009, p.60). A deductive approach, in which categories are derived from existing theories or practices (Krippendorff, 2004), was carried out on the relevant Zambian documents using, as an analytical framework, a set of 11 IUCN PMPs identified in Chapter Four. The coding was performed based on the key feature, indicators and the list of synonymous words or expressions as provided in the assessment framework (Table 5.5). Because the study analysed different types of documents (legislation, policies, strategic plans), which are used at different levels of government, and are unique in terms of structure and level of detail, it was difficult to provide generic coding method/process that would be suitable for assessing the different documents. Thus, the coding processes used were not always distinct steps; they were often iterative throughout the research process.

Coding software

NVivo 11 Pro software, a qualitative data analysis computer software package, was used to facilitate the data storage, coding and analysis (QSR International®, 2017). NVivo 11 Pro software has useful analytical functions (such as Query wizard, Text search, Word frequency, Coding matrix, Link, and Model) which generate data in a form that can facilitate qualitative and quantitative analyses (Cong, Wu, Morrison, Shu & Wang, 2014).

Data analysis

Legislation, policies, management plan and reports are written documents, and they can be studied through thematic content analysis. The data analysis involved quantitative and qualitative analyses. The quantitative analyses included enumerating the frequency

with which each of the IUCN principles occurred in each document. The IUCN principles, their key features and/or key words (i.e. words intended to represent the fundamental ideas captured by the principles) were used as the search words. Carvalho and Burgess (2005) argue that the volume coverage of an issue within any channel of communication such as written text or broadcast media provides an important indication of the attention given to it. Therefore, content was extracted from Zambia's national park laws, policies, management plans and reports either verbatim (relying on the explicit mentioning of each of the key principles) or through interpretation and was compiled into a database and organised into themes based on the 11 IUCN PMPs. This allowed a more detailed quantitative analysis of text relevant to each of the key principles.

The coded data were also qualitatively analysed to provide a deeper understanding of how the 11 IUCN PMPs are embedded, replicated or transformed in the national and sub-national level documents. This involved reading repeatedly the surrounding content (text) of every coded word in each document to determine how each coded word was situated within the text. Emphasis was placed upon sections of the surrounding text that expressed action or being (verbs) accompanying the coded words to examine how their constructions favour and/or inhibit action. The qualitative analysis also focused on the following aspects:

i. *Intertextuality* - Intertextuality refers to the condition whereby all communicative events (such as text) draw on earlier events (Fairclough, 2010). In this study, this step involved comparing how the coded references of the 11 IUCN PMPs in the national laws, policies and plans draw on the texts from IEAs and organisations. By comparing how the IUCN principles are constructed/reflected in national and local level documents relative to how they are framed in international documents, an analysis of how they are replicated was conducted.

ii. *Definitions* – Definitions reveal the discursive power of language. According to Hovden and Lindseth (2004), the way in which the content of a text is presented

to its audience is of relevance to understanding of the text. Therefore, in this study, definitions of the 11 IUCN PMPs provided by the IUCN were used as a standard against which to compare how they are interpreted in national and local level policy documents.

iii. *Silences* - Silences or omissions in the definitions were also examined. Carvalho and Burgess (2005, p. 1462) argue that it is important to consider "silences", that is, what is not addressed within each discourse. To this end, the qualitative analysis included examining how the various documents constructed, integrated and/or omitted the IUCN PMPs. The goal was to expose what the legislative and policy texts omit or suggest rather than what they appear to display in terms of the IUCN principles (Armstrong, 2003).

This process of reading the laws and policies to identify the principles or their features involved an iterative process of considering how each principle was coded in the documents. Emphasis was placed on the key features of the principles, looking for orientations, co-existence, and dominance of features. This qualitative analysis provided insight into aspects of the principles that are presently the statutory responsibility of national level structural units and those not presently addressed within the national and local level documents.

To obtain a relative measure of occurrence, the identified references to each of the IUCN principles were also classified based on whether (or not) they were linked to action steps. A 'traffic light' colour coding system was also used to show the different classifications:

Green = principle mentioned along with the required action steps

Amber = principle mentioned but action steps missing

Red = principle not mention.

This system facilitated visual examination and comparison of how the principles are reflected in each of the documents.

Furthermore, the results of quantitative and qualitative analyses were contextualised based on the researcher's professional experience, critical reflections, and review of academic literature. This involved reviewing the institutional and organisational circumstances through which the policy documents were developed and their constitutive effects. This part of the analysis focused on the following aspects:

i. *Analysis of the extent to which rhetoric matches practice* – This analysis focused on examining how the implementation of the key international principles of national park management is reported at the park level. Excerpts from park management plans and reports that shed light on the implementation of international principles in national parks were analysed. What is planned in the park managements with respect to the international principles plans was compared to what is implemented as reported in the national park annual reports and management planning reports, particularly the Management Effectiveness Tracking Tool for Protected Areas in Zambia (METTPAZ) report (GRZ, 2007a) (see Chapter seven).

ii. *Explanation of the outcomes based on contextual factors* - This analysis drew on the outcomes of the previous two phases and the contextual factors surrounding national policy making in Zambia to explicate in detail why Zambia's national park laws, policies, and management plans reflect the international PMPs the way they do. By considering factors of economic, social, political and/or historical significance, important observations were made that helped explain, for example, why texts privilege some specific sets of international principles over others, emphasise some aspects and/or omit the others.

The analyses performed in this interpretation stage continued throughout the writing of the results and discussion chapters, with constant referencing back to the research objectives, and discussions with the research supervisory team to mitigate any bias. The researcher's experience in the natural resources sector in Zambia provided insight and

understanding that facilitated a more comprehensive explanation of why Zambia's national park laws, policies, and plans respond to IUCN PMPs the way they do.

In summary, the thematic content analysis employed in this study used a deductive approach where the researcher approaches the data looking for segments of text that correspond with research questions, concepts, or themes (Krippendorff, 2004). The deductive themes (IUCN principles) were derived from the analytical framework shown in Table 5.5 and the presence and absence of these themes in the policy documents were documented.

A total of 40 documents were quantitatively and qualitatively analysed with 17 of them representing the international level, 7 the national level, and 16 the sub-national (park) level. The quantitative and qualitative analyses involved the following steps:

- Careful reading of each document page and systematically coding all words that could be associated with any of the 11 IUCN PMPs using the analytical framework shown in Table 5.5. The analytical framework specified each of the IUCN principles based on their key features and/or key words (i.e. words intended to represent the fundamental ideas captured by the principles).
- Organising the coded content (references to each of the IUCN principles) in a database.
- Closely examining the coded data where one stands back and looks at how the coded words are situated within the surrounding text in order to understand the context within which they are used.
- Reading through the surrounding content of every coded word and categorising the coded data based on whether (or not) they are linked to specific measures or action steps.
- Categorising the coded words into two groups:
    (i) references that mention and link a principle with goals, objectives or action steps; and
    (ii) references that mention a principle but without goals or action steps.

- Interpretation of results based on the researcher's critical reflections and review of academic literature.

5.4. Limitations of the study method

Limitations occur for all studies, and owing to the nature of this study, the following limitations are acknowledged:

(i) The study relies solely on secondary and publicly available documents. Therefore, the results were interpreted and used within the constraints and boundaries placed by available data and information and the approach taken to analyse them. Future research could utilise other methods, such as interviews and questionnaires, to gain more knowledge on how national level laws, policies and plan respond to international principles for national park management.

(ii) The data were coded by one person and the analyses then discussed with a panel of supervisors. The primary coding process allowed for consistency in the coding of the data but failed to provide multiple perspectives from a variety of people with differing expertise. Future studies could involve several individuals to code the data, with themes being developed using discussions with other researchers and/or experts to gain multiple perspectives.

5.5. Research ethics

This study was desk-based. The units of analysis were lines of texts from national park laws, policies and plans, supplemented by local and international literature. These documents were all available from government ministries and websites. Therefore, no contact with human research subjects was involved. As such, the conventional ethical standards required in studies involving live research participants did not apply to this study. Nevertheless, two major ethical considerations were observed: the appropriateness of the researcher's behaviour in connection to his dual roles as a government official and as a researcher and care to avoid plagiarism. Regarding the former, precaution was taken to avoid any potential conflict of interest by ensuring that permission was obtained in case of a need to draw on documents that were not available

in the public domain and/or were accessed by the researcher in his prior role (for the purpose of his job as opposed to his position as researcher). In this regard, a low risk ethical application was made to the Massey University Human Ethics Committee (MUHEC) and approval was granted in August 2016 (Appendix B). Even so, all the documents used were publicly accessed. To address the latter concern, precaution was taken to avoid plagiarism and ensure the required intellectual integrity by clearly citing the sources of ideas and materials referred in the course of the study; paraphrasing texts and ideas and acknowledging the source(s); reproducing exact quotes of ideas that are of central importance and duly acknowledging the source(s); and presenting a full list of references.

5.6. Conclusion

This chapter presented the research method and strategy adopted to collect and analyse the data used in this study. It supports the combined use of a literature review, thematic content analysis and the researcher's critical reflections to address the research aim and objectives set in this study. The use of quantitative and qualitative analysis techniques within the thematic content analysis facilitates a complete and synergistic utilisation of data, strengthening the research results. The data sources and data coding and analyses processes were also detailed.

Another important goal of this chapter was to present an analytical framework for examining national park laws, policies, management plans, and reports. Drawing on existing literature, an analytical framework, specifying 11 IUCN national park management principles and the key features, indicators and key words that are associated with each of the 11 IUCN principles, was presented. The analytical framework offers an assessment tool for comparing national level policy documents against a set of global principles to address normative questions on policy transfer, revealing how policy documents may be amended and examining the degrees of policy alignment among policy documents used at different governance levels. The next three chapters present the results from the examination of Zambia's national park laws, policies, management plans, and reports.

CHAPTER 6. RESULTS: ALIGNMENT OF ZAMBIA'S NATIONAL PARK LAWS, POLICIES AND NATIONAL LEVEL STRATEGIC PLANS WITH THE IUCN PARK MANAGEMENT PRINCIPLES

6.1. Introduction

National level laws, policies and strategic plans are the foundation upon which practice is built. In the case of Zambia's national parks, a thorough knowledge about the uptake of international park management principles in its laws, policies, and national level strategic plans could contribute to strengthening the integrity and long-term success of Zambia's national park system. This current chapter, which is the first of three results chapters, presents quantitative and qualitative results from an examination of Zambia's national park laws, policies and national level strategic plan in relation to a selected set of IUCN park management principles (PMPs).

Chapter Five detailed the methods which were employed to analyse and interpret the content of Zambia's national park laws, policies, management plans, and reports. These methods include an analytical framework, comprising the 11 IUCN PMPs (Table 5.5), which was employed to guide the coding of the Zambian national park documents examined in this study.

This chapter is divided into four sections. This introductory section (6.1) is followed by a section (6.2) which presents an overview of the observations about the frequency with which the IUCN PMPs in Zambia's laws, policies, and strategic plan, and the results of the analysis undertaken. The third section (6.3) presents a detailed examination of the results pertaining to how Zambia's laws, policies and strategic plan interpret each of the IUCN PMPs. The final section (6.4) concludes the chapter by providing a summary of remarks concerning the key findings.

6.2. Data and findings

6.2.1. Data

A total of seven Zambian documents (three Acts (laws), three policies, and one national level strategy/action plan) were identified as key documents for this study as they include provisions for the management of national parks. There were 470 pages of text contained within the seven documents from which a total of 391 references were coded with respect to the 11 IUCN PMPs. A list of the Zambian national level documents used in this study is shown in Table 5.4.

6.2.2. Data analysis

Inclusion of reputable and internationally recognised principles in a country's laws, policies, and strategic plans can be taken as support for their legal status and help distil and explain those laws, policies, and plans (Martin, Boer & Slobodian, 2016). In addition, a foundation of such principles may help policymakers, practitioners and other stakeholders to understand and appreciate the basis of a country's legal and policy framework (Lausche, 2011).

One possible measure of the degree to which a country's legal and regulatory mechanisms reflect relevant international principles is by enumerating the frequency with which references that address the relevant principles appear within the laws, policies and plans. To illustrate, Krippendorf (2004, p. 62) asserts that "the frequency with which an idea, topic or concept occurs in a stream of messages is taken to indicate the importance of, attention to, or emphasis on that idea, topic or concept". In relation to the environment, Houghton (2014) suggests that internationally recognised environmental principles provide a highly effective means of structuring state practice, amplifying existing international commitments, and providing a basis for international organisations to maximise their mandates in favour of the environment when guiding the implementation of international frameworks. To apply this measure in the present study, a thematic content analysis was carried out on the relevant laws, policies, and

national level strategic plan using, as an analytical framework, the set of IUCN PMPs identified in Chapter Four.

In Chapter Five, the processes by which this thematic content analysis was performed are described in detail. However, to summarise, the selected documents were subjected to two phases of content coding:

i. The first phase involved reading each document and systematically coding all words that could be associated with any of the IUCN park management principles using the analytical framework shown in Table 5.5.

ii. Reading through the surrounding content of every coded word and categorising them based on whether (or not) they are linked to specific measures or action steps.

These two phases focused on generating descriptive statistics that were used to quantitatively show the extent to which each of the IUCN principles is reflected and linked to action steps in the national park documents. Furthermore, the coded data were qualitatively analysed to ascertain, interpret and explain the quantitative results. The results are tabulated using numeric values and a 'traffic light' colour coding system (green, amber and red) to provide a visual overview of how the IUCN PMPs appear in the national level documents.

6.3. Results

This chapter provides an overview of the data regarding references of the indicators of the IUCN park management principles (PMPs) across Zambia's national park laws, policies and national level plan. These data show an awareness of the IUCN PMPs across the national level documents. At the same time, the data shows that the policy documents are largely void of explicit definitions and action steps to translate the IUCN principles into practice. While there is an awareness of the park management principles expressed at the global level, progress towards their transfer into national level policy documents is marginal.

The evidence reveals marked variation in how the Zambian national level park laws, policies, and strategic plan reflect the IUCN park management principles (PMPs). From the example of the seven national level documents examined in this study, the National Policy on Environment (2007) and the National Forestry Policy (2014) more closely reflect the IUCN PMPs than the other documents. These two policies have the highest percentage of indicators for the IUCN PMPs mentioned with action steps: 46% for the National Policy on Environment (2007) and 43% for the National Forestry Policy (2014). Compared to the other national level documents, the National Policy on Environment (2007) and the National Forestry Policy (2014) perform well in terms of incorporating indicators for the good governance, social equity and justice, and management of invasive alien species principles.

Furthermore, when all the seven national level documents and 11 IUCN park management principles are considered together, the results show that only three of 11 IUCN PMPs are 'reasonably structured' and integral across the documents. These include public participation, management plans, and taking an international perspective. These three principles are, to a large extent, mentioned with action steps across all the documents and hence, show a high combined performance score (by number of indicators mentioned with action steps across the documents); they are well recognised and can be said to be given the most attention by the policymakers at national level. The remaining principles (e.g. social equity and justice, management of

climate change, and good governance) are in most cases either mentioned without any action steps or not mentioned at all. These principles show a low combined performance score and can be said to be given the least attention by policymakers at the national level.

The results also demonstrate limited horizontal alignment between the laws, policies, and national level plan in relation to the uptake of the IUCN park management principles. There is hardly a case where any of the indicators for the 11 IUCN PMPs is exhaustively and consistently reflected across all the laws, policies, and plan.

At the same time, the interpretation of the IUCN PMPs within the seven documents is not always consistent with how they are defined by the IUCN. Of the 11 IUCN PMPs, only four (management plan, the precautionary principle, management of invasive alien species, and climate change) are explicitly defined across the documents. This is problematic regarding the coordination of actions at subsequent levels and consequently, the sustainability of Zambia's national park system.

When overarching principles, such as those suggested by the IUCN, are not explicitly defined or mentioned as the basis for national park management, it is less likely that the laws, policies and national level strategic plans would provide a strong foundation for national park management. Therefore, the fact that most of the IUCN principles are not explicitly defined and/or mentioned across the Zambian national level documents suggest that that the basic legal, policy, and national strategic plan responses to the IUCN principles are, at this point, uneven and insufficient. Consequently, if the assumption that increased coverage of international principles enhances the potential to successfully manage national park systems, greater effort is needed to align Zambia's national level laws, policies and plans with international principles. Table 6.1 provides support for these findings.

Table 6.1 Rating of Zambian national park policies, laws and national level strategic plan against selected IUCN park management principles

Key

= IUCN principles mentioned in the documents along with required action steps
= IUCN principles mentioned in the documents but action steps missing
= IUCN principles not mentioned in the documents
The numbers in each circle = the frequency of reference(s) to the IUCN principles

IUCN Principles	Key Features	Indicators	Policies			Indicator Mode	Laws			Indicator Mode	Plan	Overall Score(s)*			Combined Performance of Policies, Laws & Plan (Mode)
			PNPW	NPE	NFP		ZWA	FA	EMA		NBSAP				
Perpetual Integrity	Secure conservation status over the long term demonstrated through high policy-level designation	Presence of an official declaration of protected area status obtained at the appropriate level	2				3	3				0	3	4	
		Reference to resolve land tenure conflicts					4	3				2	0	5	
Mode												**2**	**3**	**9**	
System Planning	Plan within ecosystem/large-scale context	Mention of spatial and temporal scales of treatment and the relationships between protected areas and other relevant categories of land	1	3	2		2	2	3		5	0	7	0	
	Long-term science-based site planning	Mention the use of scientific knowledge			1							0	1	6	
	Consider multiple, complex interactions that occur within an area	Mention of ecosystem connectivity opportunities and needs										0	0	7	
Mode												**0**	**8**	**13**	
Management by Conservation Objectives	Recognition that management should be in accordance with the goals and objectives for which the site is established	Mention of the goals and objectives for which the site was designated	4		1		1					0	3	4	
	Recognition of the IUCN management categories	Mention of the management zones and land use patterns that conform to the established zones	1		1							0	2	5	
Mode												**0**	**5**	**9**	
Management Plans	Clear objectives, and management strategies within given timeframes	Mention of management plans	7	4	3		9	15	5		6	5	2	0	
	Guidelines on the preparation and content of management plans	Information on the preparation and content of management plans	8		1		4	7				4	0	3	
Mode												**9**	**2**	**3**	

Table 6.1 *(continued)*

IUCN Principles	Key Features	Indicators	Policies			Indicator Mode	Laws			Indicator Mode	Plan	Overall Score(s)			Combined Performance of Policies, Laws & Plan (Mode)
			PNPW	NPE	NFP		ZWA	FA	EMA		NBSAP				
Precautionary Principle	Placing the evidentiary burden on proponents and high standard of proof requirements	Mention of approaches that demand high standard of proof from development proponents		3	2			2	2		1	3	2	2	
	Adaptive management	Mention of the use of adaptive management							3			1	0	6	
Mode												**4**	**2**	**8**	
Management of Invasive Alien Species	Recognise the threat of invasive alien species	Mention of and information on invasive alien species	1	2	1			1	3		3	2	4	1	
	Prevent the intentional or accidental introduction of Invasive alien species	Mention of IAS control strategies							5		3	2	0	5	
Mode												**4**	**4**	**6**	
Management of Climate Change	Recognition of the threat of climate change	Mention of climate change		3	6			1	2		5	3	2	2	
	Clear objectives, targets and management strategies	Mention of climate change adaptation and mitigation goals and measures		3	7						5	3	0	4	
Mode												**6**	**2**	**6**	
Taking an International Perspective	Regional and global coordination and collaboration	Mention of the need to promote regional and global coordination and collaboration	1	1	1		7	5	6		5	4	3	0	
	Recognises compliance with global and regional conventions as essential	Mention of goals that promote compliance with regional and global conventions	2	18	4		5		7			5	0	2	
Mode												**9**	**3**	**2**	
Good Governance	Accountability	Mention of staff roles and responsibilities, and reporting and answerability mechanisms	1	1							1	2	1	4	
	Performance	Evidence of staff requirements for wise-use of park resources					2		5			2	0	5	
	Transparency	Evidence of goals that promote information disclosure to all stakeholders		1	1			1				1	2	4	
	Subsidiarity	Evidence of management of park by local institution		1								1	0	6	
Mode												**6**	**3**	**19**	

Table 6.1 *(continued)*

IUCN Principles	Key Features	Indicators	Policies			Indicator Mode	Laws			Indicator Mode	Plan	Overall Score(s)			Combined Performance of Policies, Laws & Plan (Mode)
			PNPW	NPE	NFP		ZWA	FA	EMA		NBSAP	🟢	🟡	🔴	
Public Participation	Participation in decision-making processes	Evidence of goals that promote local participation	3	20	1		6	7	15		6	6	1	0	
	Co-management partnerships	Mention of co-management partnerships	2	9	7		2					4	0	3	
	Access to information	Goals that promote access to information	1	6	1				2			3	1	3	
Mode												**13**	**2**	**6**	
Social Equity and Justice		Reference to access and benefit/cost sharing	2	6	3		2	2	3		1	5	2	0	
	Community access to resources, equitable distribution of conservation costs and benefits	Reference to dispute resolution mechanisms			1			1			9	3	0	4	
		Mention of goals that promote access to resources		4								1	0	6	
	Intra- and intergenerational equity	Evidence of mechanisms that address the needs of future generations			1							1	0	6	
Mode												**10**	**2**	**16**	
											Scores for combined policies, laws and plan	**63**	**36**	**97**	

Distribution of frequencies									
Frequency with which the 28 indicators for the IUCN principles are mentioned and action steps assigned	7 (25%)	13 (46%)	12 (43%)		9 (32%)	6 (21%)	8 (29%)		8 (29%)
Frequency with which the 28 indicators for the IUCN principles are mentioned but goals or action steps missing	7 (25%)	3 (11%)	7 (25%)		3 (11%)	7 (25%)	5 (17%)		4 (14%)
Frequency with which the 28 indicators for the IUCN principles are not mentioned	14 (50%)	12 (43%)	9 (32%)		16 (57%)	15 (54%)	15 (54%)		16 (57%)
Performance of individual policies, laws, and plan (Mode)	🔴	🟢	🟢		🔴	🔴	🔴		🔴

PNPW = Policy for National Parks and Wildlife (1998)
NPE = National Policy on Environment (2007)
NFP = National Forestry Policy (2014)
ZWA = Zambia Wildlife Act (2015)
FA = Forests Act (2015)
EMA = Environmental Management Act (2011)
NBSAP = National Biodiversity Strategy and Action Plan (2015)
*Overall score(s) = Summation of scores for each of the IUCN principles across the documents

6.3.1. IUCN principles and Zambia's national park laws, policies and strategic plan

Table 6.1 provides a summary of the results showing the extent to which Zambia's national park laws, policies, and national level strategic plan reflect the IUCN PMPs. The table shows a total of 196 red, amber or green circles (hereafter referred to as 'traffic lights') set out in rows across the seven national level documents in relation to the 28 indicators within the 11 IUCN PMPs. Of these, the 65 green traffic lights (33%) indicate the existence of references that mention the IUCN PMPs along with action steps across the documents while the 37 (19%) amber traffic lights indicate the existence of references that mention the IUCN PMPs but do not include any action steps which may facilitate implementation. The remaining 48% of (red) traffic lights indicate that the IUCN principles are not mentioned or acknowledged.

Table 6.1 also shows that there is a total of 391 references (shown by the numbers included in the traffic light circles) to the 11 IUCN PMPs across the seven documents. Furthermore, 302 of these references (with green traffic lights) include mention of a principle as well as an action step. However, 89 of the references mention a principle (amber traffic lights) but without any action steps.

Using the interpretation key in Table 6.1, it is possible to see which of the references to the IUCN PMPs are linked (or not linked) to action steps. To illustrate, regarding the IUCN Principle of perpetual integrity, Column Seven (ZWA), representing the Zambia Wildlife Act (2015), shows that presence of an official declaration of protected area status indicator is mentioned three times (indicated by the number in the circle) but without action steps to achieve it (indicated by the amber traffic light). Similarly, for the same law (ZWA), Column Seven shows that the land tenure indicator is mentioned four times along with the required action steps (green traffic light). Furthermore, for the same law, Column Seven (ZWA) shows that the use of scientific knowledge indicator of the IUCN system planning principle is not mentioned at all (red traffic light).

6.3.2. Frequency of references to the indicators for the IUCN principles within the national level documents

The 11 IUCN PMPs contain 28 indicators that have been rated against Zambia's policies, and plans to gauge national park performance (Figure 6.1). Figure 6.1 shows that the indicators to the IUCN PMPs are in most cases not mentioned within the national level documents. To illustrate, of the three policy documents examined, only the National Forestry Policy (2014) show a higher frequency of references where the indicators to the principles are mentioned along with action steps (12 out of 28). This outcome may be attributed to the fact that the National Forestry Policy (2014) was recently revised. In contrast, the Policy for National Parks and Wildlife (1998) stands out with the lowest frequency of observations where the indicators to the principles are mentioned along with action steps (7 out of 28). This situation may be attributable to the time at which this policy was developed. Among the oldest, it is perhaps not surprising that most of the principles or their indicators are not mentioned. The policy was developed when environmental issues had become more pronounced but before the publication of the IUCN *Guidelines on Protected Areas Legislation* in 2011.

Among the legislation, all three Acts show a low frequency of references where the indicators of the principles are mentioned along with action steps compared to where they are not mentioned at all. For example, 15 of the 28 indicators of the IUCN principles are not mentioned in the Environmental Management Act (2011) and the Forests Act (2015), while 16 of the 28 indicators are not mentioned in the Zambia Wildlife Act (2015). Similarly, in the group of strategic plans, the National Biodiversity Strategy and Action Plan (2015) only mentions 16 of the 28 indicators.

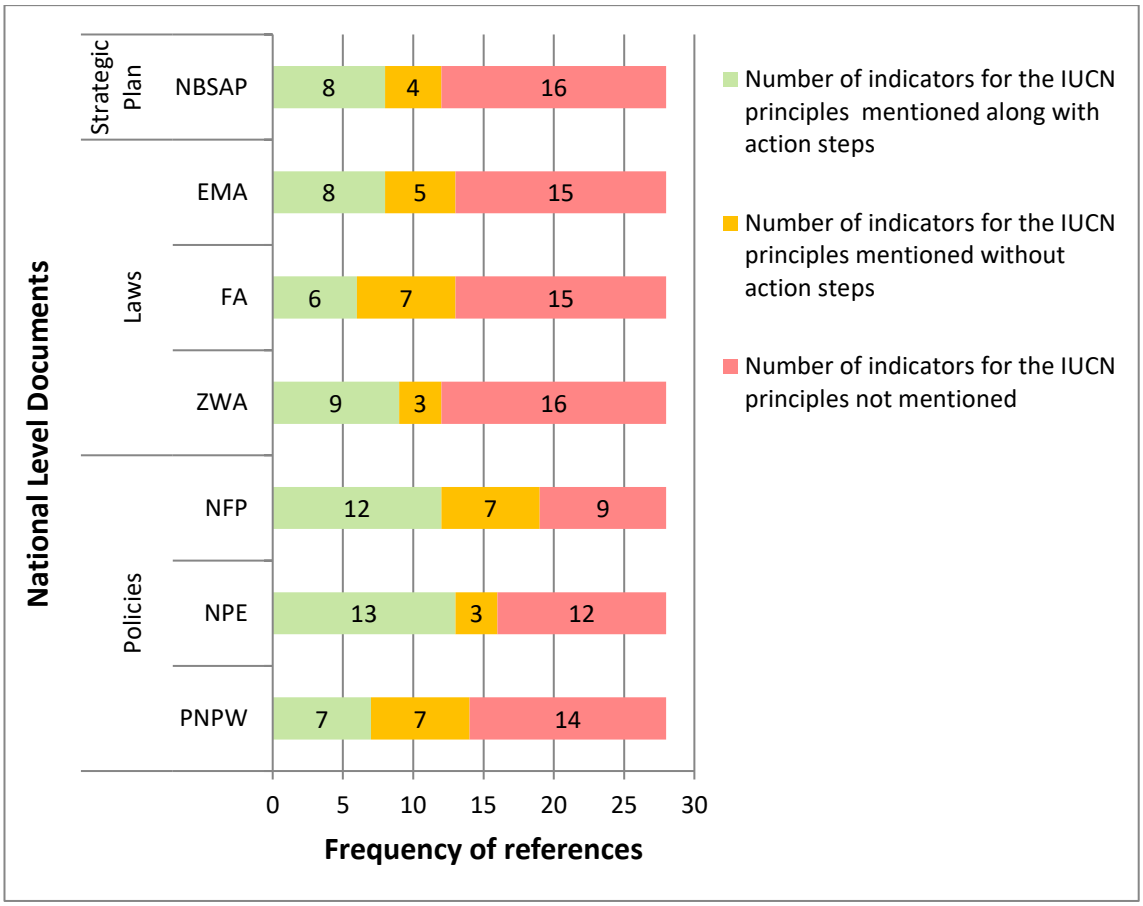

Figure 6.1 *Frequency with which the 28 indicators for the IUCN principles are referenced within the national level documents*

PNPW = Policy for National Parks and Wildlife (1998)
NPE = National Policy on Environment (2007)
NFP = National Forestry Policy (2014)
NBSAP = National Biodiversity Strategy and Action Plan (2015)
ZWA = Zambia Wildlife Act (2015)
FA = Forests Act (2015)
EMA = Environmental Management Act (2011)

6.3.3. Definition of IUCN principles in Zambian laws, policies and plans

According to the IUCN, definitions underpin the operational components of the laws and policies (McNeely et al., 2001). In relation to international environmental principles, the IUCN asserts that clear definitions of the principles included in a country's laws and policies have the potential of advancing the goals of those laws and policies and generating shared understanding of the principles at different governance levels (McNeely et al., 2001). Providing explicit and coherent definitions of terminologies used in a country's laws and policies can help facilitate communication between different sectors and increase the likelihood of implementation of those laws and policies (McNeely, Mooney, Neville, Schei, & Waage, 2001; Dhliwayo, Breen, & Nyambe, 2009).

As each of the documents examined in this study has a section of definitions where terms used are defined, in this study, the definitions of the principles most closely aligned with the IUCN definitions (where these are present) in these documents were compared to the definitions provided by the IUCN. For those principles not defined in the documents examined, implicit terms that point to any of the IUCN Principles were used in the comparison. Specifically, the definition section of each document was examined to identify which of the IUCN Principles have been defined (or not defined), and whether these definitions are harmonised with those provided by the IUCN (i.e. how prescriptive they are). Similarities and differences in the definition of the IUCN Principles and the reasons behind these definitions were explored to demonstrate the strength and coherence of the laws, policies and strategic plan in the context of the IUCN principles. A summary of how each of the IUCN Principles is defined in the Zambian national level documents examined in this study is presented in Table 6.1 while details of the references made for each of the IUCN principles are presented in the subsection that follow. Examples to illustrate how they are principles are reflected and defined in the documents are included to highlight the variation between documents and provide insight on specific areas where extra efforts need to be directed.

Table 6.2 *Definitions of the IUCN principles in Zambia's national park laws, policies and national level plans*

IUCN Principle	IUCN definition of the principle	Status of IUCN principles in Zambian laws, policies and plan		
		Defined	Not defined	Comments
Perpetual integrity	Ensuring the perpetual integrity of a national park means providing safeguards by the best means available to ensure its long-term success (Lausche, 2011).		x	The term 'perpetual integrity' is not mentioned anywhere but references that indicate an intention to ensure national parks are managed in perpetuity are present, particularly the Zambia Wildlife Act (2015).
System planning	An organised approach to macro-level conservation planning for protected areas (Lausche, 2011; Davey, 1998)		x	System planning is not explicitly defined but is considered in general using terms such as "integrated approach", "integrated planning" and "holistic approach".
Management by conservation objectives	Conservation objectives are the specifications of the overall targets for the species and/or habitat types for which a protected area is designated (Lausche, 2011)		x	Implicit references to conservation objectives are found in the Zambian laws, policies and plan
Management plan	A document which sets out the management approach and goals, together with a framework for decision-making, to apply in a protected area over a given period (Thomas & Middleton, 2003).	x		A management plan is defined as "a document that sets the basic management and development philosophy for a protected area and provides the strategies for addressing problems and achieving identified management objectives" (The Zambia Wildlife Act, 2015, Part I s 2).
The precautionary principle	The precautionary principle provides that where knowledge is limited and there is lack of certainty regarding the threat of a serious environmental harm, this uncertainty should not be used as an excuse for not taking action to avert that harm (Lausche, 2011, p. 33).	x		The precautionary principle is explicitly described in the Environmental Management Act (2011) and the Forests Act (2015) (see Part I s 2 in both Acts) to mean "the principle that lack of scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation, or possible environmental degradation, where there is a threat of serious or irreversible environmental damage because of the threat".
Invasive alien species	An alien species that can survive and reproduce or spread outside of human intervention/cultivation and whose introduction and/or spread has a negative impact on biodiversity or ecological functions within a Protected Area (Lausche, 2011, p. 34).	x		The Environment Management Act (2011) defines IAS as "an animal or plant with potential to cause harm to the environment when introduced into an ecosystem where the animal or plant does not normally exist" (Part I s 2).

***Table 6.2** (continued)*

IUCN Principle	IUCN definition of the principle	Status of IUCN principles in Zambian laws, policies and plan		
		Defined	Not defined	Comments
Climate change	Adaptation to and mitigation of climate change and its predicted impacts, including changing and more extreme patterns of drought, storms and flooding, changes in the ecosystem distribution and quality, and the implications of these for species survival in protected areas (IUCN, 2010).	x		The National Policy on Environment (2007) and the National Forestry Policy (2014) define climate change as "human-induced changes taking place in the world's climate, especially trends towards global warming, which will deeply impact upon most ecosystems".
Taking an international perspective	Embracing a perspective beyond purely national scale that considers events, obligations, and natural processes that may originate outside the country and beyond.		x	While taking an international perspective is not defined, commitments towards such a perspective are found in the Zambian laws, policies and plans.
Good governance	"Interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken, and how citizens or other stakeholders have their say" (Graham, Amos & Plumtre (2003, p. ii).		x	There is partial application of the good governance principle in the Zambian laws evaluated in this study. Most of the governance sub principles are not reflected.
Public participation	Participation in initial exploratory meetings; the identification or verification of boundaries; defining conservation objectives and other purposes; laying out rights and responsibilities of all parties; defining management, enforcement and incentive structures; and negotiating a formal contractual agreement" (Lausche, 2011, p. 162).		x	The term "public participation", though highly recognised and explicitly referenced, is not defined, but is explicitly reflected through several provisions in all the laws, policies and plans.
Social equity and justice	Requirement that stakeholders, particularly those holding or claiming rights over land, sea or resources, should be respected and engaged in protected area design, establishment and management, and should have legal recourse if their rights are violated (Lausche, 2011, p. 46).		x	The language referring to social equity in the Zambian laws, policies and plan is generic. However, various provisions typically capture the distributive and inclusive nature of the term.

Perpetual integrity

The IUCN principle of perpetual integrity of a national park can be interpreted as providing safeguards, by the best means available, to ensure its long-term success (Lausche, 2011). According to the IUCN, such safeguards in protected areas legislation would normally include goals related to: (i) requirements for high-level designation of national parks; (ii) clear legal status with respect to the ownership of the park; and (iii) secure land tenure. In this study, these three elements were considered as the key indicators for the examination of the IUCN perpetual integrity principle.

The term 'perpetual integrity' is not used in any of the documents examined in this study. However, the laws examined, particularly the Zambia Wildlife Act (2015), address the three indicators of the perpetual integrity principle through provisions relating to establishment of national parks, ownership of wild animals, acquisition of land and granting of mining and other rights in protected areas. The following examples, from the Zambia Wildlife Act (2015), show the references that indicate an intention to ensure national parks are managed in perpetuity.

> **Part III s 11: Declaration of national parks**
> Whenever the President considers that the conservation or protection and enhancement of wildlife, eco-systems, biodiversity and natural beauty so demands, the President may, after consultation with the Minister and the local community in the area, by statutory order, declare an area of land within the Republic to be a National Park for the purposes of this Act and may, in like manner, declare that a National Park shall cease to be a National Park or that the boundaries of a National Park shall be altered or extended.
>
> **Part III s 15(1): Prohibition of granting of land in national park**
> A person shall not acquire a certificate of title in respect of any land in a National Park, Community Partnership Park or bird or wildlife sanctuary.
>
> ***Part III s 16(1): Grant of mining and other rights in national park***
> Subject to subsection (2), nothing in this Act shall be construed as preventing or restricting the granting in respect of any land within a National Park, Community Partnership Park or bird or wildlife sanctuary—
>
> a) of any mining right or other right, title, interest or authority necessary or convenient for the enjoyment of a mining right; or

b) for any purpose consistent with this Act of a right, title, interest or authority under any other written law.

Part III s 16(2)
A mining right shall not be granted in a National Park, Community Partnership Park or bird or wildlife sanctuary without an environmental impact assessment conducted in accordance with procedures specified by the Environmental Management Act, 2011, and which procedures shall consider the need to conserve and protect.

While these four references do not explicitly mention the term 'perpetual integrity', they do provide details relating to the three key requirements that need to be present to help ensure national parks are managed in perpetuity. For example, the references to long-term conservation status, high policy-level designation, and land tenure arrangements provided in Part III s 11, 15 and 16 clearly point to the need to determine the legal status of national parks and the general intention that they will be managed in perpetuity.

The Zambia Wildlife Act (2015) makes explicit provisions for the national parks to have clear legal status as required by the IUCN. It is also clear from Part III s 11 that the designation/cessation of national parks in Zambia involves a high policy-making body (i.e. the Office of the President). Such provisions carry considerable weight in securing government commitment to protect and manage national parks over the long term.

Secure land tenure, here defined as the assurance that land-based property rights will be upheld by society (Robinson, Holland & Naughton-Treves, 2014), is also considered an important precondition for ensuring the long-term success of national parks and other protected area categories. Part III s 15 of the Zambia Wildlife Act (2015) makes specific reference to land tenure rights in national parks and prohibits granting of land in national parks. However, there are some exceptions to this requirement. Part III s 16 permits the granting of land in national parks for mining purposes while Part III s 16(2) describes the procedures for granting of land for mining purposes. This infers that mining may be undertaken provided an environmental impact assessment is conducted.

However, the relationship between these provisions (Part III s 15(1) and 16(1)) is ambiguous. In particular, the use of the phrase "nothing in this Act shall be construed as preventing or restricting the granting in respect of any land within a national park" (Part III s 16(1)) may be interpreted to imply that mining developments should be prioritised over conservation. Such ambiguity highlights a gap in the land tenure requirements to ensure national parks are managed in perpetuity. Furthermore, this may suggest that while land tenure security has, to some degree, been incorporated into Zambia's laws, they are currently not sufficiently comprehensive to ensure national parks are managed in perpetuity.

System planning

The IUCN principle of system planning refers to an organised approach to macro-level conservation planning for protected areas (Lausche, 2011; Davey, 1998). The IUCN, to promote integrated protected area management has suggested several indicators for system planning with potential for use in legal and policy frameworks (Shepherd, 2008). Three indicators were used in the analytical framework developed in this study: requirements for use of scientific knowledge; spatial and temporal scales of treatment; and ecosystem connectivity.

The use of scientific knowledge refers to the need for scientific data to support development of specific policies or measures that inform biodiversity conservation. Spatial and temporal scales of treatment relate to the importance of managing protected areas as part of a whole and integrated system. Protected areas should be designed with as much spatial and temporal coverage as possible to provide zones of sufficient size and flexibility to accommodate management changes while still preserving their primary conservation objectives (Lausche, 2011).

Connectivity refers to "the extent to which the physical relationships between landscape (and seascape) elements enable the full range of natural processes, such as species migration, across a regional scale" (Ervin, Sekhran, Dinu et al., 2010, p. 99). Ecosystem connectivity is a generic term for various connectivity functions for conservation. Ecological functions need to be connected for protected areas to survive and fulfil their

conservation objectives. These functions include connecting ecological processes, patterns of vegetation, habitats for threatened and vulnerable species, and other living resources within landscapes or seascapes (Lausche, 2011).

Within the Zambian laws, policies and strategic plan examined in this study, system planning is considered in general terms. While these documents have nowhere defined system planning, there are 19 references to system planning of which seven are from the laws, seven from the policies and the remaining five from the strategic plan (Table 6.1). These provisions deal with system planning indirectly, for example, through the mention of terms such as 'integrated approach', 'integrated planning' and 'holistic approach'. A comparison of the meaning of these terms with the IUCN definition for system planning indicates that they fall within the intent of the IUCN, i.e. each of them emphasises a holistic, participatory and integrated approach that aims to manage human interactions with ecosystems and all associated organisms, opposed to single-species management approaches (Shepherd, 2008).

The Zambia Wildlife Act (2015) implicitly references system planning within the context of wildlife conservation stating that "wildlife conservation and management shall be integrated because all the elements of the environment are linked and inter-related" (Part I s 4(c)). In addition, Part 5 s 33(1) of the Zambia Wildlife Act (2015) mentions the term 'integrated approach';

> [T]he functions of a board are to promote and develop an integrated approach to the management of human and natural resources in a Community Partnership Park, Game Management Area or an open area falling under its jurisdiction.

This provision empowers the 'board' to promote and develop an integrated approach to the management of human and natural resources. Although the emphasis here is not on the term 'integrated approach', but on the 'board' as the primary conduit for promoting an integrated approach to the management of protected areas, the fact that the term is mentioned illustrates some level of awareness of the necessity of planning and managing natural resources in an integrated manner.

A few other legal provisions implicitly stipulate specific requirements that are seemingly associated with system planning as provided by the IUCN. The Environmental Management Act (2011) (Part I s 6(b)) focuses specifically on consideration of the multiple users of natural resources by requiring a 'holistic approach' to biodiversity conservation. Similarly, the Forests Act (2015) also implicitly references an ecosystem approach in the following provisions:

> **Part I s 5(2)(h)**
> Without prejudice to the generality of subsection (1), the functions of the Department are to -
>
> (h) conduct and support forestry research and development and studies on national resource requirements and devise the best methods for meeting the demand of the multiple users of forest resources in an integrated manner compatible with sustainable use and conservation of biodiversity.
>
> *Part II s 8(f)*
> The Minister, Director or persons to whom the Minister or Director has delegated any powers and functions under this Act, shall, in implementing this Act, have regard to—
>
> (f) the need to protect biodiversity in forest areas and protect the ecosystem, including species which are not targeted for exploitation.

These statements implicitly show that the IUCN principle of system planning is acknowledged as important regarding the management and conservation of biodiversity. By including requirements for research and development (Part I s 5(2)(h)), and the need to "protect the ecosystem as a whole" (Part II s 8(f)), two of the three requirements of the system planning principles as defined by the IUCN are indirectly included in the Forests Act (2015).

Within the policies, references to the system planning principle are also generic in terms of an integrated approach to environmental planning and resource utilisation. For example, the National Forestry Policy (2014) recognises that "inadequate integrated approach to forest resource management and coordinated land-use planning and management" have contributed to deforestation and forest degradation in Zambia (Part 2 s 2.2.3) and therefore, sets a "holistic and ecosystem-based management" as one of

the guiding principles for its implementation (Part 5(d)). Further, the policy specifies the use of a multi-sector approach and science-based methodologies as key measures for implementation of sustainable forest resources and ecosystem management (Part 6 s 6.1(c)(ii)). These provisions can be used to promote and operationalise the system planning principle as a key approach to national park management.

Overall, although the term 'system planning' is not explicitly mentioned and defined in the bulk of Zambia's legislation and policies, they contain some provisions that convey the same general meaning of the term as the IUCN. Both the IUCN and Zambia's legislation and policies explicitly require using scientific knowledge, carrying out management actions at a scale appropriate for the issue being addressed, focusing on ecosystem and services that underpin social and economic well-being, and ensuring ecosystem connectivity and inter-sectoral cooperation. As such, the examples above reveal that a lack of precise definition or explicit reference to system planning does not mean that it is not acknowledged. However, it remains ambiguous as to whether the system planning principle as defined by the IUCN is what is referred to using the terms 'integrated approach', 'integrated planning' and 'holistic approach' in the Zambian documents examined in this study. This is because these terms are also not defined or explained. The absence of definitions for these terms in the laws, policies and strategic plan is an important discursive silence to note. It suggests a weakness on the part of legislators (line ministry officials and drafters) in providing clarity on what practitioners should understand by the terms. Without precise definitions, practitioners are seemingly granted broad discretion to work out the details which may result in ineffective and uncoordinated implementation. In the context of this study, the absence of definitions of the terminologies used in the laws, policies and strategic plan leaves wide open interpretation and consequently makes it difficult to unequivocally determine their coherence with the IUCN definitions.

Management by conservation objectives

The need to specify the conservation objectives for a protected area is explicitly acknowledged in the 2008 IUCN definition for a protected area. In a general sense, conservation objectives are the specifications of the overall targets for the species

and/or habitat types for which a protected area is designated (Lausche, 2011). The analytical framework presented in Table 5.5 outlines two requirements that show an intention to specify the conservation objectives of a protected area: a requirement for information on the goals and objectives for which a site was designated; and a need to indicate the management category for a site, and the possibility of different zones within the categories.

There are eight references to management by conservation objectives of which one is from the laws and seven from the policies. These references show that the laws examined in this study do not have explicit provisions requiring information on the goals and objectives for which sites are designated. Neither are there any provisions that indicate the management categories that should apply to protected areas established under the legislation. Rather, they seem to 'assume' that the conservation objectives for each protected area are already identified. For instance, the Zambia Wildlife Act (2015) implicitly refers to conservation objectives in its definition of a general management plan stating that a general management plan is "a document that sets out the basic management and development philosophy for a protected area and provides strategies for addressing problems and achieving identified management objectives" (Part 1 s 2).

Similarly, the policies neither define conservation objectives nor explain their role in protected area management. The only explicit references to conservation objectives are found in the Policy for National Parks and Wildlife (1998). This policy explicitly requires the designated management agency to develop "a clear statement of national priorities, and a plan of action for achieving the national conservation objectives" (Part II s 2.1.1). The policy also acknowledges the need for conservation objectives in national park planning to ensure each park contributes to realising the country's long-term conservation goals (Part II s 2.1.1) as well as the relevance of a systematic approach in identifying suitable areas for meeting national conservation objectives (Part 2 s 2.2.6). Taken together, these provisions indicate the need for establishing conservation objectives as a necessary reference for achieving the long-term success of Zambia's

protected areas system as well as identifying site-specific conservation measures at local level.

Management plans

Protected areas laws, policies and plans should require that a site management plan is developed for each site. According to the analytical framework presented in Table 5.5, indicators that show an intention to develop a site management plan relate to providing authority, requirements and guidance on the process and content of site management plans. The laws, policies and plans also should address regular monitoring and evaluation of plan implementation and, where feasible, indicate the intervals for the review and updating of the plans (for example, every five years).

All the Zambian laws, policies and strategic plan reported in this study refer to management plans. There are 69 references (Table 7.1) for management plans across the seven national level documents examined in this study. Of the 69 references, 40 are from the laws, 23 from the policies and six from the strategic plan. Generally, the laws, policies and plan explicitly exhibit the philosophies underlying a management plan as defined by the IUCN. For example, among the laws, the Zambia Wildlife Act (2015) defines a management plan as "a document that sets the basic management and development philosophy for a protected area and provides the strategies for addressing problems and achieving identified management objectives" (Part I s 2). The Act also provides for management plans to be prepared through an interactive planning process which includes stakeholders, local communities and other local partners according to internationally accepted norms (Part II s 5(2)(h)). It provides for management plans to be developed for national parks, community partnership parks, bird and wildlife sanctuaries and game management areas. Similarly, the Forests Act (2015) provides for the preparation of site management plans (Part IV s 40), including guidance on the content, publication, and registration of the plans (Part IV s 43, 44).

Correspondingly, the policies also make explicit reference to the development of management plans. More specifically, the Policy for National Parks and Wildlife (1998)

provides explicit examples of references that relate to providing authority, requirements, and guidance on the process and content of site management plans:

> **Part 2 s 2.2.8**
> General Management Plans will be prepared, implemented, and periodically revised or updated for every park in the wildlife estate. Each Warden in charge of the park will implement the approved GMP that lays out a management concept for the park; establishes a role for the park within the context of regional trends and plans for conservation, access, economic development, local community and other regional issues; and identifies actions to resolve problems and achieve park management objectives. Guided by the mission statement for ZAWA, all GMPs will set out the bigger picture for the park and all other plans will be consistent with the direction established in these plans.
>
> **Part 2 s 2.2.8.1**
> Sufficient information for formulating proposals, evaluating potential environmental impacts, and making informed decisions will be made available and collated prior to initiating a GMP. In some instances, however, it may be necessary to prepare a GMP based on limited available information and then identify data gaps and information priorities in the plan.
>
> **Part 2 s 2.2.8.2**
> Without exception, General Management Planning will be conducted by an interdisciplinary team of planning professionals, park managers, staff scientists and research specialists, Field/Wardens will have the major responsibility of actively participating in all aspects of the plan's preparation. All planning teams for protected areas in the wildlife estate will be led by PAPU of ZAWA. On the other hand, PAPU will be responsible for facilitating the planning process and for writing the draft document, overseeing its review, and finalizing the GMP.

The Policy for National Parks and Wildlife (1998) also provides a definition for management plans that reads similar with the one provided in the Zambia Wildlife Act (2015). Consistent definitions of terms assist in the alignment of practitioners towards a shared understanding and facilitate communication between different sectors at different governance levels.

Precautionary principle

The precautionary principle fundamentally refers to the need for decision-makers to act in advance of scientific certainty to protect the environment from incurring harm. The IUCN guidelines on the precautionary principle highlight several important elements

that should be incorporated in protected areas legislation (IUCN-WCPA, 2007). These include, *inter alia*, adaptive management, high standard of proof requirements, and placing the evidentiary burden on proponents.

The precautionary principle is among the least referenced principles in the laws, policies and plan reported in this study. There is a total of 13 references that explicitly reflect this principle, of which seven are from the laws, five from the policies and one from the strategic plan (Table 6.2). Among these, six references specifically mention the term 'precautionary principle'.

The precautionary principle is explicitly described in the Environmental Management Act (2011) and the Forests Act (2015) (see Part I s 2 in both Acts) to mean "the principle that lack of scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation, or possible environmental degradation, where there is a threat of serious or irreversible environmental damage because of the threat". This definition is drawn from the Rio Declaration and is thus equivalent with that of the IUCN.

Within the laws, the precautionary principle is noted as one of the guiding principles of the Environmental Management Act (2011) (Part 1 s 6(c)). Under this Act, the precautionary principle is specifically mentioned in its application to environmental impact assessment (Part II s 29) and pollution control (Part IV s 43). For example, Part IV s 43(2) deals with the development of regulations on pollution control in the absence of conclusive scientific evidence and states that the rationale of such regulations must refer to the precautionary principle. The Forests Act (2015) also recognises the need for precaution in the utilisation and conservation of natural resources (Part II s 8(b)). In contrast, the Zambia Wildlife Act (2015) does not mention the precautionary principle. This is not surprising, as this principle is neither mentioned in the Policy for National Parks and wildlife (1998) which the Zambia Wildlife Act (2015) is designed to operationalise.

Among the policies, the National Forestry Policy (2014) makes explicit reference to the precautionary principle, including it as an underlying principle for implementation, while the National Policy on Environment (2007) recognises the importance of precautionary principle in statements such as the following:

> The Policy will catalyse the implementation of sustainable environmental, social and economic development tenets bringing together in a holistic strategy all aspects of preventive and precautionary actions, equitable benefit sharing, community participation, information dissemination, environmental education and awareness raising and gender equality in order to fully harness the Nation's latent capacity in this regard (Part V(j)).
>
> The National Policy on Environment emphasises sectoral and cross-sectoral rights and responsibilities and that fundamentally it is the duty of any institution, Government or Non-Governmental Organisation, any community group or people's organisation or any individual, that uses or otherwise carries out activities that affect the environment, to exercise care to maintain the integrity of the environment and the nation's resource base (Part VII).

Similarly, the NBSAP-2 indirectly points to precaution by including "informed decisions" as an underlying principle for biodiversity management (Part4 s 4.1(8)). The NBSAP-2 also communicates the importance of the precautionary principle in its metatext (the sentences describing and defining its objectives), explaining how the principle has been applied in relation to the development of Zambia's Biotechnology and Biosafety Policy of 2003 (Part 3 s 3.4.3.3).

In line with the IUCN, the analytical framework presented in Table 5.5 outlines two key requirements that show an intention to apply the precautionary principle: High standard of proof requirements (which includes placing the evidentiary burden on proponents); and adaptive management. These requirements, though not explicitly mentioned in relation to the precautionary principle, are implicitly reflected in the laws. For example, the Environmental Management Act (2011) under Part III s 29 and 30 retains many elements that characterise the three requirements in relation to environmental impact assessment (EIA). Of particular note, are provisions for projects requiring EIAs; the scope of EIAs (the information to be included); and the penalties for non-compliance with the regulations (Part III s 30). These provisions require proponents to

systematically identify and examine the possible environmental consequences of development actions and then use the conclusions for planning and decision-making. Similarly, EIA is also incorporated in the Zambia Wildlife Act (2015) which includes a requirement that prohibits granting of mining rights in a national park without conducting an environmental impact assessment (Part III s. 16(2)). Such provisions can be interpreted as facilitating the precautionary principle. Nevertheless, such provisions are not a directive to secure commitment from practitioners to apply the precautionary principle. For efficient application of the precautionary principle, the laws, policies and plans should be supplemented with measure that explicitly reflect its requirements and include its application as a goal.

Management of invasive alien species

Invasive Alien Species (IAS) are one of the biggest causes of biodiversity loss and species extinctions globally (IUCN, 2000a). In some cases, they present the biggest challenge to biodiversity conservation in national parks (IUCN, 2000a; McNeely, Mooney, Neville, Schei, & Waage, 2001). It is therefore essential that IAS be incorporated into national park laws, policies and plans. Within the Zambian laws, policies, and plan reviewed in this study, there are 19 references relevant to IAS (Table 6.1), of which nine are from the laws, four from the policies, and six from the strategic plan. These results show AIS to be among the principles that are given the least attention in the documents examined in this study (See Figure 6.1).

The analytical framework presented in Table 5.5 outlines two elements that should feature in comprehensive legal and policy frameworks on IAS: requirements for information and strategies to control IAS. Timely information on IAS such as types of IAS, invasion rate and speed, habitats prone to invasion, and possible ecological and economic impacts is needed for objective decision-making. Information is also needed to ensure a strategic approach to the design of regulatory controls and procedures for IAS (Shine, Williams, & Gündling, 2000). Where there is inadequate information, the impacts of IAS are often under-estimated. This not only makes it hard to promote consistent decision-making at different administrative levels but also impedes building political will for new or improved legislation (Shine et al., 2000). Strategies for

addressing IAS should also be outlined as part of governments' response to the potential impacts of IAS. If left undefined in the laws, policies and plans, strategies for addressing IAS will be inadequately provided for. As such, legal and regulatory frameworks should support the collation of information and outline control strategies on IAS, as part of broader requirements for the conservation of biodiversity in national parks.

Within the Zambian laws examined in this study, IAS are explicitly identified as a threat to biodiversity conservation. The Environment Management Act (2011) defines IAS as "an animal or plant with potential to cause harm to the environment when introduced into an ecosystem where the animal or plant does not normally exist" (Part I s 2). This definition is like that of the IUCN-WCPA which defines IAS as "an alien species that is able to survive and reproduce or spread outside of human intervention/cultivation and whose introduction and/or spread has a negative impact on biodiversity or ecological functions within a Protected Area" (Lausche, 2011, p. 34). The key element of both definitions is the threat that IAS cause to biodiversity. They both recognise IAS as a global threat to the conservation of biodiversity through their proliferation and spread, displacing or killing native flora and fauna and affecting ecosystem services. The Environment Management Act (2011) also establishes formal requirements for "the prevention of the introduction of, control or eradication of invasive alien species which threaten ecosystems, habitats or species" (Part III s 27(2)(g)). These requirements extend to the prohibition of the import and export of IAS (Part IV s 77(1)) and, provision of information on the types of IAS and presence or suspected presence of IAS (Part IV s 78(1) as well as any other processes or activities that are likely to have a significant impact on conservation and sustainable use of biodiversity.

Within the policies examined in this study, IAS have been given very little attention. The policies do not provide enough guidance on how the threat of IAS should be addressed. The National Policy on Environment (2007) recognises the threat of IAS and defines them as:

> Species of organisms not indigenous to a given ecosystem that invade it, usually as a result of introduction from abroad for example Water Hyacinth, *Eichornia*

> *crassipes*. Indigenous species also tend to invade ecosystems when they are damaged or under stress.

Despite providing a definition of IAS here, this policy does not include any provisions or measures requiring information on IAS or outline any strategies for their control. The only policy measure in relation to IAS is found in the National Forestry Policy (2014) which calls for the prevention of "the import and export of known and unknown invasive plant species" in the implementation of sustainable forest resources and ecosystem management (Part 6 s 6.1(c)(x)).

Conversely, Zambia's Second National Biodiversity Strategy and Action Plan (2015) addresses the threat of IAS and has a set target for their control. Target nine of Zambia's National Biodiversity Strategy and Action Plan states the following:

> By 2020, invasive alien species (*Mimosa pigra*, Hyacinth, crayfish, and Lantana camara) and their spreading pathways are identified and prioritised, controlled or eradicated, and measures are in place to manage pathways to prevent their spread and establishment (Part 4 s 9).

To meet this target, a few measures including, updating existing mapping of types and spread (Part 4 s 9.1.1), and implementing updated programmes for IAS in the country (Part 4 s 9.1.2) have been established. Such measures link to the criteria laid down by the IUCN (Shine et al., 2000) and defined in Table 5.5. However, the NBSAP-2 does not explicitly define IAS or explain how the set target and proposed measures are to be achieved as there are no definitive details for implementation. Neither are there provisions for the nomination or establishment of a co-ordinating body to ensure IAS challenges are effectively addressed.

Management of climate change

Climate change has become a major priority on the global environmental and development policy agenda (Ervin, Sekhran, Dinu et al., 2010) in part because it is one of the biggest threats to biodiversity conservation worldwide (Dudley, Stolton, Belokurov, Krueger et al., 2010; Lausche, 2011). Criteria for examining the management of climate change principle outlined in the analytical framework presented in Table 5.5

include the recognition of the threat of climate change, as well as mentions of clear objectives, targets and management strategies.

The management of climate change principle is mentioned in 32 references within the national level documents examined in this study. Of the 32 references, 3 are from the laws, 19 from the policies and ten from the strategic plan. Five references specifically refer to 'climate change adaptation' and four to 'climate change mitigation'. The remainder mention the term 'climate change' indirectly, for example, by referring to human-induced climate changes taking place because of deforestation, drought, floods, and greenhouse gas emissions (e.g. Part VII s 7.2.4.2(a) in the National Policy on Environment).

The three Zambian laws examined in this study explicitly mention climate change. Even so, although these laws explicitly reference climate change and acknowledge its negative effects on biodiversity, none of them define it or provide specific linkages between its effects and conservation actions. For example, the Environmental Management Act (2011) simply notes the potential effects of climate change on human beings and the environment and calls for research and the preparation of climate change management guidelines (Part II s 9(2)).

In contrast, a definition of climate change is provided in the National Forestry Policy (2014) and the National Policy on Environment (2007). In both these policies, climate change is defined as "human-induced changes taking place in the world's climate, especially trends towards global warming, which will deeply impact upon most ecosystems". The National Forestry Policy (2014) specifically acknowledges climate change as a guiding principle for the policy's implementation (Part 5(e)) while the National Policy on Environment (2007) has an objective to "minimize the adverse impact of climate change and to reduce air pollution and greenhouse gas emissions" (Part VII s 7.1.11.1). These provisions could be used to promote implementation climate change adaptation and mitigation measures. However, they do not provide enough guidance on what should be done to moderate the negative effects of climate change. As such,

while these policies acknowledge the management of climate change principle, they do not address it in a comprehensive manner.

Taking an international perspective

In a globalised, networked world, national park laws, policies and plans need to take an international perspective, i.e. they need to offer a perspective beyond national borders that considers events, obligations, and natural processes that may originate outside the country and beyond. In so doing, they will then offer a more comprehensive coverage of the potential environmental challenges faced by a nation and offer opportunities for wider collaboration (Lausche, 2011). In this study, the taking an international perspective principle was analysed in terms of the requirements for regional and global coordination and collaboration, and the mention of goals that promote compliance with regional and global conventions.

While the term 'taking an international perspective' is not defined in the Zambian national park laws, policies and plan examined in this study, commitments towards such a perspective are present across these documents. There are 62 references (of which 30 are from the laws, 27 from the policies and five from the strategic plan) that can be interpreted as expressing an intention to implement the taking an international perspective principle. This is a significant representation compared with the findings in relation to the other principles.

For example, the three laws provide for the implementation of IEAs to which Zambia is a party and acknowledge the need to liaise with other countries or international institutions involved in the management of natural resources. This is illustrated by the following excerpts from the Zambia Wildlife Act (2015):

> **Part II s 10(1)**
> The Minister shall ensure cooperation with other countries in enhancing the role of the wildlife sector for international cooperation and regional integration.
>
> **Part II s 10(2)**

Subject to the Constitution and this Act and notwithstanding any other law, the Ministry responsible for wildlife may, on behalf of the Government—

(a) enter into bilateral or multi-lateral agreements with a foreign State or organisation relating to wildlife conservation and management;

(b) in liaison with other relevant Government Ministries, develop national, regional or international legal instruments for the protection and conservation of wildlife and encourage sustainable wildlife utilisation;

(c) establish or strengthen research and development programmes at national, sub regional, regional and international levels for the assessment of activities with impact on wildlife and the environment and monitor such research and development programmes to ensure that they are appropriate for wildlife conservation and management;

(d) increase cooperation with international organisations established or constituted under international instruments; and

(e) participate in, and support, regional institutions that increase regional cooperation and promote regional development of the wildlife sector.

Part II s 10(3)
The Minister shall, by statutory instrument, give effect to any international or regional agreement on wildlife conservation and management to which Zambia is a State Party.

Similarly, the policy documents make explicit reference to the taking an international perspective principle. The National Policy on Environment (2007), for instance, identifies conformance to "international biodiversity treaty obligations through systematic introduction of requisite enabling legislation that are relevant to Zambia's situation" as a key strategy to conserve and manage the country's biodiversity (Part VII s 7.1.12.3(k). Other examples of policy interventions outlined in the National Policy on Environment (2007) that can support integrating an international perspective include exchange of information (Part VII s 7.1.11.3(i)); development of biodiversity networks (Part VII s 7.1.12.3(g)); and promotion of transboundary conservation (Part VII s 7.1.14.2(a)).

Good governance

The Good Governance principle is among the least referenced principles (n = 14) across the Zambian documents examined in this study. Criteria for examining Good Governance include requirements for accountability, transparency, performance, and subsidiarity. According to the IUCN, accountability refers to "having clearly demarcated lines of responsibility and ensuring adequate reporting and answerability from all stakeholders about the fulfilment of their responsibilities" while transparency refers to "ensuring that all relevant information is available to all stakeholders" (Dudley, 2008, p. 28). Accountability and transparency require that information be readily available to and directly accessible by those affected by decisions and, ideally, in forms easily understood by non-experts (Dudley, 2008). Accountability and transparency may also be enhanced by maintaining clear roles and responsibilities, particularly as relates to legally responsible authorities (i.e., governments).

In protected area management, good governance can also be promoted through performance and subsidiarity through deliberative decentralised decision-making. Performance relates to "effectively conserving biodiversity whilst responding to the concerns of stakeholders and making wise use of resources" (Dudley, 2008, p. 28). Performance is enhanced through evaluation of the progress made towards the achievement of the proposed park management objectives. Subsidiarity involves attributing management authority and responsibility to the institutions closest to the resources at stake. This also includes sharing authority and resources and devolving decision-making authority and resources where appropriate (Lausche, 2011).

Applying the elements (indicators) of good governance in Table 5.5, there are no explicit references to good governance in the Zambian laws examined in this study. The term 'governance' has nowhere been mentioned or defined in the laws. However, there are implicit provisions made particularly under the Forests Act (2015), such as Part III s 29(3)(d) which notes that "the management of any funds and the selection of the leaders of the community forest management group shall be based on transparency,

fairness, impartiality and non-discrimination". This alone, however, is insufficient as most elements of good governance are not included.

The Good Governance principle is also referenced in the policies. The National Policy on Environment (2007) mentions the term 'effective governance' and briefly explains that this will be achieved through the decentralisation of environmental management services, equitable distribution of government resources, and cross-sectoral strategic planning (Part V (f)). Similarly, the National Forestry Policy (2014) recognises governance as a cross-cutting issue that should be mainstreamed into all aspects of forest management (Part 6 s 6.8(b)). However, these references do not provide any details on how the Good Governance principle is to be achieved. This gap typically has implications in the management of national parks. Without explicit reference and definition of what constitutes Good Governance, practitioners may neglect important governance dimensions such as 'transparency' and 'performance', and/or incompletely address other aspects such as 'accountability'.

Public participation

The IUCN defines public participation in decision-making processes for protected areas management as follows:

> participation in initial exploratory meetings; the identification or verification of boundaries; defining conservation objectives and other purposes; laying out rights and responsibilities of all parties; defining management, enforcement and incentive structures; and negotiating a formal contractual agreement (Lausche, 2011, p. 162).

Public participation is important in national park management particularly in relation to: a) the creation of conservation units, when the law requires a prior public consultation; b) the establishment and operation of the management board, as a mechanism to assure public participation in management of the conservation unit; and c) the drafting and approval of each unit's management plan (Martin et al., 2016). Provisions for public participation in national park laws and policies are an indicator of how local communities benefit from national parks. To highlight the response of Zambia's laws, policies, and strategic plan to the public participation principle, this study focused on the three

elements of public participation: 'the right to participate in decision-making'; 'access to information'; and 'access to justice'. According to the IUCN, these elements must be present in national park laws and policies for effective implementation of the public participation principle.

The right to participation in decision-making is explicitly reflected through several provisions in all the laws examined. For example, the Zambia Wildlife Act (2015) provides for equitable and effective participation of local communities and traditional leaders (Part I s 4 (d)). This dedication to effective participation is further emphasised by identifying Community Resource Boards (CRBs) as institutions through which communities can participate, co-manage, and benefit from game management areas (Part V s 32). Details of what the CRBs are, their mandate, membership and how they are run are provided in section 2.2.1 of this this thesis. The Forests Act (2015) also makes explicit provisions for public participation in decision-making. References to public participation are definitive and explicit in their intent regarding joint forest management and the equitable sharing of benefits. For example, The Act defines joint forest management as "the participation of stakeholders in the sustainable management of forest resources and the sharing of benefits derived from the management of the forest resources" (Part I s 2). Furthermore, the Forests Act (2015) requires all responsible individuals or agencies to act in ways that lead to broad and accountable participation in the decision-making processes (Part II s 8(k)). Reflecting the need for public participation in environmental decision-making, the Environmental Management Act (2011) states that "the people shall be involved in the development of policies, plans and programmes for environmental management" (Part I s 6(f)). This right to participate in decisions is further emphasised by the provision of Part VII s 91(2) which states that

> [T]he public shall have the right to participate in decisions concerning the formulation of environmental policies, strategies, plans and programmes and to participate in the preparation of laws and regulations relating to the environment.

The Environmental Management Act (2011) also explicitly highlights the need for access to information in its preamble. Part VII s 91(2) of this Act states that, the public has "the

right to be informed of the intention of public authorities to make decisions affecting the environment and of available opportunities to participate in such decisions". Furthermore, s 94 (1) mandates the Minister to "make regulations to enhance the ability of the public to acquire environmental information" through statutory instrument. Regarding access to justice, the laws examined in this study fall somewhat short as explicit provisions for 'access to justice' are missing. They provide some regulations to protect private interests in protected areas, but these are unclear and do not comprehensively specify the way in which access to justice is to occur.

As with the laws, the national policies acknowledge that public participation is necessity for effective management of Zambia's national park system. For instance, the National Parks and Wildlife Policy (1998) provides for the involvement of local communities in the management of parks stating that "throughout any planning process, local communities and the general public at the international, national, provincial and district levels will be given the opportunity to voice concerns about planning and management of parks" (Part 2 s 2.2.7). To further strengthen community involvement in wildlife management, the National Parks and Wildlife Policy (1998) provides for the establishment of Integrated Resources Development Boards (IRDBs), whose role is to enhance management and sustainable use of wildlife resources outside national parks (Section 2.9). These are referred to as Community Resource Boards (CRBs) in the Zambia Wildlife Act (2015).

Of all the documents considered in this study, they were 88 references to the public participation principle of which 32 were from the laws, 52 from the policies, and four from the strategic plan (Table 6.1). The public participation principle is explicitly recognised as one of the underlying principles in decision-making processes in all the national level documents. These documents all acknowledge the need for stakeholder consultation in the development of environmental policies, strategies, plans and programmes as well as the need to promote and facilitate community access to information in natural resource management.

The term 'public participation', though highly recognised and explicitly referenced, is not defined in the Zambian laws, policies and plan. However, the texts of the reference to the public participation principle reflect an interaction between the Zambian understanding of this principle and the definitions used by the IUCN. Both carry an assumption that non-state actors (local communities, academia, NGOs and the private sector) of an affected population have a right to contribute to the design of solutions or strategies to address complex environmental issues. As such, the use of the term in the national level documents examined could be considered as equivalent or in conformance with the definitions by the IUCN. Nevertheless, the fact that the public participation principle remains undefined in the Zambian laws and the absence of detailed information on how it should be operationalised leaves it open to different interpretations and may weaken its implementation.

Social equity and justice

The social equity and justice principle is not only the keystone of long-term social stability and security; it is also a fundamental condition for sustainable use of natural resources (IUCN, 2000b). Protected areas laws and policies should provide for socio-economic and cultural equity concerns to promote sustainable and equitable conservation and natural resources use (IUCN, 2000b). According to the IUCN (Lausche, 2011, p. 46), "the principle of social equity and justice requires that stakeholders, particularly those holding or claiming rights over land, sea or resources, should be respected and engaged in protected area design, establishment and management, and should have legal recourse if their rights are violated". Furthermore, access to equity and justice in protected area management requires providing easier and more efficient ways of addressing disputes regarding the interests of local communities. As such, it entails the establishment of legal mechanisms that local communities "can use to gain review of and to appeal decisions made by protected area authorities under the law" (Lausche, 2011, p. 47). In this study, the social equity and justice principle in national park management was considered in terms of (i) distributive and procedural processes, which largely relate to cost and benefit sharing issues that affect human wellbeing, (ii) access to resources, (iii) establishment of dispute resolution mechanisms, and (iv)

considerations for the needs of present and future generations (intra- and intergenerational equity).

In common with the other principles, the language referring to the social equity and justice principle in Zambia's laws, policies, and strategic plan are generic. The terms 'social equity' and 'justice' are not defined. However, various provisions typically capture the distributive and inclusive nature of these terms. There are 35 references to the Social equity and justice principle in the national level documents examined in this study. Out of these 35 references, eight were from the laws, 17 from the policies, and ten from the strategic plan. These references include criteria requiring some form of social equity, with 24 references explicitly referring to equitable sharing of conservation benefits. For example, one of the objectives of the Zambia Wildlife Act (2015) is to "promote equitable access to, and fair distribution of, the economic, social, health and environmental benefits derived from wildlife" (Part I s 4(e)). This provision suggests that social equity is conceptualised as a multi-faceted principle involving 'equitable access' and 'fair distribution' – dimensions that appear to align to social equity as it is viewed by the IUCN. These two dimensions are repeated in Part II s 8(h) of the Forests Act (2015) which articulates that "the Minister, Director or persons to whom the Minister or Director has delegated any powers and functions under this Act, shall, in implementing this Act, have regard to the need to promote the fair distribution of the economic, social health and environmental benefits derived from forests". As such, there is explicit commitment to promote social equity, particularly in terms of fair distribution of conservation benefits, in the laws. Nevertheless, all the national level documents examined in this study remain vague as to what approach should be used to operationalise the social equity and justice principle. The Zambia Wildlife Act (2015) simply acknowledges the need for it in wildlife utilisation without providing further detail. Similarly, the National Forestry Policy (2014) encourages civil society organisations to work with local communities in the promotion of equity and benefit sharing but offers little guidance as to what must be done (Part 7 s 7.1.6).

6.4. Conclusion

This chapter presented the results of the quantitative and qualitative analyses of how concerns regarding 11 IUCN PMPs are expressed in seven national level policy documents governing Zambia's national parks system. The results reveal marked variations in how the 11 IUCN are expressed within the national level documents and the way they are interpreted is not always consistent with how they are defined by the IUCN. The response of the national level documents to the international principles differs by the number of the indicators for the IUCN PMPs mentioned, and associated with action steps. Across the documents, 33% of the indicators for the IUCN PMPs are mentioned along with action steps, 19% are mentioned but without any action steps, and 48% not mentioned at all. Although the largest proportion (48%) of the indicators for the IUCN PMPs are not mentioned, the results demonstrate considerable progress towards the uptake of the IUCN park management principles and consequently, a commitment to implement IEAs at the national level. Overall, five of the seven national level documents are limited in their uptake of the IUCN PMPs. Only two documents, the National Policy on Environment (2007) and the National Forestry Policy (2014), mention the requisite indicators for the IUCN PMPs, demonstrating progress towards the uptake of the IUCN park management principles and consequently, a commitment to implement IEAs at the national level.

The limited uptake of international principles in Zambia's laws, policies, and plans was highlighted in previous studies (Kalaba et al., 2014; Lindsey et al., 2014; Aongola et al., 2009). The results presented in this chapter extend these studies by permitting insight into the extent to which specific international principles are considered and revealing opportunities where enhancements to the national policy documents may be made.

Therefore, this chapter provides an important reference point in terms of the extent to which Zambia's national level documents align with international principles. It supports current recommendations for comprehensive reforms in the legal, policy and strategic plan development processes in Zambia. The chapter also reinforces a need for further research to understand the variable uptake of international principles in Zambia. For

example, what are the implications of the variations in the uptake and interpretation of international principles at subsequent levels? Such questions could aid further analysis to provide a more comprehensive view of how Zambia's laws, policies and plans respond to international principles. The next chapter continues with this theme of comparing Zambia's national park system with a selected set of IUCN PMPs and presents the results of the alignment of Zambia's national park management plans with the 11 IUCN PMPs.

CHAPTER 7. RESULTS: ALIGNMENT OF ZAMBIA'S NATIONAL PARK MANAGEMENT PLANS WITH THE IUCN PARK MANAGEMENT PRINCIPLES

7.1. Introduction

The previous chapter presented the results, at a national level, of an analysis of the alignment of Zambia's laws, policies and national level strategic plan with a set of selected IUCN principles. While analysis of this national level information is important for commenting on Zambia's response to international principles, it cannot, by itself, demonstrate the success of that response. Site level information is also required.

This chapter draws on park level information from specific national park management plans to provide a more in-depth analysis of the alignment of Zambia's national park policy documents with international principles. National park management plans were chosen as a primary focus of park-level management operations because they define the management approach to protected areas at park-level by translating theory into practice (Thomas & Middleton, 2003). National park management plans also provide guidance on both baseline data gathering and on-going longitudinal studies that contribute towards the operations, monitoring and evaluation required for managing a national park.

The chapter is divided into four sections. Following this introductory section, the second section provides a recap of the data and methods used in this study. The third section presents the quantitative and qualitative results of how the management plans for the nine individual national parks examined, accommodate each of the IUCN principles. The final section provides concluding remarks about the significance of the observations made.

7.2. Data and methods

The data and methods that were used to derive the results presented in this chapter are briefly described below.

7.2.1. Data

The results presented in this chapter are based solely on the information derived from nine of Zambia's national park management plans and the 11 IUCN principles. All the plans use the term 'General Management Plan' (GMP) in their titles. National park management plans are recognised globally as a required tool for effective protected area management (Lausche, 2011). They indicate how a national park is to be used, developed and managed, identifying the significance of an area, establishing goals, and coordinating actions toward achieving them (Worboys, Lockwood, & De Lacy, 2005; Thomas & Middleton, 2003).

The nine national park general management plans (GMPs) used in this study represent most recently written plans (Table 7.1) all of which were published between 2004 and 2010. However, since the life span of a plan is ten years, two of them (the Blue Lagoon and North Luangwa national park GMPs) are currently outdated. These GMPs were supposed to have been reviewed and updated in 2015 but were not and are still in use. This consolidates the observation made in the previous chapter suggesting that there is poor management within central government particularly regarding the regular review of national planning documents. Without timely revision of management plans, practitioners will have to rely on outdated plans to continue implementation of parks activities.

Using the Conservation Priority System for Southern Africa (Bell & Martin, 1987) (Table 7.2), of the nine GMPs, one (KNP) was from a national park classified as 'very large', four (LZNP, MWNP, NLNP and NsNP) from national parks classified as 'large', three (BLNP, LcNP and LPNP) from national parks classified as 'medium', and one (LP) from a national park classified as 'small'. The guidelines for the minimum size of a national park

according to the IUCN is 10 km^2 (1000 ha) (IUCN-WCMC, 1994). The nine-national park GMPs in this study meet this condition and vary in size between 67 and 22,480 km^2.

Table 7.1 *National park management plans*

No.	Document Name	Year Published	No. of Pages
1.	Blue Lagoon National Park General Management Plan (2004-2014)	2004	71
2.	Kafue National Park General Management Plan (2012-2022)	2012	188
3.	Lochinvar National Park General Management Plan (2005-2015)	2005	116
4.	Lower Zambezi National Park GMP (2008-2018)	2008	113
5.	Lusaka Park General Management Plan (2005-2015)	2005	49
6.	Lusenga Plain National Park General Management Plan (2010-2020)	2010	135
7.	Mweru-wa-Ntipa National Park General Management Plan (2010-2020)	2010	94
8	North Luangwa National Park General Management Plan (2004-2014)	2004	126
9	Nsumbu National Park General Management Plan (2010-2020)	2010	95

The size of the park is an important factor to consider because it dictates the number of species present and the susceptibility of the park to external threats. As a rule, larger parks are preferred to smaller parks because they offer better opportunities for a more varied spectrum of habitats which, in turn, increases the number of species that can be supported by an area (Hockings, Stolton & Dudley, 2000; Pressey, 1996). Larger parks allow ecosystem processes to occur unhindered and support larger populations of species. Another benefit of larger parks is that they are more likely to accommodate larger species that tend to have larger space requirements (Hockings et al., 2000; Pressey, 1996). The classification of the study parks is presented in Table 7.2.

Table 7.2 *Descriptive categories for national park size*

Category	Classification (Km^2)	Total No.	National Parks
Very large	>10,000	1	KNP
Large	1,000 – 10,000	4	LZNP, MWNP, NLNP and NsNP
Medium	100 – 1,000	3	BLNP, LcNP and LPNP
Small	10 - 100	1	LP

Note: Descriptive categories for park size adapted from Bell and Martin (1987)

7.2.2. Data analysis

A thematic content analysis combining quantitative and qualitative analysis (described in full in Chapter Five) was used to determine how the individual park plans reflected the 11 IUCN Principles. These analyses were conducted in the same way as for the national level documents examined in Chapter Six. To summarise, the quantitative part of the analysis involved enumerating the frequency with which the references that address the relevant indicators of the IUCN park management principles appear within the nine management plans; while the qualitative analysis facilitated interpretation and explanation of the text.

For each of the 11 IUCN principles, the key features and indicators (as described in the analytical framework in Table 5.5) enabled comparison with those identified in the GMPs. For each of the 11 IUCN park management principles, the number of references that could be interpreted as reflecting a principle and/or its key features, were counted. The total number of references recorded for each management plan was then taken as the measure of the extent to which any given IUCN principle is addressed in the plan. There were 987 pages of text contained within the nine GMPs and a total of 1197 references to the 11 IUCN Principles were found.

The identified references to each of the IUCN principles were also classified based on whether they were linked to action steps. The 'traffic light' colour coding system (used previously in Chapter Five) was also used here to show the different classifications:

Green = principle mentioned along with the required action steps

Amber = principle mentioned but action steps missing

Red = principle not mention.

This system facilitated visual examination and comparison of how the principles are reflected in each of the GMPs. The results are presented in Table 7.3.

7.3. Results

The results of this chapter indicate that Zambia's national park management plans have an explicit common foundation with the international principles, thus having potential to facilitate implementation of Zambia's national and international environmental commitments. From the example of the nine national parks considered in this study, six parks can be said to have well-developed management plans in relation to the 11 IUCN park management principles. These include Blue Lagoon, Kafue, Lochinvar, Lusenga Plain, North Luangwa, and Nsumbu national parks. Among these parks, the Kafue, Lochinvar, and North Luangwa national parks have the highest scores for mentioning the indicators for the IUCN park management principles along with action steps (60.5%, 46% and 43% respectively).

A common feature of the three parks with relatively high scores is that they have been home to conservation projects supported by international organisations (GRZ/UNDP, 2007). For instance, the Kafue National Park has been implementing a project entitled *Programme for the Development of Kafue National Park as a Model of Sustainable Economic Use and Biodiversity Conservation in a Management Extensive Environment* since 2005 (ZAWA, 2004). The project aims at reversing the loss of biodiversity in the park and its adjacent game management areas as well as developing sustainable tourism, has been supported by the United Nations Development Programme (UNDP) and the GEF (Global Environment Facility) (ZAWA, 2004). Similarly, the North Luangwa National Park has been implementing the *North Luangwa Conservation Programme* with the support of the Frankfurt Zoological Society since 1986 (Frankfurt Zoological Society, 2016). As a result of these projects, the parks' governance structures including park

administration and management, private sector-public partnerships, and community participation have been strengthened, resulting in improved park performance. Such domestic factors could likely explain the viability and extent of mention and implementation of international principles in Zambia.

Three parks score poorly for having acknowledged the IUCN principles and can be said to have less well-developed management plans. These include the Lower Zambezi, Lusaka, and Mweru-Wa-Ntipa national parks. A major element of these parks is the high number of the indicators for the IUCN park management principles that are not mentioned. In the Lusaka National Park management plan for example, only 36% of the indicators for the IUCN principles are mentioned with action steps. 43% of the indicators are not mentioned. Key among the missing indicators relate to the social equity and justice, management of climate change and management of invasive alien species principles.

The results also reveal that all the parks acknowledge the perpetual integrity, management by conservation objectives, management plans and public participation principles. The high scores regarding these principles can be attributed to the fact that the indicators for these principles are already well-established and do not require active management. The inclusion of these principles can be traced back to the 1950s, 60, and 70s when the national parks where established. For example, in relation to the perpetual Integrity principle, each national park has had a well-established legal status, outlined in a Statutory Instrument for Gazettment. This is a legally binding instrument, which was signed by the Zambian President to establish the park and secure its status over the long term. Similarly, in management by conservation objectives principle, all the parks' management objectives were defined when the national parks where established. Nevertheless, the explicit support for these principles is a strong indication that Zambia has always been keen to sustainably manage its national parks.

Table 7.3 *Rating of Zambia's national park management plans against selected IUCN principles*

Key

= IUCN principles mentioned in the management plans along with required action steps
= IUCN principle mentioned in the management plans but action steps missing
= IUCN principles not mentioned in the management plans
The numbers in each circle = the frequency of reference(s) to the IUCN principle

IUCN Principles	Key Features	Indicators	National Park Management Plans									Overall Score(s)			Combined Performance of management Plans (Mode)
			BLNP	KNP	LcNP	LZNP	LP	LPNP	MwNP	NLNP	NsNP				
Perpetual Integrity	Secure conservation status over the long term demonstrated through high policy-level designation	Presence of an official declaration of protected area status obtained at the appropriate level	1	1	1	1	1	1	1	1	1	9	0	0	
		Reference to resolve land tenure conflicts	7	4	11	8	4	5	5	9	9	9	0	0	
Mode												**18**	**0**	**0**	
System Planning	Plan within ecosystem/large-scale context	Mention of spatial and temporal scales of treatment and the relationships between protected areas and other relevant categories of land	1	11	6	2	2	8	2	14	4	3	6	0	
	Long-term science-based site planning	Mention the use of scientific knowledge	4	18	5	12	6	15	5	11	4	9	0	0	
	Consider multiple, complex interactions that occur within an area	Mention of ecosystem connectivity opportunities and needs		3		1		1	3	1		1	4	4	
Mode												**13**	**10**	**4**	
Management by Conservation Objectives	Recognition that management should be in accordance with the goals and objectives for which the site was established.	Mention of the goals and objectives for which the site was designated	26	14	24	25	18	22	19	24	16	9	0	0	
	Recognition of the IUCN management categories	Mention of the management zones and land use patterns that conform to the established zones	22	22	13	9	8	15	14	22	16	9	0	0	
Mode												**18**	**0**	**0**	
Management Plans**	Clear objectives, and management strategies within given timeframes	Mention of the park goals and values	26	14	24	25	18	22	19	24	16	9	0	0	
	Guidelines on the preparation and content of management plans	Mention of monitoring and evaluation plan	14	28	10	5	2	11	13	13	11	6	3	0	
Mode												**15**	**3**	**0**	

Table 7.3 *(continued)*

IUCN Principles	Key Features	Indicators	National Park Management Plans									Overall Score(s)			Combined Performance of management Plans (Mode)
			BLNP	KNP	LcNP	LZNP	LP	LPNP	MwNP	NLNP	NsNP				
Precautionary Principle	Placing the evidentiary burden on proponents and high standard of proof requirements	Mention of approaches that demand high standard of proof from development proponents		6		3	8	12	12	5	15	2	5	2	
	Adaptive management	Mention of the use of adaptive management	1	10	1		1	1				0	5	4	
Mode												**2**	**10**	**6**	
Management of Invasive Alien Species	Recognise the threat of invasive alien species	Mention of and information on invasive alien species	6	3	5	2		1			2	4	2	3	
	Prevent the intentional or accidental introduction of Invasive alien species	Mention of IAS control strategies			6						4	2	0	7	
Mode												**6**	**2**	**10**	
Management of Climate Change	Recognition of the threat of climate change	Mention of climate change		8					2			1	1	7	
	Clear objectives, targets and management strategies	Mention of climate change adaptation and mitigation goals and measures		1								0	1	8	
Mode												**1**	**2**	**15**	
Taking an International Perspective	Regional and global coordination and collaboration	Mention of goals to promote regional and global collaboration	6	8	6	1	1		2			2	4	3	
	Recognises compliance with global and regional conventions as essential	Evidence of goals that promote compliance with regional and global conventions		1		1			1			0	3	6	
Mode												**2**	**7**	**9**	
Good Governance	Accountability	Existence of staff roles and responsibilities, and reporting and answerability mechanisms	1	6	2	1		1	1	3	1	1	7	1	
	Performance	Mention of staff requirements for wise-use of park resources	14	12	10	11	3	1	2	6	2	9	0	0	
	Transparency	Mention of goals that promote information disclosure to all stakeholders	1	3	1						1	0	4	5	
	Subsidiarity	Management of park by local institution	1	17	1	2					1	1	4	4	
Mode												**11**	**15**	**10**	

Table 7.3 *(continued)*

IUCN Principles	Key Features	Indicators	National Park Management Plans									Overall Score(s)			Combined Performance of management Plans (Mode)
			BLNP	KNP	LcNP	LZNP	LP	LPNP	MwNP	NLNP	NsNP	🟢	🟡	🔴	
Public Participation	Participation in decision-making processes	Mention of goals that promote local participation	4	11	4	1	3	5	4	1	3	4	5	0	🟡
	Co-management partnerships	Mention of co-management partnerships	4	7	4	1	3	2	🔴	3	3	7	1	1	🟢
	Access to information	Mention of goals that promote access to information	🔴	3	🔴	🔴	4	2	🔴	2	🔴	3	1	5	🔴
Mode			🟢🔴	🟡	🟢	🟢🔴	🟢	🟢	🔴	🟢	🟡	**14**	**7**	**6**	🟢
Social Equity and Justice	Community access to resources, equitable distribution of conservation costs and benefits	Reference to access and benefit/cost sharing	4	2	3	1	🔴	7	🔴	1	🔴	1	5	3	🟡
		Existence of dispute resolution mechanisms	1	1	🔴	🔴	🔴	🔴	🔴	🔴	🔴	0	2	7	🔴
		Mention of goals that promote access to resources	🔴	5	1	1	🔴	1	2	🔴	1	1	5	3	🟡
	Intra- and intergenerational equity	Evidence of mechanisms that address the needs of future generations	🔴	6	🔴	🔴	1	1	1	1	1	1	5	3	🟡
Mode			🔴🟡	🟢	🟡🔴	🟡🔴	🔴	🟡	🟡🔴	🟡🔴	🟡🔴	**3**	**17**	**16**	🟡
Total Group Scores												**102**	**73**	**77**	🟢

Distribution of frequencies										
Frequency with which the 28 indicators for the IUCN principles are mentioned and action steps assigned	10 (36%)	17 60.5%	13 (46%)	9 (32%)	10 (36%)	11 (39%)	8 (29%)	12 (43%)	12 (43%)
Frequency with which the 28 indicators for the IUCN principles are mentioned without action steps	9 (32%)	10 (36%)	7 (25%)	11 (39%)	6 (21%)	9 (32%)	9 (32%)	5 (18%)	7 (25%)
Frequency with which the 28 indicators for the IUCN principles are not mentioned	9 (32%)	1 3.5%	8 (29%)	8 (29%)	12 (43%)	8 (29%)	11 (39%)	11 (39%)	9 (32%)
Performance of individual National Park Management plans (Mode)	🟢	🟢	🟢	🟡	🔴	🟢	🔴	🟢	🟢

BLNP = Blue Lagoon National Park General Management Plan (2004-2014)
KNP = Kafue National Park General Management Plan (2012-2022)
LcNP = Lochinvar National Park General Management Plan (2005-2015)
LZNP = Lower Zambezi National Park GMP (2008-2018)
LP = Lusaka Park General Management Plan (2005-2015)
LPNP = Lusenga Plain National Park General Management Plan (2010-2020)
MwNP = Mweru-wa-Ntipa National Park General Management Plan (2010-2020)
NLNP = North Luangwa National Park General Management Plan (2004-2014)
NsNP = Nsumbu National Park General Management Plan (2010-2020)

* Overall score(s) = Summation of scores for each of the IUCN principles
** The indicators used for the management plan principle are different from those used in Table 6.1 in Chapter Six where analysis of the principle focuses on determining whether the laws, policies, and national level plan mention management plans and include information on their preparation. In this table, the analysis of the management plan principle (within actual park management plans) refers to the existence of clear objectives and management strategies.

7.3.1. IUCN principles and Zambia's national park management plans

Table 7.3 shows a total of 252 circles/traffic lights (hereafter referred to as traffic lights) across the nine GMPs and the 28 indicators within the 11 IUCN principles. Of the 252 traffic lights, 103 (41%) show references that mention the IUCN principles along with specific action steps while 73 (29%) traffic lights show the references that mention the IUCN principles but without any action steps that may facilitate implementation. The remaining 30% of the traffic lights show incidences were the IUCN principles are not mentioned or acknowledged.

Table 7.3 also shows that there are a total of 1197 references (shown by the numbers in the traffic light circles) to the 11 IUCN principles across the nine GMPs. Furthermore, 981 of these references (with green traffic lights) include mention of a principle as well as an action step. However, 216 of the references mention a principle (amber traffic lights) but without any action steps.

Using the interpretation key in Table 7.3, it is possible to see which of the specific references to the IUCN principles are linked (or not linked) to action steps. To illustrate, regarding the IUCN Principle of System Planning, Column Three (BLNP), representing the Blue Lagoon National Park GMP (2004), shows that the spatial and temporal scales of treatment indicator is mentioned once (indicated by the number in the circle) but with action steps missing (indicated by the amber traffic light). Similarly, for the same (BLNP) GMP, Column Three shows that the scientific knowledge indicator is mentioned four times along with the required action steps (green traffic light). Furthermore, for the same GMP, Column Three (BLNP) shows that the ecosystem connectivity opportunities indicator of the IUCN system planning principle, is not mentioned at all (red traffic light).

By comparing how the IUCN principles are reflected across the management plans (based on whether they are linked to action steps or not), Table 7.3 shows a high proportion of observations where the principles are mentioned as opposed to where they are not mentioned. Of the 11 IUCN principles, five principles (public participation, management plans, management by conservation objectives, system planning, and

perpetual integrity) are, in most instances, mentioned in the management plans along with action steps while the remaining six principles are, in most instances, either mentioned without action steps or not mentioned at all.

Frequency of references to the indicators of the IUCN principles within individual park management plans

In order to more effectively report on and discuss the results in Table 7.3, the evidence of the presence of the IUCN principles within the GMPs was displayed based on frequency with which the 28 indicators for the IUCN principles are referenced within the park management plans (Figure 7.1). Overall, Figure 7.1 shows little differences in the frequency of references where the indicators to the IUCN principles are mentioned along with action steps and where they are not mentioned at all. While seven of the GMPs show a higher frequency where the principles are mentioned along with action steps, only the Kafue National Park management plan (KNP) shows a significant difference between the references where the principles are mentioned along with action steps and where they are not mentioned at all (17 against 1). This outcome may be attributed to the fact that the KNP management plan is the only plan which mentions the climate change and social equity and justice principles along with action steps. The lack of significant differences in the frequency of references within the majority of the GMPs makes it difficult to unequivocally determine whether these plans are fully aligned or non-aligned with the international principles.

While the differences between the references where the principles and mentioned and not mentioned appear to be insignificant, overall, the paucity of action steps in the management plans, in general, suggests a low likelihood for them to deliver appropriate outcomes in relation to the IUCN principles. Furthermore, this lack of action steps indicates that there is limited knowledge about the IUCN principles among those charged with the responsibility of developing the plans, thus restricting the development of more specific action steps. The full implications of this observation will be discussed in detail in Chapter Eight.

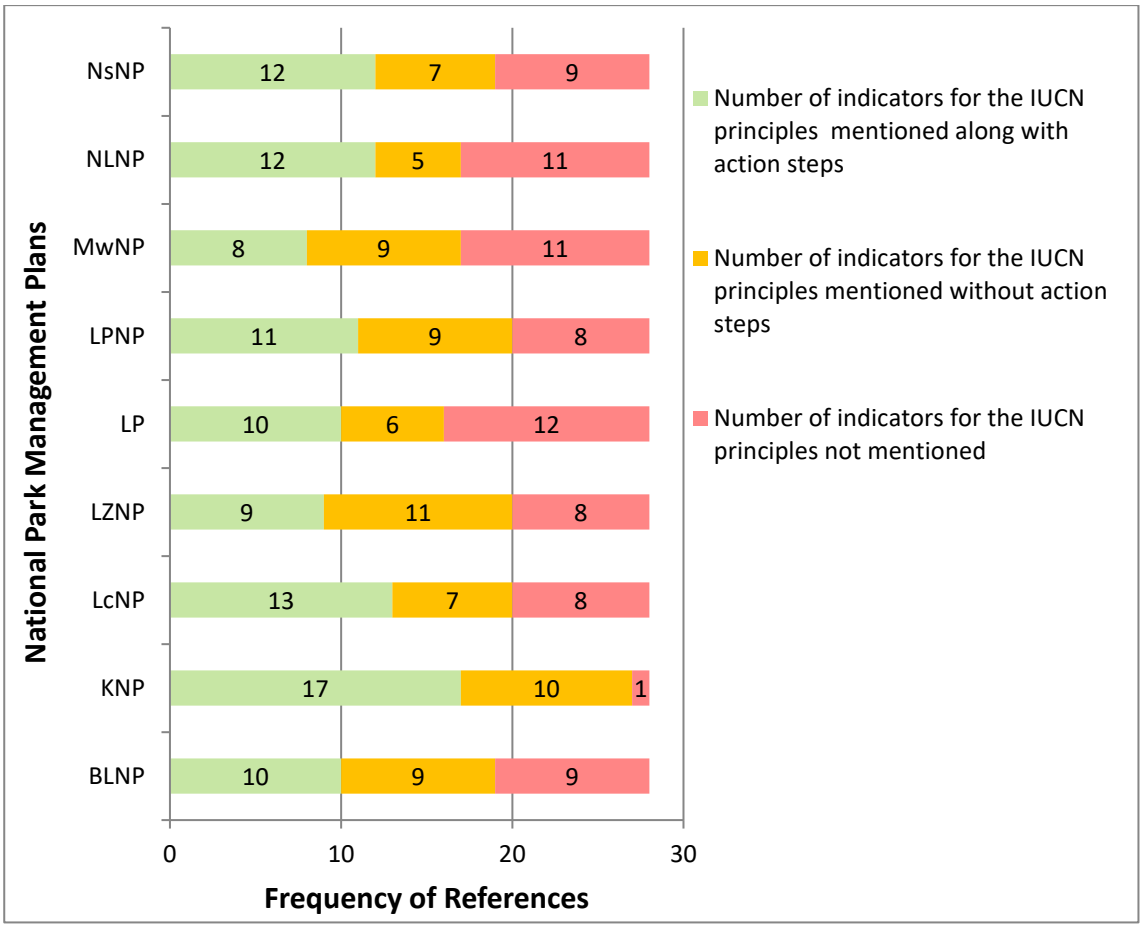

Figure 7.1 *Frequency with which the 28 indicators for the IUCN principles are referenced within the national park management plans*

BLNP = Blue Lagoon National Park Management Plan (2004-2014)
KNP = Kafue National Park Management Plan (2012-2022)
LcNP = Lochinvar National Park General Management Plan (2005-2015)
LP = Lusaka Park General Management Plan (2005-2015)
LZNP = Lower Zambezi National Park GMP (2008-2018)
LPNP = Lusenga Plain National Park Management Plan (2010-2020)
MwNP = Mweru-wa-Ntipa National Park Management Plan (2010-2020)
NLNP = North Luangwa National Park General Management Plan (2004-2014)
NsNP = Nsumbu National Park General Management Plan (2010-2020)

References to the IUCN principles across the park management plans

Table 7.3 also permits the analysis of each of the 11 IUCN principles based on the frequency with which it is mentioned across the GMPs. The most referenced principles across the nine GMPs include management by conservation objectives (329), management plans (295), and system planning (139). In contrast, the principles with the least references include management of climate change (11), taking an international perspective (27), and management of invasive alien species (29). The low frequencies

are of concern because they give an indication of the low importance placed on the principles in the GMPs.

References to the IUCN principles in individual management plans

Analysis of the individual GMPs (column 3 – 11) allows the number of references to the IUCN principles in each plan to be compared. The number of references that could be interpreted as reflecting the principle and/or its indicators, are shown in the circles in Table 7.3. The total number of references to the IUCN principles varies considerably across the nine GMPs. They also vary across the 11 IUCN principles within each park GMP. The number of references to the IUCN Principles within the individual GMPs ranges from 225 to 83. To illustrate, the Kafue National Park GMP has the highest number of references to the IUCN principles (225), followed by the Lochinvar National Park GMP (138). The Lusaka National Park GMP stands out with the lowest number of references to the IUCN principles (83). Appendix C illustrates these differences for all the parks. Considering that the presence or absence of references to a principle may indicate the source's awareness or knowledge of the principle and determine the likelihood of implementation of that principle in the park, information on the frequency of references provided invaluable insight into the robustness of the individual national park management plans.

The following section presents the results of the content and discourse analysis in detail. Examples illustrating how the GMPs reflect the 11 IUCN principles are included to highlight the differences between the plans and to provide site-level information that could be used to contribute to strengthening the integrity and long-success of Zambia's national park system. The section is organised according to the 11 IUCN principles.

7.3.2. Perpetual integrity

The IUCN principle of perpetual integrity in national park management refers to the need to provide safeguards, by the best means available, to ensure the long-term success of national parks. According to the IUCN, a national park should have secure conservation status over the long-term. That is, it should be managed in perpetuity and not as a short-term or temporary management strategy. This has further been detailed

in the work of Lausche (2011). National park management plans should include goals or objectives that will facilitate and promote the long-term security of a protected area designation. Such goals relate to requirements for a national park to be established by a high-level office and have clear legal status with respect to its ownership and land tenure use rights.

All the national park management plans examined in this study include in their appendices a copy of the Statutory Instrument for Gazettment of each of the national parks. A Statutory Instrument for Gazettment is particularly important (in relation to ensuring the perpetual integrity of national parks) because it defines the area set out to be a national park and serves as the legal foundation for securing it over the long term. It is a legally binding instrument and is signed by the President with the consent of the National Assembly. An example of a Statutory Instrument for Gazettment of Lochinvar National Park is attached as Appendix D. The Statutory Instrument for Gazettment for each national park makes it explicit that the national parks have clear legal status as required by the IUCN. It is also clear from the Statutory Instruments that the designation of national parks involves a high policy-making body because they are endorsed by the President. Such endorsement carries considerable weight in securing government's and other stakeholders' commitment to protect and manage national parks over the long term.

The nine management plans also recognise land tenure rights as critical to ensuring the perpetual integrity of national parks. Land tenure conflicts due to unclear park boundaries are among the common challenges reported in the management plans examined in this study. Examples of goals related to land tenure include public education goals to sensitise local communities on the extent of the park boundaries, and operational goals to maintain the park boundaries throughout the year in order to avoid park encroachment by the local communities. All the nine management plans include goals and associated action steps that relate to land tenure rights. Notably, the North Luangwa National Park GMP (2004) includes a goal to prevent land tenure conflicts by clearly demarcating the park boundary:

> Land surveyors and Park Management should remark the park boundary especially the west and south boundaries of the park, which needs to be properly cleared to prevent human encroachment into the park. Beacons that were damaged along the boundary should be checked and replaced. The portion of the boundary that requires urgent attention is the west and south part boundary of the park (p. 50).

Another similar example is found in the Lusenga Plain National Park GMP (2010, p. 50) which outlines the following objective, action steps, and other associated requirements:

> **Management Objective No. 10:** To ensure that the park boundary is clearly marked.
> **Action:** Clearly mark the park boundary.
> **Activity:**
> - Survey the boundary
> - Clear the vegetation along the boundary
> - Place beacons
> - Place signage of park boundary
>
> **How:** Physically visit the site for verifying, marking and clearing the boundary.
> **When:** During 1st year of ratification
> **Materials:** Survey equipment
> **Experts:** Planning Officer/Surveyor, Contractor
> **Where:** Lusenga Plains National Park
> **Who:** ZAWA
> **Time Frame:** Within 6 months of the 1st year
> **Priority:** High
> **Estimated Cost:** US$20,000
> **Source of Funding:** ZAWA, Cooperating partners

These examples do illustrate the goals and objectives in the park management plans that implicitly show an intention to maintain the legal status of the parks with respect to land tenure use rights.

7.3.3. System planning

System planning refers to an organised approach to macro-level conservation planning for protected areas (Lausche, 2011). The analytical framework applied in this study outlines three dimensions of system planning: requirements for use of scientific knowledge, spatial and temporal scales of treatment, and ecosystem connectivity.

Within the management plans examined in this study, there are a total of 139 references that can be interpreted as reflecting these three dimensions of system planning.

Out of the 136 references to system planning, 80 references relate to the use of scientific information for successful plan implementation. The management plans that address this theme included goals and action steps related to the role of research in the implementation of park activities. Common among these research-related goals is the establishment of research and monitoring programmes, and cooperation with other stakeholders (donors, academia, and research institutions) on data collection and analysis.

For example, the management plan for Lower Zambezi National Park GMP (2008, p. 35) discusses the need for scientific information stating that

> [I]nformation about the natural resources of any protected area is important and some basic data still needs to be collected for the area. The plan should strive to ensure that this data is collected through appropriate monitoring and research programmes, and that, funds, equipment, and personnel are adequate for the task.

The Lower Zambezi National Park GMP (2008) also incorporates action steps for research as illustrated in Table 7.4.

Table 7.4 *Research-related objectives and activities from the Lower Zambezi National Park General Management Plan*

NATURAL RESOURCE PROGRAMME				
Objectives	**Strategies**	**Activities**	**Results/Targets/ Monitoring/Evaluation**	**Priority**
Improved information base for management related decisions	*1.1:* Monitoring programme established	Workshop to define simple monitoring programme	Workshop by mid-2008	High
		GIS functional at LZAMU HQ offices	Programmes, data on computers early 2008	High
		Collection and analysis of data	Annual reports	
	1.2: Research programme established	Research priorities set in accordance with ZAWA research guidelines	Document by mid-2008	High
		Active lobbying for researchers (internal or external)	Immediately after priority document available	Medium
		Endangered species research encouraged (*e.g*. elephant, black rhino, lion, wild dog)	Feasibility study for black rhino completed	Medium
		EU-funded environmental study for tourism underway	EU with necessary paperwork for study	High
			Agreed Terms of Reference	High
			Study underway by 2009	High
		Other management orientated research encouraged	See research listing	Medium
	1.3: Adequate staff and equipment for monitoring	Two assistant ecologists	Posts filled by end 2008	High
		Dedicated research vehicle acquired	Vehicle on site by mid-2008	High
		GIS training for ecologists	Training courses early 2008	Medium
	1.4: Liaison with other stakeholders on data collection & analysis	Development of a protocol for data collection and sharing	Protocol established by mid-2008	Medium

Source: Lower Zambezi National Park General Management Plan (2008, p. 43)

There are 50 references across the nine GMPs examined in this study that include requirements for spatial and temporal scales of treatment. While acknowledging this dimension of system planning using terms such as 'holistic' and 'integrated' approach to sustainable use and management of natural resources, most GMPs do not include goals or objectives set to ensure the implementation of this 'integrated' or 'holistic' approach. For instance, the Kafue National Park GMP (2011, p. 174) provides for "harmonising park management with surrounding land uses". While such statements are common across all the management plans, without including any specific action steps or measures to operationalise the statements, the plans in many respects simply play lip service to planning within an ecosystem, integrated or large-scale context.

Of the nine GMPs examined in this study, only three include a goal with associated action steps related to planning within an ecosystem or large-scale context. These include the Lusenga Plain, Mweru-Wa-Ntipa and Nsumbu GMPs. Notably, the Lusenga Plain National Park GMP (2010) considers the areas surrounding the park and has the following management objective and measures for planning within an ecosystem or large-scale context:

> **Management Objective No.2:** To provide an environmental management plan for the park and surrounding areas.
> **Action:** Develop and implement the environmental management plan.
> Activity: Identify areas where there is environmental degradation and link up with suitable mitigation measures.
> **How:**
> - Conduct appropriate conservation awareness campaigns at all levels of society
> - Provide signage wherever possible.
>
> **When:** Ongoing beginning with ratification of GMP.
> **Materials:** Stationery, Testing equipment.
> **Experts:** ZAWA Resident Engineer, ECZ, Kawambwa District Council and Zambia Bureau of Standards (ZBS).
> **Where:** Lusenga Plains National Park and surrounding areas.
> **Who:** ZAWA, Kawambwa District Council.
> **Time Frame:** Ongoing
> **Priority:** High.
> **Estimated Cost:** US$10,000 per year
>
> (Lusenga Plain National Park GMP, 2010, p. 44)

Regarding the ecological connectivity dimension of system planning, they are only nine words coded in the management plans examined in this study. None of the management plans, except the Mweru-wa-Ntipa National Park GMP (2010), provide specific measures on how to achieve ecological connectivity. Even so, the importance of ecological connectivity is acknowledged in all the management plans. For instance, the Kafue National Park GMP (2011, p. 38) explicitly states that it is in "the interest of species conservation to join together fragmented habitat patches into a continuum, a vitally important objective of Transfrontier Conservation Area (TFCA) establishment". Other GMPs also mention ecological connectivity in relation to the promotion of

sustainable conservation programmes in the game management area and formulation of land use plans for areas adjacent to the national parks.

The Mweru-wa-Ntipa National Park has the following management objective and measures for ecological connectivity:

> **Management Objective No. 3:** - To create ecological linkage with other adjacent parks.
> **Problem:** Ecological isolation of Mweru-wa-Ntipa National Park from adjacent parks
> **Action:** Identify corridors
> **Activities:** Sensitisation, assessment of the status of the corridors
> **How:** Research and meetings
> **When:** After the ratification of GMP
> **Where:** Surrounding GMAs and open areas
> **Who:** ZAWA
> **Cost:** US$100,000
> **Materials:** Research equipment, stationery and transport
> **Experts:** Research officers, facilitators
> **Time frame:** Within 3 years
> **Priority:** Low
> **Source:** Donor
> **Constraints:** Funding.
>
> (Mweru-wa-Ntipa National Park GMP, 2010, p. 43)

7.3.4. Management by conservation objectives

Management by conservation objective refers to the need for specific information on the goals and objectives for which a site was designated, and the management category for a site overall, as well as the possibility of different categories for individual zones within a site. All the nine management plans described in this study explicitly address these needs.

A total of 329 references were found across the nine management plans, with 188 references highlighting the goals and objectives for which the sites were designated and the remaining 141 references focusing of the management zones and land use patterns that conform to the established zones. The goals for which the parks are designated

range from purely ecological – such as protection of rare and endemic species - to economic goals related to tourism-based business development, conservation education, and scientific research. For example, the Nsumbu National Park GMP (2010) includes the following goal addressing site designation, with a list of associated park significance statements:

> **Park Purpose**
> The Nsumbu National Park was set aside and established as a National Park to provide for the conservation, protection and management of the mosaic land forms, the freshwater lake and its resources, the rare and endemic Itigi thickets, and the biodiversity of the national park for economic, recreational, educational and scientific purposes.
>
> **Park Significance Statements**
> a) Lake Tanganyika has been waters that offer fish sporting activity.
> b) The cultural sites that are evidence of local people's beliefs.
> c) The park contains the rare and endemic Itigi thickets and the Tanganyika water cobra.
> d) The park has mosaic landforms.
> e) The park is accessed by Air, Road and water.
> f) The park has several sites of Archaeological, Geological and Cultural significance.
> g) The park products and resources can easily be accessed during the dry and wet season.
> h) The park has abundant water for water sporting activities and at the same time serves as a breeding site for the diverse fish species of the Lake Tanganyika.
>
> (Nsumbu National Park GMP, 2010, p. xi)

All the nine management plans described in this study also recognise the need for different management zones within a site with different objectives associated with different IUCN management categories I-VI. They all include several management zones ranging from three to seven. For example, the management plan for the Kafue National Park includes seven management zones namely; Special Conservation Zone, Wilderness Zone, Wild Zone, Intensive Use Zone, Public Access Zone, Exclusive Access Zone and Buffer Zone. Detailed zone descriptions of the restrictions governing each zone, and maps illustrating the extent of each zone are also included. These include, *inter alia*, specific guidance for what is permitted and not permitted in each zone, including the limits of acceptable use as prescribed in the form of restrictions and prohibitions in the

National Parks and Wildlife Act. This level of details gives more specificity to the plan and provides practitioners more information for effective decision-making.

7.3.5. Management plans

The IUCN defines a management plan for a protected area as

> a document which sets out the management approach and goals, together with a framework for decision making, to apply in the protected area over a given period. Plans may be prescriptive, depending upon the purpose for which they are to be used and the legal requirements to be met. The process of planning, the management objectives for the plan and the standards to apply will usually be established in legislation or otherwise set down for protected area planners (Thomas & Middleton, 2003, p. 1).

Following this definition, a management plan should "identify the key features or values of the protected area, clearly establish the management objectives to be met and indicate the actions to be implemented" (Thomas & Middleton, 2003, p. 1).

As discussed above, the nine management plans reported in this study include the goals and values of the national parks, including their management objectives. These elements were the most mentioned in the nine management plans. There is a total of 313 references coded under the 'management plan' principle. According to the IUCN, the key best practice management principles requiring consideration in a protected area management plan relate to the plan content and the process of preparation. These two elements including examples of how some of the park attributes are reflected in the management plans are discussed below.

Process of management plan preparation

All the GMPs reported in this study were prepared by the then Zambia Wildlife Authority (ZAWA). Out of the nine GMPs, five (BLNP, LPNP, MwNP, NLNP and NsNP) explicitly mention that the plan preparation process was funded by international organisations (i.e. the United Nations Development Programme (UNDP), the World-Wide Fund for Nature (WWF) and the Frankfurt Zoological Society).

The process used to prepare a management plan is important to ensure its successful use and implementation (Lausche, 2011). According to the IUCN, the process of plan preparation should be participatory involving all stakeholders affected by the management of the protected area such as tour operators and local communities. This has been further elaborated by Thomas and Middleton (2003) in the IUCN Guidelines for Management Planning of Protected Areas. Broadly, the approach for preparing a management plan include the following steps: establishing participatory mechanisms for the public and stakeholders, collecting relevant data, and identifying and assessing issues and problems, broad goals, conservation objectives, zoning needs, and management actions including regulatory actions and priority activities (Thomas & Middleton, 2003; Lausche, 2011).

All the nine GMPs reported in this study meet these requirements and provide details of how they were produced. A strategic planning process, involving a cross-section of stakeholders was used to develop each of the nine plans. The stakeholders involved included government, civil society organisations, private sector, donors, academia, and local communities. To illustrate, the management plan for Blue Lagoon National Park indicates in its introduction that its development was

> [a]chieved through several steps which involved among others; preliminary data collection and analysis, development of possible scenarios, presentation of findings through workshops to the stakeholders involved, and finalisation of the plan based on the chosen management options (Blue Lagoon National Park GMP, 2004, P. x).

Similarly, the Lusenga Plain National Park GMP (2010, p. 3) outlines the steps that were taken in its preparation, namely

a) pre- fieldwork and baseline data collection phase;
b) reconnaissance field survey and 1st planning workshop phase; and
c) post fieldwork and 2nd planning workshop phase.

Blue Lagoon, Lochinvar, Lusenga Plain, Mweru-Wa-Ntipa and Nsumbu management plans go further to include lists of stakeholders that were involved and consulted in promoting and creating the plan. This inclusion of lists of stakeholders in the plans (e.g.

Appendix IV – VIII in the Blue Lagoon Management Plan) can be taken as a sign for showing that the process was transparent and was influenced by broad representation of stakeholders. Including such information in a plan helps to increase transparency and legitimacy as well as the extent to which a plan is supported and implemented. A management plan is much more likely to be implemented if the affected stakeholders are involved in its development and have a sense of "shared ownership" (Thomas & Middleton, 2003, p. 15).

Plan content

Another best practice management principle that requires consideration within protected areas legislation relates to plan content. Although there is no standard format for a management plan, international guidelines for the content of a plan identify several key components that should be included. According to the IUCN (Lausche, 2011, p.30), a management plan should include the following:

a) Legal description of the area and how it relates to the system plan;
b) protected areas authority in charge and other important governance arrangements;
c) basic description of the resources and conservation values for which the area is being designated, and related human interactions intended to be permitted in the area;
d) conservation objectives and management category for the area;
e) principal threats and management approaches for dealing with them;
f) zoning plan, as needed;
g) kinds of activities permitted and prohibited in the area;
h) monitoring plan; performance criteria for evaluating progress toward goals and objectives, and effectiveness of specific management approaches; and
i) life of the plan and basic cycle for review, revision and updating.

The content of the plans reported in this study show some common patterns which reflect the above elements. The scope and format of the GMPs reported in this study include the following:

(i) A statement of park significance and purpose;

(ii) An analysis of issues and problems;

(iii) A description of exceptional resources and values;

(iv) A proposal that includes

- a management zoning scheme with specific actions and determination of "limits of acceptable use" and interrelated proposals for resource protection and management;
- boundary and land protection recommendations;
- cooperation with associated local and district interests;
- visitor experience, use and interpretation;
- accessibility for disabled visitors;
- park operations;
- a general indication of location, size, capacity, and function of physical development;
- an environmental assessment proposal; and
- a plan implementation schedule and cost estimates.

All the nine GMPs reported in this study include these elements and provide details of the park attributes under each element. Table 7.5 shows an example of some the park attributes reflected in the Nsumbu National Park GMP (2010).

Table 7.5 *Summary of attributes reflected in the Nsumbu National Park General Management Plan*

Park Purpose
The Nsumbu National Park was set aside and established as a national park to provide for the conservation, protection and management of the mosaic land forms, the fresh water lake and its resources, the rare and endemic Itigi thickets, and the biodiversity of the national park for economic, recreational, educational and scientific purposes.
Exceptional Resources and Values
a) Proximity to the Lake Tanganyika b) Presence of the Itigi forest c) Presence of breeding sites of diverse fish species d) The historical, cultural and scenic sites
Natural Resource Management Problems, Concerns, and Challenges
a) Park encroachment b) Poaching c) Waste management d) Land and soil degradation e) Inadequate scientific Information f) Wild fires g) Invasive alien species h) Lack of awareness programmes
Natural Resource Management Objectives
a) To monitor and enforce park boundaries and create awareness amongst surrounding communities b) To reduce poaching levels within the park through sensitisation and law enforcement c) To ensure proper disposal of all liquid and solid waste d) To ensure restoration of depleted and degraded habitats e) To ensure the establishment of both short and long term research and monitoring programmes f) To ensure the development of fire management plan g) To ensure effective control of Invasive Alien Species h) To ensure the use of implementation of Environmental Impact Assessments and Land Use Plans on all development projects in the park
Management Zone Plan
Zone I - Development Zone: Tourist attraction, recreation, heritage conservation and scientific research, administration Zone II -Wilderness Zone: To provide a high level of protection to flora and fauna communities with minimum disturbance and development Zone III –Low Development Zone: Promote small-scale development of infrastructure and associated recreational activities Zone IV - Restoration Zone: Reverse degradation of flora/ fauna communities; opportunity for scientific research studies and re-stocking Zone V - Special Use Zone: Promote small-scale development of infrastructure and associated recreational activities

While the content of the plans reflects some best practice element recommended by the IUCN across the management plans, a striking feature of the plans is the most of the details appears to be repetitive across the different management plans, casting doubt as to whether the individual (site specific) needs of the plans are effectively considered in the plan development processes. To illustrate, the following recommendation on monitoring appears in the Blue Lagoon National Park GMP (2004, p. 53) and six other GMPs:

> Monitoring being the continuous or periodic review of the park's general management plan implementation by park management will be used to assess delivery, identify difficulties, to ascertain problem areas, and to recommend remedial actions. The purpose of monitoring is to ensure the efficient and effective implementation of the proposed management actions. Monitoring the implementation of the proposed management actions will provide timely information on park development and management and will also provide baseline data for future park planning.

This phenomenon repeatedly presented itself in different forms throughout the document review. In many cases, entire sections in the management plans are reproduced word for word from other management plans, suggesting that recycling of sections is common practice with the institution that spearheaded the development of the plan (plan author). Interpretation of this finding is mixed. On one hand, it can be argued that the similarities of the management plans can be viewed as highly relevant to planning since they show the use of a standard template or plan format, and thus a consistent approach to management plan development. If this is the case, it may suggest a desire by the management agency to use a standard format to suit the expected audience, provide quality control, and speed up the plan preparation process.

On the other hand, the similarities of the management plans may suggest a copy-and-paste approach to management plan development. This raises questions of whether the plans are comprehensively validated by the responsible management agency to ensure they address the individual needs of the parks for which they are designed. If this is the case, this finding suggests that a low level of importance is attached to the documents and may explain why the IUCN principles are reflected uniformly across the

management plans. Perhaps avoiding the use of a copy-and-paste approach to management plan development, and individualising each plan based on park values and management objectives will contribute to addressing some of the weaknesses in incorporating the IUCN principles in the management plans.

Monitoring and evaluation plan

An important component of a comprehensive management plan is a monitoring and evaluation plan and is discussed here. Monitoring is defined as "the continuous collection and analysis of information used by management and partners to determine progress on the implementation of activities, achievement of objectives and use of resources" (IUCN 2013, p. 4). Monitoring is, thus, a fundamental part of management. Evaluation on the other hand is "a periodic and systematic assessment, as impartial as possible, of the relevance, effectiveness, efficiency, impact and sustainability of an activity in the context of stated objectives" (IUCN 2013, p. 4). According to the IUCN, the purpose of monitoring and evaluation is three-fold: Learning and improvement; accountability; and evidence-based management (IUCN, 2013). In this context, the pivotal role of monitoring and evaluation is to help understand why and to what extent certain outcomes are achieved, to demonstrate impact and to provide public and internal accountability in resource use (Hockings et al., 2001; Stem et al., 2005; IUCN 2013). Monitoring and evaluation activities also provide an important basis for improved decision-making and for learning lessons for better design and implementation of development interventions. In relation to national parks, establishing and maintaining monitoring and evaluation systems of their key features is an integral part of management without which it is difficult to know whether their aims are being achieved in practice.

Within the national park management plans reported in this study, the terms 'monitoring' and 'evaluation' are not explicitly defined. However, six of the nine management plans acknowledge the importance of monitoring and evaluation in providing timely information on park development and management as well as providing baseline data for future park planning. These plans, however, do not include

detailed indicators, baselines and targets that could facilitate effective monitoring and evaluation. For example, the North Luangwa management plans states that "monitoring will be primarily concerned with the delivery process, ensuring that inputs through activities are transformed into outputs, and analysing their quantity and quality" (p. 108) while "evaluation will be an essential function that will take place at one specific point in time in order to feedback into park management and future direction of park planning, formulation and management" (p. 109). Such statements, while important, are too broad and lack specific information or guidance on how progress towards specific goals and outcome will be assessed in the national parks.

7.3.6. Precautionary principle

The precautionary principle provides that where there are threats of serious or irreversible harm, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation (UN, 1992). Important elements of the precautionary principle included in this study relate to adaptive management and high standard of proof requirements and placing the evidentiary burden on proponents. The precautionary principle acknowledges that there is uncertainty within any system and attempts to minimise this uncertainty through provision of adequate information to enable management to make informed decisions on how to proceed with the developmental proposals.

A total of 75 references to the precautionary principle were found in the nine GMPs examined in this study. The nine GMPs approach the precautionary principle through requirements for adaptive management (14 references) and approaches that demand high standard of proof from development proponents such as the application environmental impact assessment (EIA) (61 references). Adaptive management and EIA are both appropriate approaches in situations of uncertainty (Lausche, 2011; Gregory, Ohlson & Arvai, 2006).

Five of the nine GMPs reported in this study (BLNP, KNP, LcNP, LP and LPNP) mention adaptive management as a factor in management and decision-making. Notably, The Kafue National Park GMP (2011, p. xviii) defines adaptive management as "a continuous

feedback loop between adopted management action and its result that can be modified to attain optimum future actions", and further mentions it in relation to monitoring, evaluation and revision of the plan. The Blue Lagoon National Park GMP (2004) also explicitly mentions adaptive management as the overall approach for its implementation:

> Given that the management of wildlife-protected areas is often conducted under great uncertainty regarding future conditions, it is recommended that an adaptive management approach be adopted in the implementation of the management actions. Such an approach will incorporate fundamental issues of flexibility in management interventions. Importantly, the management actions will be viewed as experiments and implemented in such a manner that they provide useful information about the status and condition of the resources in the Park (Blue Lagoon National Park GMP, 2004, p. 28).

In this light, the concept of adaptive management is recommended as a way of linking the adopted management action and its result with plan revision and future implementation. This approach requires learning about a system through hypothesis testing and using the knowledge acquired to respond to changing conditions and new, unanticipated threats.

The five management plans that mention adaptive management have been designed to be adaptive to changing conditions while supporting diversity and flexibility where possible to mitigate risk. Nevertheless, effective integration of adaptive management within management plan requires a comprehensive monitoring plan which includes detailed information for evaluating progress towards the plan's goals or objectives. None of the plans includes a detailed monitoring plan. Without a comprehensive monitoring plan, adaptive management is unlikely to be achieved.

As mentioned above, the precautionary principle shifts the burden of proof onto those carrying out a risk-imposing activity, requiring them to prove that the proposed activity will not be detrimental to the environment. This requires those carrying out any potentially harmful activity need to provide adequate information before the activity is undertaken. All the plans recognise the need for adequate data to be collected before

undertaking any developmental activity, thus placing the evidentiary burden on project proponents as required by the precautionary principle. Most plans include a section titled "strategic environmental assessment" with a goal to provide guidelines for dealing with environmental consequences of any proposed development projects and activities in the national parks. While the term 'precautionary principle' is not explicitly mentioned, the plans approach this principle through requirements for environmental impact assessments (EIAs). For instance, the Lusenga Plains National Park GMP (2010, p. 71) notes:

> All developmental projects taking place in the Lusenga Plains National Park will be subjected to Environmental Impact Assessments (EIAs). Depending on their nature and magnitude, the implementation of projects will require the preparation of Environmental Project Briefs (EPBs), Environmental Impact Statements (EISs), or Wildlife Impact Reports (WIARs) and Environmental Audit Reports (EARs). The EIAs will be important for making decisions on whether projects should be implemented or not. They will provide for implementation and monitoring through the Environmental Management Plan, which will also include mitigation measures for the identified adverse impacts on the environment and its surrounding environs. An Environmental Project Brief of Full Environmental Impact Assessment study should be prepared for all developmental projects taking place in the National Parks and GMAs depending on the magnitude of the project being embarked upon as stipulated in the Zambia Wildlife Act No. 12 of 1998 and the regulations on Environmental Impact Assessment Regulations Statutory Instrument No.28 of 1997) of the Environmental Protection and Pollution control Act (EPPCA) No. 12 of 1990.

The Lusenga Plains National Park GMP (2010) also includes guidelines that focus on ensuring adequate information is provided by project proponents to combat uncertainty related to developmental activities within the national parks. Specific topics or projects that are subjected to EIAs are also listed in the plans. The basic requirement under this plan is that

> [B]efore the Project Proponent embanks on any site clearing and preparation, construction and operational activities on the potential site of the proposed Tourism Development, the Project Proponent should carry out an Environmental Project Brief study or Environmental Impact Assessment study depending on the magnitude of the Tourism Development and Bed Capacity of the proposed Facility to be submitted to the Environmental Council of Zambia (ECZ) for Approval or

> Rejection through a Decision Letter containing appropriate Conditions (Lusenga Plains National Park GMP, 2010, p. 116).

While such statements on EIAs appear to be duplicated (almost word for word) in seven of the nine GMPs (except for the Kafue and Lower Zambezi GMPs), further examination of the GMPs shows that the current planning processes do not fully cater for detailed environmental studies. The Lower Zambezi National Park GMP (2008) acknowledges this limitation, stating that

> [C]urrently, in terms of the Zambia Wildlife Policy, all General Management Plans for National Parks in Zambia require an environmental assessment. Usually the assessments contained within the management plans are 'statements' rather than 'assessments'. This is because time and money constraints for the planning process do not cater for detailed environmental studies. An important part of these statements is that they draw attention to the potential environmental or sociological impacts of the activities outlined in the plan, and the plan, and recommend future work to be carried out. In many cases the statements, drawn from consensus from experienced personnel and interested and affected parties, will help to differentiate those areas that require further work from those where it is not considered necessary. This will allow available funding and manpower to be focussed on those aspects where it is necessary (Lower Zambezi National Park GMP, 2008, p. 93).

7.3.7. Management of invasive alien species

Management of invasive alien species (IAS) refers to the prevention, early detection, eradication and control of alien species which becomes established in natural or semi-natural ecosystems or habitat, and threatens native biodiversity (IUCN, 2000a). The analytical framework presented in Table 4.5 outlines two important elements on IAS that should feature in comprehensive management plans – mention of, and information on IAS, and strategies for their prevention, early detection, eradication and control.

Within the nine GMPs examined in this study, 29 references to IAS were coded. Of the nine management plans, six plans explicitly mention IAS. While these GMPs acknowledge the importance of adequately addressing the threat of IAS, they do not all include specific goal or volunteer any action steps (control strategies). Of the six GMPs that mention IAS, only two address the management of IAS with a goal and compatible

action steps. Examples from these two plans are highlighted below to illustrate this point.

The Nsumbu National Park GMP (2010) is an explicit example of one that clearly describes the parks overall goal for the control of IAS and includes a set of action steps:

> **Management Objective No. 7:** Effective control of Invasive Alien Species
> **Actions:** Monitoring and evaluation
> **Activity:** Monitoring and surveying of park area for alien vegetation; application of appropriate and effective method of eradication of these alien species.
> **How:** Identify the alien species and application of appropriate method of eliminating these alien species.
> **When:** On going
> **Materials:** Transport, list of species found in the park area
> **Experts:** Ecologists and researchers
> **Where:** Within park area
> **Who:** ZAWA
> **Time Frame:** Ongoing
> **Priority:** High
>
> (Nsumbu National Park General Management Plan, 2010, p. 24)

Not only does the plan provide an overall goal for the control of IAS with associated action steps, it also details specific actions that should be taken to reach this goal. The inclusion of such detail (e.g. as the funding sources to pursue and the institution responsible for implementation) makes the plan more specific, increasing the likelihood of successful implementation.

Another explicit example that describes how the plan goal and actions related to IAS will be carried out is found in the Lochinvar National Park management plan. This plan further identifies the specific IAS (*Mimosa pigra*) to be targeted for control as an IAS and includes the associated budgetary considerations needed to meet the set goal.

> **Management Objective No. 2:** - To control the *Mimosa pigra* and other invasive alien species.
> **Action:** - Harmonisation of management efforts to eradicate the *Mimosa pigra* and other invasive alien species by key stakeholders such as ZESCO, Zambia Sugar Plc, WWF, ECZ, ZAWA, DWA, MAC and MTENR; Engage local communities to

eradicate the *Mimosa pigra* and other invasive alien species by burning and mechanical means.
Activities: - Bring stakeholders together; Local communities & Experts to eradicate the weed.
How: - Holding workshops; Involving experts in invasive alien species eradication & local labour. **When:** - Immediate.
Materials: - Machinery & Fuels for burning the weed.
Where: - On site.
Who: - ZAWA, CRBs, Stakeholders & Experts in invasive alien species eradication.
Time Frame: - On going.
Priority: - Local labour to start immediately.
Budget: - USD 40,000-00
Source of Funding: - WWF, NORAD, GRZ, NGO & Cooperating Partners.

(Lochinvar National Park General Management Plan, 2005, p. 54)

While these GMPs provide explicit examples of plans that address the management of IAS with a goal and compatible action steps, the lack of reference to control strategies for IAS in the majority of plans suggests a lower overall reference to the IAS principle within the management plans and is likely to have implications that may impede implementation of IAS control activities in the national parks.

7.3.8. Management of climate change

National park management plans should address changing climate and its projected effects. The lack of integration of climate change considerations in the Zambian national park management plans is notable. Important elements of the management of climate change principle included in this study relate to the recognition of the threat of climate change and strategies for their management. Overall, there were only 11 references which were corded for managing climate change within the nine GMPs. This is a significant low representation compared to the results of the other principles. As mentioned earlier, the frequency with which a principle appears in a stream of texts indicates the importance of, attention to, or emphasis on that principle. Of the nine plans, only one plan explicitly mentions the importance of managing climate change and has goals set to address its effects. No plan includes thorough climate change considerations which should include adaptation and mitigation measures as recommended by the IUCN (Lausche, 2011).

Only the Kafue National Park GMP (2011, p. xviii) includes a general discussion of climate change. According to this plan, climate change refers to "human-induced changes taking place in the world's climate, especially trends towards global warming, which may deeply impact upon most ecosystems". The plan recognises the threat of climate change and the associated need for best available scientific information. It notes;

> [T]here is clear evidence that both natural and human-induced climate change is influencing global climate, with associated impacts on the environment and human welfare. There is a need for the collection of quality climatic data from at least three station in KNP, north, central and south, which should be made available for international climate monitoring programs. KNP is ideally placed to do this. This situation palpably accentuates the value of KNP in its role of safeguarding ecosystem services for which additional applied research is required (Kafue National Park GMP, 2011, p. 151).

The Kafue National Park management plan also identifies drought and frost are the major threats of climate change in the park and outlines a set of measure to address these threats. While several measures are outlined for drought, no mitigation measures are outlined to address the threat of frost other than "to take note of its impact" and ensure that the habitats already damaged by it are not destroyed by uncontrolled burning (Kafue National Park GMP, 2011, p. 156). The measures outlined for drought include the following:

> a) Careful protection and monitoring of waters resources especially seasonal tributaries of the Kafue and seasonal pools and lagoons.
> b) Being alert to the potential for the integrity of the Park to be jeopardised by local communities and their livestock at times of severe drought.
> c) Considering possibilities for construction of artificial waters sources, wells or boreholes or weirs at times of severe drought bearing in mind the need for EIAs and potential negative as well as positive impacts on animal populations and ecology.
> d) Considering how the developed permanent water supplies at the WPO Outpost on the Western Boundary and elsewhere might be incorporated in response to drought.
>
> (Kafue National Park GMP, 2011, p. 155)

Clearly, this plan is implicit in the types of measures or strategies described that could be used to respond to climate change. Measures such as the ones outlined above lack

demonstrate a general lack of quantifiable targets and details on how to mitigate or adapt to the impacts of climate change.

Overall, the results indicate that while the impacts of climate change are recognised as a major challenge influencing the conservation and sustainable use of national park resources, this awareness is not supported by concrete action steps. This suggests that the management plans in their current form cannot facilitate effective implementation of climate change initiatives in the national parks. This result may further suggest that there is limited capacity within the park management authority to use the best available scientific information to develop site specific adaptation and mitigation measures for addressing the effects of climate change.

7.3.9. Taking an international perspective

Taking an international perspective involves considering events or natural processes that may impact from outside, ranging from the next country, to regional and global. In this study, commitments towards taking an international perspective within the GMPs were examined by considering two important elements: the need to promote regional and global coordination and collaboration; and goals that promote compliance with regional and global conventions. A total of 27 references that can be interpreted as expressing an intention to take an international perspective were found across the nine GMPs.

Out of the nine GMPs reported in this study, six (BLNP, KNP, LcNP, LZNP, LP and MwNP) acknowledge the need for taking an international perspective to ensure a broader approach to national park design and management. The six GMPs acknowledge the need for taking an international perspective: mentioning the need to improve communication with other stakeholders beyond national borders (through exchange of information and development of joint programmes with neighbouring countries) (Kafue National Park GMP, 2011, p. 55); acknowledging the need to provide security and create rapport with international agencies (Mweru-wa-Ntipa National Park GMP, 2010, p. 37); highlighting concerns over Palaearctic migrant birds (Blue Lagoon National Park GMP, p.

15); emphasising a desire to integrate and harmonise the management of natural resources with other neighbouring countries (Kafue National Park GMP, 2011, p. 55).

However, of the six GMPs that acknowledge the need for taking an international perspective, only two GMPs only the Kafue and Lower Zambezi national parks GMPs include goals or objectives related to regional and international collaboration. The Lower Zambezi National GMP (2008) implicitly mentions the importance of taking an international perspective in its relations to the participation, promotion and establishment of a Transfrontier Conservation Area (TFCA). More specifically, the plan states:

> [T]he management of LZNP shall participate and promote efforts aimed at establishing a Transfrontier Conservation Area (TFCA) in the Mana-Lower Zambezi ecological region. Such efforts shall be based on broad based collaborative arrangements involving key stakeholders in the two countries as well as the region (Lower Zambezi National GMP, 2008, p. 2).

This goal refers to considering the biodiversity and conservation needs of nearby national parks, particularly the Mana Pools National Park which is in Zimbabwe. As such, the Lower Zambezi National Park management plan includes a section listing specific ways the park's management authority would collaborate with the management authority in other country.

Similarly, the Kafue National Park GMP (2011) considers natural processes that may impact from outside and includes requirements for regional collaboration. The plan explicitly states that:

> Whilst this GMP is for Kafue National Park (KNP) area alone, the planning process was carried out against the background of integrating the park fully into its role as a major part of the five-country Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) (Kafue National Park GMP, 2011, p. ii).

The Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) involving five countries: Angola, Botswana, Namibia, Zambia and Zimbabwe. Its management

objectives for successful and sustainable co-management of natural resources include, *inter alia*, the development of protocols for the harmonisation of the management of natural resources, researching disease risk and mitigation strategies, and the development of strategies for addressing human/wildlife conflicts. By including goals that link with these management objectives, the Kafue National Park GMP (2011) reflects an international perspective as defined by the IUCN.

There are three references that directly indicate an intention to comply with regional and international conventions across the nine management plans. For example, Kafue National Park GMP (2011, p. 41), reiterates the need to comply with international conventions stating that

> Government and ZAWA shall participate in those international treaties and conventions that are consistent with Zambia's policy for wildlife conservation and use, such as the SADC Wildlife Protocol, Lusaka Agreement Taskforce, CITES, Ramsar, and others that may be formulated by the International community and ratified by Zambia.

While such references do not provide any details on how compliance will be achieved, it is important to note here that 'compliance with' and 'promotion of' regional and global conventions are closely related. As such, the references highlighted in the above discussion on promotion of regional and global conventions could suffice for the compliance dimension as well.

7.3.10. Good governance

The aim of governance is to create a process that is fair, transparent and accountable to all stakeholders (Dudley, 2008). The management plans examined in this study do not explicitly mention the term 'good governance'. However, they contain a total of 105 references that reflect different dimensions of good governance. These references not only indicate the ministry's awareness or knowledge of the importance of the good governance principle in protected areas management but also provides a quantitative account of how its different dimensions are prioritised. The analytical framework developed in this study (Table 5.5) includes four substantive dimensions of the good

governance principle: accountability, transparency, performance and subsidiarity. These have been defined in Chapter 5.

There is a total of 16 references to accountability across the GMPs. Of these 16 references, only three references in the North Luangwa National Park GMP (2004) are associated with action steps (Table 7.3). To illustrate, the North Luangwa National Park GMP (2004) includes a goal to ensure financial accountability in park management. More specifically, the plan seeks to "put in place mechanisms for accountability on all park revenue collected and revenue to be retained for law enforcement and park management" (North Luangwa National Park GMP, 2004, p. 57). The performance dimension of the good governance principle is the most referenced dimension among the four dimensions examined in this study. There are 61 references across the GMPs all of which are associated with action steps (Table 7.3). In general, the need for performance is expressed in relation to the wise use of resources and evaluation of the impacts of the parks' performance across all the GMPs. For example, the Blue Lagoon National Park GMP (2004) outlines seven aspects that management should consider in evaluating the plan's implementation performance. These include effectiveness, efficiency, relevance, validity of design, causality, unanticipated effects, alternative strategies, and sustainability.

These GMPs also highlight the need for transparency in relation to the management and allocation of Tourism and Joint Managements Concessions. Notably, the Kafue National Park GMP (2011, 105), commenting on the management of Tourism and Joint Managements Concessions states:

> All available Tourism and Joint Managements Concessions should be brought into the process as soon as practical to achieve maximum exposure of products in the marketplace and the highest possible level of transparency in the process.

While such statements reflect the need for transparency, there are neither linked to any action steps nor accompanied with detailed explanation of how transparency is to be achieved.

Similarly, subsidiarity is acknowledged by highlighting the need to transfer authority and financial responsibility to site-level management institutions such as the 'Business Centre' established in the Kafue National Park (Kafue National Park GMP, 2011, p.1). Subsidiarity in decision-making is further addressed through collaborative approaches, particularly the involvement of Community Resource Boards (CRBs). CRBs are locally elected bodies that have a legal mandate to negotiate with government and other stakeholders on agreements relating to the management of resources outside the national parks. Involvement of CRBs signals a significant move towards more collaborative and decentralised protected area governance. Notably, the Kafue National Park GMP (2011) includes a goal that addresses subsidiarity in decision making, outlining the following objectives:

a) Effective decentralisation of management responsibility for KNP and the GMAs to the Western Region Office.
b) Effective establishment of the Business Centre.
c) Effective implementation of the Business Plan.
d) Sufficient strengthening of the CRBs so that they can coordinate with ZAWA and the communities.
e) Revise the Park's administrative instructions and make sure that these are provided to all ZAWA KNP staff as soon as possible.
f) Ensure that all reporting and monitoring are done in a timely manner and acted upon without delay.

(Kafue National Park GMP, 2011, p. 183)

While the term ;good governance' or terms that infer its substantive dimensions such as 'accountability' or 'subsidiarity' are not used in the GMPs, the above examples show that the absence of explicit mention on the good governance principle or its substantive dimensions does mean that the GMPs do not acknowledge or promote the principle. The IUCN does state that in protected areas legislation, good governance can also be applied through provision on access to information, public participation and social equity and justice (Lausche, 2011). This appears to be the case with the management plans reported in this study.

7.3.11. Public participation

Public participation constitutes an important principle for a comprehensive national park management plan. A management plan should reveal community participation and identify the stakeholders involved in its development; including how the participation influenced the development process (Thomas & Middleton, 2003). According to the IUCN, public participation in protected areas decision-making should be revealed through community involvement in "exploratory meetings; the identification or verification of (protected area) boundaries; defining conservation objectives and other purposes; laying out rights and responsibilities of all parties; defining management, enforcement and incentive structures; and negotiating a formal contractual agreement" (Lausche, 2011, p. 162). Based on the general description of the public participation principle by the IUCN, three dimensions of public participation were considered in this study: public participation in decision-making; existence of co-management partnerships; and access to information (Borrini-Feyerabend, Dudley, Jaeger, Lassen et al., 2013; Thomas & Middleton, 2003). All the GMPs reported in this study refer to public participation. A total of 74 references addressing the three dimensions public participation were found across the nine GMPs.

The nine GMPs examined in this study include definitive goals with associated measures that indicate a clear commitment to promote public participation in decision-making, co-management partnerships (see Table 7.3). The goals mentioned included broadening local community participation in planning and management processes, involving local communities as co-managers for the sustainable use of natural resources, making information accessible to local communities for them to make informed decisions on matters related to the management and utilisation of the parks, and other considerations such as the establishment of community-based programmes and organisations.

Action steps associated with the goals related to the promotion of public participation in decision-making range from purely operational — such as conducting meetings and awareness programmes — to strategic long-term measures related to establishing CRBs,

Public-Private-Community Partnerships and Joint Management Concessions. For example, the Kafue National Park GMP explicitly provides for the private sector to participate in park management through Joint Management Concessions. It further provides for stakeholders' participation in commercial management, involving the private sector's own institutions such as the Kafue Park Operator's Association (KPOA). Another notable example is found in the North Luangwa National Park GMP (2004). This plan includes the following objectives to encourage local community participation:

a) To conduct environmental conservation education and enhance community awareness on park resources and information exchange between ZAWA staff and the communities especially on issues relating to human/animal conflict.
b) To encourage programmes that improves community involvement in tourism activities & that enable people to have alternative sources of income.
c) To facilitate the preparation and development of land use and management plans in the GMAs in order to harmonize activities such as hunting, photographic safaris, fishing and settlement.
d) To initiate formation of CRBs to strengthen the CBNRM programme in all GMAs surrounding NLNP.
e) To put in place a fishing monitoring system from which action can be taken with special reference to fishing methods.

(North Luangwa National Park GMP, 2004, p. 29).

7.3.12. Social equity and justice

The principle of social equity in protected area management refers to the need for fair distribution of the benefits and costs of conservation among different social groups and individuals (IUCN, 2000b). It recognises that social groups and individuals have different needs, interests, rights to and responsibilities for resources, and that they experience different impacts of conservation and development interventions (IUCN, 2000b). Four dimensions of social equity and justice, namely, community access to resources, equitable distribution of conservation costs and benefits, existence of dispute resolution mechanisms, and intra- and inter-generational equity are emphasised in the analytical framework presented in Table 5.5.

The management plans reported in this study make little reference to the Social equity and justice principles; with a total of 42 references. Only one of the nine GMPs, the Kafue National Park GMP (2011), has explicit goals or objectives set for the social equity and justice principle. However, the language used in most of the plans relate to facilitating community participation in the distribution of benefits from park resources and promoting inter- and inter-generational equity. For example, in relation to the community access to resources and equitable distribution of conservation costs and benefits, the Blue Lagoon National Park GMP (2004, p. 52) has a provision to "facilitate the active participation of local people in the distribution of the benefits from park resources". Similarly, the Kafue National Park GMP (2011) provides for an inclusionary approach for the development of strategic partnerships aimed at helping local communities to access resources and obtain direct economic benefits from the park:

> ZAWA will also encourage the development of business relationships between tourism operators and CBOs. Such relationships will range from simple local employment contracts and contracts for the supply of goods and services, to participation in tourism-based Small and Medium-sized Enterprises (SMEs). The development of these will be up to the initiatives of operators, but ZAWA will encourage partnerships between operators and communities that are based on equity and shareholding among the partners (Kafue National Park GMP, 2011, p. 110).

Unique to the Kafue National Park GMP (2011, p. 145) is a provision that "all interventions take account of the social safeguards required for effective community engagement", which is suggestive of a focus on social equity and justice. The measures set under this provision include the following:

a) Ensure broad community participation in decisions and project benefits. All community members affected by new planning guidelines resource use must participate in decisions affecting their lives and in benefits resulting from sustainable access to resources.
b) Undertake Social Impact Assessments and ensure mitigation measures are sufficient. Community members themselves must be involved in assessing the impact of change on their lives, and the effectiveness of mitigation measures in terms of new benefits.

c) Establish Conflict Resolution Mechanisms. There needs to be a clearly understood mechanism for conflict resolution and easily accessible means for settling grievances.
d) Establish Custodian for the Community Engagement Process. The Community engagement process itself needs a custodian and manager to ensure that all the CBNRM activities conform with the new Wildlife Act, have conservation development linkages and have local level monitoring and evaluation systems.
e) Ensure the social safeguards are in position and that any conflicts among the various institutions involved are resolved. The institution or body performing this role needs to be established as a legal entity with mandate to resolve conflicts.

(Kafue National Park GMP, p. 145, 146)

These measures can be argued to include three of the four dimensions of the social equity and justice principle as they emphasise broad community participation and access to resources, benefit-sharing and establishment of conflict resolution mechanisms.

Furthermore, the need for dispute resolution mechanisms is included through goals and objectives that relate to achieving efficiency in addressing environmental conflicts. Notably, the Kafue National Park GMP recognises the need for clearly understood and easily accessible conflict resolution mechanism for settling grievances and provides for the establishment of such mechanisms. Furthermore, the Kafue National Park GMP (2011, p. 146) includes the following goal:

> Ensure the social safeguards are in position and that any conflicts among the various institutions involved are resolved. The institution or body performing this role needs to be established as a legal entity with mandate to resolve conflicts.

Other examples of goals that indicate the need for dispute resolution mechanisms include outreach and public education goals to ensure comprehensive mitigation of human-wildlife conflicts as well as land use conflicts.

Similarly, goals related to intra- and inter-generational equity are also found in six of the nine GMPs examined in this study (Table 7.3). For example, the Lusaka National Park

GMP (2005, p. 9) asserts that it is designed to "provide a base for long-term conservation education, scientific research and promotion of appropriate tourism for the benefit of the present and future generations".

Considering that only the Kafue National Park GMP (2011) references the social equity and justice principle with associated action steps (Table 7.3), it can be argued that, overall, references to the social equity and justice principle are not sufficiently prescriptive in the GMPs examined in this study. While the four dimensions of the social equity and justice principle are recognised, there are no concrete measures reflected to ensure their practical application. This pattern seems to be common for most of the IUCN principles considered in this study. By not outlining measures or action steps to translate the principles into concrete action, it is unlikely that the goals of the management plans will be fully achieved.

7.4. Conclusion

This chapter presents the results from the analysis of the alignment of nine Zambian national park management plans with the IUCN park management principles. It sheds light on how Zambia's national park management plans respond to international principles, providing park level information needed to comment on the integrity of Zambia's national parks system. The findings of this chapter suggest that the Zambia's national parks' management plans have an explicit strategic intent to implement the IUCN park management principles. Across the nine park management plans examined in this study, 69% of the indicators for the IUCN principles are cited, demonstrating an awareness of the principles and an intention to implement them in the parks.

The results in this chapter not only provides an important reference point in terms of the degree to which Zambia's local (park) level plans are aligned with international principles, but also insight into the potential barriers to the uptake of international principles in Zambia. Key among the barriers identified include a paucity of information and the absence of comprehensive monitoring and evaluation plans to guide how progress towards the management plan goals and outcomes would be assessed.

Furthermore, the results of this chapter, when contrasted with the results of the analysis of national level documents (Chapter Five), reveal that the local level documents (park management plans) are more consistent with the international principles. As such, the picture at the local level is different from the national level, suggesting that the uptake of international principles is exclusive to each level.

The next chapter presents the results of the analysis of the alignment of national park reports with the 11 IUCN park management principles to provide a picture of the documented implementation outcomes of the IUCN principles at park level.

CHAPTER 8. RESULTS: ALIGNMENT OF ZAMBIA'S NATIONAL PARKS' MANAGEMENT REPORTS WITH THE IUCN PARK MANAGEMENT PRINCIPLES

8.1. Introduction

In Chapter Six, the results of the analysis of the alignment of Zambia's national park laws, policies and national level strategic plan with a selected set of IUCN park management principles were presented. Meanwhile, Chapter Seven presented the results of an analysis of the alignment of nine of Zambia's national parks management plans with the IUCN park management principles. These two Chapters have provided national and sub-national/park level information needed to comment on the alignment and robustness of Zambia's national parks laws, policies, and management plans, in relation the IUCN principles.

This chapter moves on to analyse the alignment of Zambia's national parks' management reports with the IUCN management principles, thereby contributing to building a more comprehensive picture of how Zambia's national park system aligns with international principles, and ultimately how it addresses its international obligations. As revealed in Chapter Seven, Zambia's national park management plans at least accommodate the IUCN principles inspirationally. However, while such evidence does demonstrate that the parks have intentions and means to implement the IUCN principles, it falls short in providing detailed information needed to comment on whether these principles are applied in practice. Thus, an understanding of the extent to which the intents of the parks are achieved (or not achieved) in practice (demonstrating whether what is said [rhetoric] is realised in practice), is essential if Zambia's national park system is to be viable in the long-term.

This chapter also includes an example which shows the extent to which the Kafue National Park (KNP) achieves its goals in relation to the 11 IUCN principles. The purpose of presenting this example is to demonstrate how the IUCN principles are incorporated

in one park's management plan and their implementation is reported in the park's annual reports. The Kafue National Park (KNP) was selected for the analysis in this chapter because it was the only park where annual reports were available.

The remainder of this chapter is organised as follows:

- Section 8.2 briefly describes the data and methods used to determine the extent to which the IUCN principles are implemented in Zambia's national parks;
- Section 8.3 presents the results of the analysis of how the evidence of the IUCN principles in eight of Zambia's national park management plans compares with the evidence from the METTPAZ report on the implementation of the IUCN principles in the parks;
- Section 8.4 introduces the example of the Kafue National Park and presents the results of the analysis of how the evidence of the IUCN principles in the park's management plan compares with the evidence from its annual reports (for the years between 2005 and 2011) on the implementation of the IUCN principles in the park; and
- Section 8.5 draws together the main results from the previous two sections to provide further park level information needed to comment on the state of Zambia's national park system and concludes the chapter with remarks on the significance of the key findings.

8.2. Data, methods and analysis

The data and methods that were used to derive the results presented in this chapter are briefly described below. A point to note here is that national park annual reports were inaccessible and alternative data sources had to be used at park level. As earlier discussed in Chapter Five (Section 5.3), the Management Effectiveness Tracking Tool for Protected Areas in Zambia (METTPAZ) report (GRZ, 2007a) was used to derive evidence of implementation of the IUCN principles in Zambia's national parks. While this document was produced in 2007, it was the only document found with comprehensive information on the performance of Zambia's national parks (excluding Lusaka National Park which was established in 2014). As a result, it is clearly acknowledged that an

important limitation of this study is that it cannot offer an any conclusions about the actual levels of policy implementation in the national parks. The results presented in this chapter were interpreted and used within the constraints and boundaries placed by available data and information.

8.2.1. Data from the management plans and METTPAZ report

Two main datasets were used in this chapter. The first data set comprised the management plan references to the IUCN principles, derived from the analysis of nine of Zambia's national park management plans undertaken in this study (Chapter Seven). This dataset provided the evidence of the presence of the IUCN principles in Zambia's national park management plans. The second dataset comprised evidence from a report on the implementation of the 11 IUCN principles in the parks. These data were derived from the content analysis of Zambia's 2007 METTPAZ evaluation report (GRZ, 2007a).

Evidence of the IUCN park management principles mentioned in Zambia's national park management plans

Evidence of 'mention' of the IUCN principles in Zambia's national park management plans was derived from the analysis of nine management plans undertaken in Chapter Seven. The method used is described in section 5.3. Briefly, two criteria were used: (a) the existence of references to the IUCN principles; and (b) whether these references were linked to specific objectives and action steps. The results are shown in Table 7.3 in Chapter Seven.

Evidence of implementation of the IUCN park management principles in the national park reports

The evidence of implementation of each of the IUCN principles in the national park managements was mined from the 2007 METTPAZ evaluation report (GRZ, 2007a). This report was used because it includes detailed information on the performance of Zambia's national parks (excluding Lusaka National Park which was established in 2014). The Report presents information on how well each of Zambia's national parks is being managed – primarily the extent to which it is protecting its values and achieving its conservation goals. The information is presented based on the six management

elements of the IUCN-WCPA framework for conducting Protected Areas Management Evaluation assessments: (i) context (importance of the protected areas in terms of biodiversity and other values and threats and pressures); (ii) planning (design of the protected areas management and work planning); (iii) inputs (the resources needed to run the protected areas effectively); (iv) process (how management is conducted); (v) outputs (whether identified work targets are met); and (vi) outcomes (whether overall objectives are met in terms of conserving biodiversity and other associated values) (Hockings, Stolton, Dudley, Leverington & Courrau, 2006). These data were reviewed and re-expressed within a format based on the 11 IUCN principles to examine the state of Zambia's national park system. A copy of the executive summary of the synthesis of the METTPAZ report (GRZ, 2007b) is attached as Appendix E.

8.2.2. Data analysis

Before presenting the results, it is necessary to briefly explain how the data were analysed. Thematic content analysis was used to extract information regarding the level of implementation of IUCN principles from the METTPAZ report. Key words were used to identify words within the report that referred to each of the 11 IUCN principles. The words provided a method for obtaining data about the level of implementation of each of the IUCN principles in the parks. The text of the METTPAZ evaluation report was analysed in the following way:

i. Examining the text for words referencing the IUCN principles.
ii. Coding each of the words.
iii. Categorising the coded words according to the extent of the implementation described. Categorisation necessitated development of a method 'scoring' the coded words as follows:
    - Green = Good evidence from the report on implementation of the IUCN principle in the national parks.
    - Amber = some evidence from the report on implementation of the IUCN principle in the national parks.

- Red = No evidence from the report on implementation of the IUCN principle in the national parks.

This scoring system was used to score both the mention of the IUCN principles in the management plans and their extent of implementation described in the METTPAZ and annual reports. Figure 8.1 presents three examples of how the coded words from the text of the METTPAZ report were categorised. More specific examples from the METTPAZ report showing the specific words reflecting each of the IUCN principles is provided in Appendix F.

Example 1. The management effectiveness assessment for the Kafue National Park indicates that the park is "managed according to the agreed objectives" and that the "design features effectively contribute to the protected area management objectives" (GRZ, 2007b, p. 14). These statements denote the management by conservation objective principle which refers to the need to manage a protected area according to the goals and objectives for which a site was designated. Both statements show positive evidence of implementation of the management by conservation objective principle and were classified as '*good evidence of implementation of the IUCN principle'*.
Example 2. The management effectiveness assessment for the Nsumbu National Park indicates that there is "ad hoc monitoring and evaluation" (GRZ, 2007b, p. 59). This statement was matched with the 'management plan' principle which requires monitoring of provisions to track how well the goals and objectives are achieved. The statement suggests that there is some form of monitoring and evaluation activities being implemented and was classified as *'some evidence of implementation of the IUCN principle'* due to the phrase 'ad hoc . . .'
Example 3. The management effectiveness assessment for the Blue Lagoon National Park states that "no direct benefit going to the people" (GRZ, 2007b, p. 8). This statement was matched with the social equity and justice principle which refers to the need for fair distribution of the benefits and costs of conservation among different social groups and individuals (IUCN, 2000b). The statement was classified as *'no evidence of implementation of the IUCN principle'* because it suggests no implementation of the social equity and justice principle.

Figure 8.1 *Examples of how the text of the METTPAZ was examined and categorised*

Comparison of the 'mention' and 'Implementation' data sets

A systematic and quantitative method was developed to compare evidence of mention of the IUCN principles in the management plans with the evidence from the METTPAZ report on the implementation of the IUCN principles in the parks. This involved comparing the scores assigned to each principle in the two data sets. The results are shown in Table 8.1. For each of the IUCN principles, the 'mention' and 'implementation'

data sets are visually represented as two concentric circles. In each case, the outer circle represents the evidence of mention of the IUCN principles in the park management plans whilst the inner circle represents the evidence from the reports on implementation of the IUCN principles in the national parks. Furthermore, as in Chapter Six and Seven, a 'traffic light' colour coding system was applied to reflect, on one hand, the extent to which the IUCN principles are mentioned in the management plans and, on the other hand, the extent to which they are implemented in the parks.

8.3. Results: Alignment of METTPAZ report with IUCN principles

The evidence presented in this chapter reveals inconsistent support for the IUCN principles across the Zambian national parks. Rather, the picture is patchy with six parks (Blue Lagoon, Kafue, Lochinvar, Lusenga Plain, North Luangwa, and Nsumbu national parks) scoring high for having acknowledged the IUCN principles and low for having achieved any of their commitments in relation to the IUCN principles. On the other hand, Mweru-Wa-Ntipa National Park scores relatively low on all two variables. In the 'middle group' Lower Zambezi National Park seems to have acknowledged the IUCN principles but without action steps and has not achieved any of its commitments in relation to the IUCN principles. From the example of the 11 IUCN principles and eight national parks in Zambia, none of the parks simultaneously mentions and implements all the IUCN principles, suggesting that the intentions of the parks are not being met.

Nevertheless, it should be noted here that four of the 11 IUCN principles fair well for being mentioned and implemented across all the parks. These include perpetual integrity, management by conservation objectives, management plans, and public participation. This result may be attributed to the type of indicators used to examine the implementation of these principles. The indicators for these principles are in most cases addressed when the parks are established and do not require active management. The indicators for the perpetual integrity principle illustrate this point. All the parks have an official declaration of protected area status obtained at the appropriate level – an element that does not require active management.

Furthermore, there are marked variations in the way the IUCN principles are reflected across the parks. Some principles such as the management of climate change and invasive alien species, and taking an international perspective are neither mentioned nor implemented across the parks. Other principles such as the precautionary principle, good governance, and social equity and justice are mentioned but without action steps, and not implemented. These variations in the way the principles are treated suggest that government support for international principles does not come in a package. It must be deliberately solicited, more so, because adoption and implementation of international principles is subject to local/domestic context. The variations also enable identification of areas where more effort is needed to improve the performance of Zambia's national parks system. Table 8.1 provides support for these propositions.

Table 8.1 *Rating of Zambia's national parks' management plans and METTPAZ report against selected IUCN park management principles*

Key

Intention

= This IUCN principle is mentioned in the management plan along with action steps to achieve it

= This IUCN principle is mentioned in the management plan but without action steps to achieve it

= This IUCN principle is not mentioned in the management plan

Evidence of implementation

= Good evidence of implementation of the IUCN principle in the METTPAZ report

= Some evidence of implementation of the IUCN principle in the METTPAZ report

= No evidence of implementation of the IUCN principle in the METTPAZ report

IUCN Principles	Key Features	Indicators	National Parks								Indicator Mode*	Combined Parks' Scores**
			BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP		
Perpetual Integrity	Secure conservation status over the long term demonstrated through high policy-level designation	Presence of an official declaration of protected area status obtained at the appropriate level										
		Reference to resolve land tenure conflicts										
System Planning	Plan within ecosystem/large-scale context	Mention of spatial and temporal scales of treatment and the relationships between protected areas and other relevant categories of land										
	Long-term science-based site planning	Mention the use of scientific knowledge										
	Consider multiple, complex interactions that occur within an area	Mention of ecosystem connectivity opportunities and needs										
Management by Conservation Objectives	Recognition that management should be in accordance with the goals and objectives for which the site was established.	Mention of the goals and objectives for which the site was established										
	Recognition of the IUCN management categories	Mention of the management zones and land use patterns that conform to the established zones										

Table 8.1 *(Continued)*

IUCN Principles	Key Features	Indicators	National Parks								Indicator Mode*	Combined Parks' Scores**
			BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP		
Management Plans* **	Clear objectives, and management strategies within given timeframes	Existence of management plans										
	Guidelines on the preparation and content of management plans	Mention of monitoring and evaluation plan										
Precautionary Principle	Placing the evidentiary burden on proponents and high standard of proof requirements	Mention of approaches that demand high standard of proof from development proponents										
	Adaptive management	Mention of the use of adaptive management										
Management of Invasive Alien Species	Recognise the threat of invasive alien species	Mention of and information on invasive alien species										
	Prevent the intentional or accidental introduction of Invasive alien species	Mention of IAS control strategies										
Management of Climate Change	Recognition of the threat of climate change	Mention of climate change										
	Clear objectives, targets and management strategies	Mention of climate change adaptation and mitigation goals and measures										
Taking an International Perspective	Regional and global coordination and collaboration	Mention of goals to promote regional and global collaboration										
	Recognises compliance with global and regional conventions as essential	Mention of goals that promote compliance with regional and global conventions										

Table 8.1 *(Continued)*

IUCN Principles	Key Features	Indicators	National Parks								Indicator Mode*	Combined Parks' Scores**
			BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP		
Good Governance	Accountability	Existence of staff roles, reporting and answerability mechanisms										
	Performance	Evidence of staff requirements for wise-use of park resources										
	Transparency	Evidence of goals that promote information disclosure to all stakeholders										
	Subsidiarity	Evidence of management of park by local institution										
Public Participation	Participation in decision-making processes	Mention of public participation in decision making										
	Co-management partnerships	Existence of co-management partnerships										
	Access to information	Existence of mechanisms that facilitate access to information										
Social Equity and Justice	Community access to resources, equitable distribution of conservation costs and benefits	Reference to access and benefit/cost sharing										
		Existence of dispute resolution mechanisms										
		Evidence of goals that promote access to resources										
	Intra- and intergenerational equity	Evidence of mechanisms that address the needs of future generations										
COMBINED TOTAL												

BLNP = Blue Lagoon National Park General Management Plan (2004-2014)
KNP = Kafue National Park General Management Plan (2012-2022)
LcNP = Lochinvar National Park General Management Plan (2005-2015)
LZNP = Lower Zambezi National Park GMP (2008-2018)
LPNP = Lusenga Plain National Park General Management Plan (2010-2020)
MwNP = Mweru-wa-Ntipa National Park General Management Plan (2010-2020)
NLNP = North Luangwa National Park General Management Plan (2004-2014)
NsNP = Nsumbu National Park General Management Plan (2010-2020)

Note:

The 11 IUCN principles are adapted from the IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011). The ratings of Zambia's national parks against the selected IUCN park management principles is based on the results that emerged from the analysis undertaken in Chapter Seven and the analysis of the Management Effectiveness Tracking Tool for Protected Areas in Zambia (METTPAZ) evaluation report of 2007. The vertical axis shows the rating of each of Zambia's national parks against the selected IUCN principles. The final column to the right shows the combined parks' scores (modes) for each IUCN principle whist the bottom row shows the overall score for each of the national parks.

The Lusaka National Park is excluded in the results presented in this chapter. This is because the results are based on the data reported in the 2007 METTPAZ Report. The report does not include the Lusaka National Park as it was established in 2014.

* The indicator mode = the result that appears most often for each indicator across the parks.
** Combined Parks' Scores = combined output for the IUCN principle based on the sum of the indicators
*** The indicators used for the management plan principle are different from those used in Table 6.1 in Chapter Six where analysis of the principle focuses on determining whether the laws, policies, and national level plan mention management plans and include information on their preparation. In this table, the analysis of the management plan principle (within actual park management plans) refers to the existence of clear objectives and management strategies.

8.3.1. IUCN principles in Zambia's national park management plans their implementation in the national parks

Table 8.1 provides a summary from all the eight parks and the 11 IUCN principles expressing how the parks' goals compare with the documented on-the-ground implementation. The table shows a total of 224 pairs of concentric circles/traffic lights (hereafter referred to as traffic lights) across the eight management plans and the 28 indicators within the 11 IUCN principles. Using the interpretation key of Table 8.1, it is possible to see that the table compares the extent to which the IUCN principles are mentioned in the park management plans (indicated by the outer traffic light) with the extent to which they are implemented in the park (indicated by the inner traffic light). To illustrate, regarding the IUCN principle of perpetual integrity, Column Three (BLNP), representing the Blue Lagoon National Park, shows that the presence of an official declaration of protected area status indicator is mentioned in the management plan along with action steps to achieve it (indicated by the green outer traffic light). Further, there is good evidence from the report from the park to implement the IUCN principle (indicated by the green inner traffic light). Similarly, for the same park (BLNP), Column Three shows that the reference to resolve land tenure conflicts indicator is mentioned in the management plan along with action steps to achieve it (indicated by the green outer traffic light) but and there is no evidence from the report from the park on its implementation (indicated by the red inner traffic light).

Of the 224 traffic lights, there are 159 (71%) traffic lights in which the IUCN principles are mentioned, 93 (42%) of these are mentioned along with action steps (green outer traffic lights circles), and 66 (29%) without any action steps to facilitate implementation (amber outer traffic lights circles). In relation to the evidence from the report on the implementation of the IUCN principles, Table 8.1 shows that out of the 244 traffic lights, only 33 (35%) traffic lights show good evidence from the Report of implementation of the IUCN principles (green inner traffic lights). 32 traffic lights (34%) show some (marginal) evidence of implementation (amber inner traffic lights) while the remaining 159 (71%) traffic lights show no evidence from the Report of implementation of the IUCN Principles (red inner traffic lights).

Cross-park comparison

The striking feature of Table 8.1 is that when all the 11 IUCN Principles and eight national parks are considered, it reveals that none of the principles is reported to have been effectively implemented across all the parks. There are significant differences in how the IUCN principles are incorporated and implemented across the parks. These differences can be more clearly seen in the left vertical axis of the table which shows the calculated means scores for each of the 11 IUCN principles across the parks. The highest scoring principles across the parks are the management plans, management by conservation objectives, and perpetual integrity principles. These three IUCN principles are incorporated across all the management plans along with action steps and there is some evidence from the Report on their implementation in the parks. Overall, the 11 IUCN principles are incorporated in the management plans but with action steps missing and their implementation in practice is poorly described in the Report.

An interesting point to note here is that the four prominent principles capture ecologically-oriented commitments such as the designation of national parks, establishment of management zones, development of management plans, and monitoring and evaluation plans - key management commitments which generally focus on protecting the core of a protected area. The other principles such as social equity and justice, which capture socially-oriented commitments, are almost entirely absent in the management plans or have been mentioned without any action steps. This observation can be interpreted in two different ways. On one hand, it can be argued that the high representation of the perpetual integrity, management plans, and management by conservation objectives principles in the national park management plans likely reflects a greater degree of understanding and experience regarding these principles. On the other hand, solely focusing on a few principles that aim at protecting the core of the national parks, appears to advance a preservation-oriented approach, suggesting a bias towards the more ecologically oriented principles. The implications of this finding will be discussed further in the next chapter.

Among the principles with no evidence from the Report of implementation three IUCN principles are heavily represented: social equity and justice; governance; and management of climate change and IAS. The indicator column of the table points to a lack of mechanisms or protocols for effective implementation of these principles. These results also suggest, to a lesser extent, a lack of purpose, evidenced by the absence of explicit goals and action steps for the principles. One possible reason for this lack of purpose could be the lack of formal knowledge among the management plan authors (planners) regarding the development of goals and action steps that can foster implementation of the IUCN principles. If planners have ample knowledge on the IUCN principles, they would more likely articulate explicit goals and targets necessary for their implementation. This would allow development of management plans that more comprehensively reflect the principles, that is, with quantifiable targets and action steps. These findings will be discussed in greater detail in Chapter Nine.

Within-park comparison

Analysis of the individual park scores gives another perspective on how the IUCN principles are reflected within the parks. The salient feature to note in Table 8.1 is the uniformity in how the parks incorporate and implement the 11 IUCN Principles as shown by the modal group score in the bottom horizontal axis. However, further analysis of individual park scores shows that some parks perform better than others, with the Kafue National Park (KNP) having the highest scores. Column Four (KNP), representing the Kafue National Park shows that this park scores strongly for having incorporated the IUCN principles in 61% of the traffic lights (green outer circles). However, for the same park, 64% of the traffic lights show no evidence of implementation (red inner circles). The second highest scores are achieved by the North Luangwa National Park (NLNP) which scores strongly for having mentioned the principles along with action steps in 63% of the traffic lights (green outer circles) but failed achieve any of its commitments in 57% of the traffic lights (red inner circles). These scores indicate that the park management plans incorporate some of the IUCN principles, but these are either not implemented in the parks or, if implemented, not reported. In other words, the mention of the principles in the management plans remains to a larger extent a theory rather than being converted into practice.

In order to more effectively report on and discuss the results in Table 8.1, the extent to which the IUCN principles are 'mentioned' in Zambia's national park management plans and 'implemented' in the parks were summarised and displayed in Table 8.2.

Table 8.2 shows that the intentions of the parks are not met. The table shows that the parks have explicit intentions to implement the international principles. However, these intentions are not translated into practice. To illustrate, for the sample, the table shows that 71% (42% + 29%) of the indicators for the IUCN principles are mentioned in the park management plans. However, only 15% of the indicators for the IUCN principles appear to have been implemented in the parks. For the remaining 85% of the indicators, 14% show some evidence of implementation while 71% show no evidence of implementation in the parks. This indicates that the parks perform poorly for having achieved any of their commitments in relation to the IUCN park management principles.

Table 8.2 *Comparison of Zambia's national parks' management plans intentions with evidence of their implementation in the METTPAZ report**

Description		National Parks								Combined Total
		BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP	
Intention	**Frequency with which the 28 indicators of the IUCN principles are mentioned in Zambia's national park management plans**									
	No. of indicators of the IUCN principles mentioned in the management plans along with required action steps	10 (36%)	17 (61%)	13 (46%)	9 (32%)	11 (39%)	9 (32%)	12 (43%)	12 (43%)	**93 (42%)**
	No. of indicators of the IUCN principles mentioned in the management plans but action steps missing	9 (32%)	10 (36%)	7 (25%)	10 (36%)	9 (32%)	9 (32%)	5 (18%)	7 (25%)	**66 (29%)**
	No. of indicators of the IUCN principles not mentioned in the management plans	9 (32%)	1 (4%)	8 (29%)	9 (32%)	8 (29%)	10 (36%)	11 (39%)	9 (32%)	**65 (29%)**
Evidence	**Frequency with which the 28 indicators of the IUCN principles are mentioned the METTPAZ report**									
	No. of indicators of the IUCN principles with good evidence of implementation in the parks	5 (18%)	6 (21%)	3 (11%)	2 (7%)	3 (11%)	4 (14%)	8 (29%)	2 (7%)	**33 (15%)**
	No. of indicators of the IUCN principles with some evidence of implementation in the parks	3 (11%)	4 (14%)	2 (7%)	4 (14%)	3 (11%)	5 (18%)	4 (14%)	7 (25%)	**32 (14%)**
	No. of indicators of the IUCN principles with no evidence of implementation in the parks	20 (71%)	18 (64%)	23 (82%)	22 (79%)	22 (79%)	19 (68%)	16 (5%)	19 (68%)	**159 (71%)**

*Aggregated data from Tables 7.3 and 8.1

BLNP = Blue Lagoon National Park General Management Plan (2004-2014)
LPNP = Lusenga Plain National Park General Management Plan (2010-2020)
KNP = Kafue National Park General Management Plan (2012-2022)
MwNP = Mweru-wa-Ntipa National Park General Management Plan (2010-2020)
LcNP = Lochinvar National Park General Management Plan (2005-2015)
NLNP = North Luangwa National Park General Management Plan (2004-2014)
LZNP = Lower Zambezi National Park GMP (2008-2018)
NsNP = Nsumbu National Park General Management Plan (2010-2020)

8.4. The Example of the Kafue National Park

Analysis of Table 8.2, which is based on the data obtained from eight management plans and the METTPAZ report, shows that Zambia's national park management plans insufficient. To strengthen the picture obtained from the analysis of the management plans and the METTPAZ report, the performance of one park, the Kafue National Park (KNP) was examined further. This involved undertaking a content analysis of six annual reports from the KNP to extract information regarding the level of implementation of the 11 IUCN principles. The content analysis was conducted in the same way for the annual reports as the METTPAZ report.

The examination of data from the Kafue National Park provides an example of how the IUCN park principles are incorporated in one park's management plan and how their implementation is reported in the park's annual reports. The aim of presenting this example is to validate the observations made using data from the METTPAZ report and to amplify the picture of the implementation status of the IUCN principles in Zambia's national parks.

The Kafue National Park (KNP) was selected for analysis in this study because it displays a suitable representation of the threats and pressures common in the Zambian national parks. It has experienced major agricultural development in the past, and is currently experiencing pressure from poaching, human encroachment, deforestation and mining development. Yet, the park is not only a sanctuary for diverse fauna and flora but is also important in maintaining ecosystem services such as water catchment protection, biodiversity conservation and carbon sequestration. The KNP also has tremendous socio-economic, cultural and environmental value for the Zambian population. The KNP is, therefore, a good example because it provides a suitable yardstick against which to assess the extent to which national parks achieve their aspirational goals and objectives in relation to the IUCN park management principles in Zambia.

Furthermore, the KNP was selected because it was the only park with filed annual reports for several years (2005 to 2011). Fortuitously, the KNP had the highest scores

for having mentioned the IUCN principles along with action steps in its management plan as compared to the other parks reported in this study (see Chapter Six). Therefore, the selection of the KNP was also based on the idea that analysis of data from the 'best' performing park could go a long way in highlighting the paucity of information and the desperate need for interventions in the other parks which do not perform as well as the KNP.

Kafue National Park: setting

Kafue National Park was proclaimed in 1950 and designated in 1972 as a national park conforming to IUCN's category II of protected areas. It covers an area of 22,480 km^2 and consists mainly of Miombo woodland, providing the largest coverage of Miombo woodland in a protected area in Africa. The KNP is located between 14°03" and 16°43" south and 25°13" and 26°46" east in the south-western part of Zambia. With nine Game Management Areas (GMAs) surrounding it, the KNP forms the central part of a protected area of nearly 68,000 km^2, making it one of the biggest game sanctuaries in Africa. The KNP is important for its prolific wildlife, hundreds of bird species, diverse vegetation types, game fish, and water resources due to the Kafue River that bisects it (ZAWA, 2004). However, the character of KNP cannot be described by reference to its environment alone; it is also characterised by poor institutional and management structures, degraded habitat, and declining wildlife numbers. These are generally attributed to several factors including poor management, mining, poaching, habitat conversion, deforestation, invasive alien species (Simukonda, 2011; Watson et al., 2014b; GRZ, 2015a) and uncontrolled burning as a result of increasingly intense land use along its borders (Lindsey et al., 2014). The main management objective of the KNP is nature conservation, although the park is one of several Zambian national parks adapted for tourism purposes. Also important are the economic activities among the communities living adjacent to the KNP and its surrounding GMAs. These include agriculture, fishing, mining and tourism. The KNP is within easy day-visit distance from the capital Lusaka receiving over 5,000 visitors per year (Lindsey et al., 2014). The level of tourist visitations and the earning from tourism in the KNP are low in comparison with other major parks in the other countries (Lindsey et al., 2014).

8.4.1. Data from the Kafue National Park annual reports

The data used in this part of the study included six annual reports from the KNP for the years between 2005 - 2011 (excluding the 2008 report, which could not be found). National park annual reports are the principal tools of accountability and are an importance source of information on national park operations (Thomas & Middleton, 2003). They indicate the management and conservation promotion activities undertaken for the year and enable an evaluation of how much of the planned programmes have been completed (Thomas & Middleton, 2003). By examining the information contained in the six annual reports in relation to the 11 IUCN principles, the study provides further insights into the extent to which the 11 IUCN principles are implemented at site level. The evidence of mention of the 11 IUCN principles within the KNP management plan (in Chapter Seven) also formed part of the primary source of data collection.

The same method and analysis conducted in the previous sections was used in this case study. Content and discourse analyses were used to determine the reported level of implementation of each of the IUCN principles within the park's annual reports. A summary of the results of how the IUCN principles are incorporated and implemented is presented in Table 8.5.

8.4.2. Results: Alignment of Kafue national Park annual reports with IUCN principles

The evidence presented in Table 8.3 also reveals the inconsistent support of the IUCN park management principles in the Kafue National Park. When all the annual reports and 11 IUCN principles are considered together, the results reveal that only four (perpetual integrity, management plans, public participation, and social equity and justice) of the 11 park management IUCN principles are successfully implemented in the parks (or at least on paper). Low performance scores are obtained in relation to system planning, management by conservation objectives, management of invasive alien species and climate change, and good governance. Among these, the management of

climate change has the lowest combined score, suggesting that more effort will be required to address the climate change principle.

Furthermore, the results do not show any significant improvements in the performance of the park over the years. This is illustrated by the consistent pattern of outcomes between 2005 and 2011. This result may be attributed to the quality of the annual reports, which appear to be duplicated over the years.

When compared with the results highlighted in the previous section (i.e. the results from the analysis of the METTPAZ report presented in Table 8.1), the results presented in Table 8.3 show significant similarities with three key exceptions:

(i) The results obtained using data from the annual reports (Table 8.3) shows evidence of implementation of the social equity and justice principle. This is not the case in the results obtained using data from the METTPAZ report (Table 8.1).

(ii) The annual report show instances were some principles are implemented without being mentioned in the management plans. The public participation principle illustrate this point. This principle is, in most cases, mentioned without action steps in the KNP Management Plan (2011). However, there is good evidence from the annual reports of its implementation in the park. This insight stresses the importance of having flexible management plans as the principles prioritised during the plan development phase, can differ significantly from those prioritised during the implementation phase.

(iii) The results demonstrate that the annual reports have more detailed information on the IUCN principles than the METTPAZ reports. This result is expected as the annual reports are mainly designed to report on all park operations. Furthermore, it also emphasises the importance of annual reports as a key decision-making tool for national park management.

Overall, while the results show comprehensive coverage of the IUCN principles in the Kafue National Park, the strategic intents of the park in relation to the 11 IUCN principles are insufficiently translated into action as elsewhere in Zambia. Considering that the results from the analysis of the METTPAZ report showed the KNP as the 'best' performing park, its low performance (as indicated by the results of the analysis of its annual reports), suggests that the other parks perform at a significantly lower level.

Table 8.3 *Rating of the Kafue National Park Management Plan and its annual reports against selected IUCN park management principles*

Key

Intention

= This IUCN principle is mentioned in the management plan along with action steps to achieve it

= This IUCN principle is mentioned in the management plan but without action steps to achieve it

= This IUCN principle is not mentioned in the management plan

Evidence of implementation

= Good evidence of the IUCN principle in the Kafue National Park annual reports

= Some evidence of the IUCN principle in the Kafue National Park annual reports

= No evidence of the IUCN principle in the Kafue National Park annual reports.

IUCN Principle	Key Features	Indicators	Kafue National Park Annual Reports						Indicator Mode*	Combined Parks' Scores**
			KNP 2005	KNP 2006	KNP 2007	KNP 2008	KNP 2010	KNP 2011		
Perpetual integrity	Secure conservation status over the long term demonstrated through high policy-level designation	Presence of an official declaration of protected area status obtained at the appropriate level								
		Reference to resolve land tenure conflicts								
System Planning	Plan within ecosystem/large-scale context	Mention of spatial and temporal scales of treatment and the relationships between protected areas and other relevant categories of land								
	Long-term science-based site planning	Mention the use of scientific knowledge								
	Consider multiple, complex interactions that occur within an area	Mention of ecosystem connectivity opportunities and needs								
Management by conservation objectives	Recognition that management should be in accordance with the goals and objectives for which the site was established.	**Mention of the goals and objectives for which the site was designated**								
	Recognition of the IUCN management categories	Mention of the management zones and land use patterns that conform to the established zones								

Table 8.3 *(Continued)*

IUCN Principles	Key features	Indicators	Kafue National Park Annual Reports						Indicator Mode*	Combined Parks' Scores**
			KNP 2005	KNP 2006	KNP 2007	KNP 2008	KNP 2010	KNP 2011		
Management plans	Clear objectives, and management strategies within given timeframes	Existence of management plans								
	Guidelines on the preparation and content of management plans	Presence of a monitoring and evaluation plan								
Precautionary principle	Placing the evidentiary burden on proponents and high standard of proof requirements	Mention of approaches that demand high standard of proof from development proponents								
	Adaptive management	Mention of the use of adaptive management								
Management of invasive alien species	Recognise the threat of invasive alien species	Mention of and information on invasive alien species								
	Prevent the intentional or accidental introduction of Invasive alien species	Presence of IAS control strategies								
Management of climate change	Recognition of the threat of climate change	Mention of climate change								
	Clear objectives, targets and management strategies	Presence of climate change adaptation and mitigation goals and measures								
Taking an international perspective	Regional and global coordination and collaboration	Presence of goals to promote regional and global collaboration								
	Recognises compliance with global and regional conventions as essential	Presence of goals that promote compliance with regional and global conventions								

Table 8.3 *(Continued)*

IUCN Principle	Key features	Indicator	Kafue National Park Annual Reports						Indicator Mode*	Combined Parks' Scores**
			KNP 2005	KNP 2006	KNP 2007	KNP 2008	KNP 2010	KNP 2011		
Good governance	Accountability	Existence of staff roles, reporting and answerability mechanisms								
	Performance	Mention of staff requirements for wise-use of park resources								
	Transparency	Presence of goals that promote information disclosure to all stakeholders								
	Subsidiarity	Management of park by local institution								
Public participation	Participation in decision-making processes	Mention of public participation in decision making								
	Co-management partnerships	Existence of co-management partnerships								
	Access to information	Existence of mechanisms that facilitate access to information								
Social equity and justice	Community access to resources, equitable distribution of conservation costs and benefits	Reference to access and benefit/cost sharing								
		Presence of dispute resolution mechanisms								
		Presence of goals that promote access to resources								
	Intra- and intergenerational equity	Evidence of mechanisms that address the needs of future generations								
TOTAL										

KNP 2005 = Kafue National Park annual report, 2005
KNP 2006 = Kafue National Park annual report, 2006
KNP 2007 = Kafue National Park annual report, 2007
KNP 2009 = Kafue National Park annual report, 2009
KNP 2010 = Kafue National Park annual report, 2010
KNP 2011 = Kafue National Park annual report, 2011

* The indicator mode = the result that appears most often for each indicator across the parks
** Combined Parks' Scores = combined output for the principle based on the sum of the indicators

8.5. Conclusion

This chapter has presented the results of the analysis of the alignment of Zambia's national park reports with the IUCN park management principles. The chapter also focused on determining the extent to which the IUCN park principles are achieved (or not achieved) in Zambia's national parks, to demonstrate whether what is said (rhetoric) is realised in practice (at least as suggested by the reports). The chapter shows how Zambia's national park management and planning structures implement and report on the IUCN park management principles, addressing research objective (iv).

The findings of the chapter reveal inconsistent support for the IUCN principles across the Zambian national parks. Only four of the 11 IUCN principles fair well for being mentioned and implemented across all the parks. Focusing on the 'marginalised' principles (principles with little evidence of implementation) reveals three specific areas of either poor or missing performance in the Zambian national parks: lack of or poor social equity and justice; lack of or poor governance; and lack of or poor management of climate change and IAS. These findings not only provide insight into the principles requiring further attention but also facilitate identification of the individual national parks where more effort is needed. They point to the need for information alongside technical expertise to support the implementation of international environmental commitments that Zambia has signed and agreed to implement.

The next chapter discusses the empirical findings, focusing on the major themes identified in the three results chapters. It draws together the research findings, literature review, and the researcher's critical reflections to make recommendations for policy and park management that may help to improve national park management in the Zambian context.

CHAPTER 9. DISCUSSION

9.1. Introduction

This study drew on international and local literature on sustainable development and policy transfer and data collected from Zambia's national park laws, policies, plans and reports, as well as the researcher's critical reflection to help understand Zambia's response to international principles for national park management best practice. Zambia's national park laws, policies, plans and reports were examined using, as an analytical framework, a set of 11 IUCN park management principles (PMPs). This framework enabled a systematic assessment of the documents, yielding important information to not only explain the robustness of the documents but also reveal specific areas where enhancements may be added to improve chances of translating the IUCN PMPs into practice.

Translating global principles into practice is a complex task. This was confirmed in the review of literature on policy transfer and sustainable development implementation. This is further confirmed by the research results from this study which showed that despite the mention of the IUCN PMPs, the Zambian policy documents are largely void of explicit definitions and action steps to translate the IUCN principles into practice. In addition, four general barriers to effective transfer of the international principles into the policy documents stand out: (i) a lack of information; (ii) a lack of technical capacities; (iii) inadequate monitoring and evaluation; and (iv) inadequate implementation mechanisms. These barriers are also eminent in the failure of sustainable development implementation in national parks, particularly in the Global South.

This discussion integrates the main research findings and the researcher's critical reflections to understand the implications of the study outcomes on policy transfer and sustainable development implementation in Zambia's national parks system. In addition, the relevance of the study to the general body of literature on policy transfer and the implementation of IEAs is presented. Together, these sections highlight how this study contributes to advancing understanding of policy transfer processes and

sustainable development implementation. Furthermore, the sections provide good practice insights that may be transferable to other countries, particularly in the Global South.

9.2. The use of international principles

The first research objective of this study was to identify the key international principles required for effective national park management. Principles (fundamental standards or propositions about the strategic purpose and rationale underpinning legal rules) are widely acknowledged in literature as one mechanism for influencing domestic implementation of international agreements (Maurer, Ehlers & Buchman, 2003; Banakar & Travers, 2005; Howard, 2015). Several international policy-related studies have shown that their implementation can lead to effective protected areas management (Vanderzwaag et al., 2012; Yates, Payo & Schoeman, 2013; Fauchald, Gulbrandsen & Zachrisson, 2014; Hassan & Hameed, 2016). Despite these advantages, two major challenges associated with the use of international principles were identified. Firstly, the selection of key principles is, in general, associated with subjective judgments. The large number of principles makes it somewhat difficult to identify the overarching principles for national park management. With limited consensus on a comprehensive set of key principles for national park management and/or explicit methods to guarantee consistent and meaningful selection of key principles, there is a high degree of arbitrariness in their selection and use. Globally, policy makers and researchers use different combinations of international principles for national park management.

Secondly, evaluation of the application of international principles is complex. There are no generally accepted performance metrics or indicators to monitor the relative degree of implementation of international principles. From the example of the 11 IUCN park management principles considered in this study, there was no single guiding document found on the precise indicators or performance metrics for monitoring any of the IUCN principles. The difficulty in finding specific performance metrics or indicators to monitor the implementation of the principles hints at the problems in translating the seemingly

straight-forward idea of environmental principles. Environmental principles are complex. They comprise "many interconnected variables, and their complexity and complicatedness, confound simple analysis" (Martin et al., 2016, p. 120). Even so, documenting levels of implementation of global principles is a necessity for both researchers and practitioners, in part because 'what gets measured gets done.'

The lack of consensus on a comprehensive set of principles and the complexity in finding specific measurement units or indicators pose a challenge to research and policy analysis as well as to policy-making and implementation. Implications includes, *inter alia*, difficulties in assessing progress toward achieving the individual principles and undertaking cross-country comparisons of performance within the context of sustainable development. These challenges also show that current research still neglects important details (pre-requisite steps) for effective policy transfer and implementation. Without explicit guidance or methods to guarantee consistency and meaningfulness identification and assessment of international principles, their identification, collation or quantification, will continue to be associated with subjective judgments. As such, more information and scientifically sound measurement systems are obviously called for to structure the complexity implicated by the multi-dimensionality of national park sustainability. Thus, the overarching challenge is to develop a robust methodological foundation for selecting the key international principles, including particularly for identifying which stakeholders' views should be taken as the basis for the exercise.

This study's contribution lies in the guidance it has provided for the hitherto under-developed area of policy transfer. It provides useful information that can guide policymakers on what needs to be focused on in ensuring alignment of national park policies. The study identifies the key international park management principles and develops a conceptual framework for the examination of national park policy documents. The international principles identified are part of the background expectations of stakeholders at different governance levels that they form an essential basis for effective national park policy frameworks. Therefore, the study makes a good

contribution to literature as it specifies the principles that policymakers may use as an essential basis for effective national park policies within the context of sustainable development and shows what policymakers need to focus on to encourage effective policy transfer.

9.3. Implementation of international principles

The sub-national level analysis focused on national park management plans because these provide the essential basis for achieving success in meeting a country's conservation commitments at the park level. National park management plans guide conservation actions and provide a framework for evaluating conservation achievements (Bottrill & Pressey, 2012) at sub-national/park level. As such, they should include evaluative mechanisms and clearly define the expected outputs and the activities involved in their delivery (Talen, 1996).

Laurian et al. (2004, p. 472), claim that "the implementation of plans is conditioned by several aspects of planning practice: … [including] the inclusion in the plan of provisions for implementation and of management techniques to implement plan policies". The results obtained in this study show that this is, to a large extent, the case in Zambia. From the example of the nine national parks examined in this study, none of them simultaneously incorporates and implements the international principles to a satisfactory extent. These results suggest that while the parks' management plans may have explicit intentions to implement the international principles, the strong rhetoric and good intentions regarding the international principles are not carried through due to lack of funding. Consequently, the intentions of the parks are not met.

Similar results have been reported elsewhere by other researchers such as Gomar et al. (2014), Zinngrebe (2018) and Gelcich et al. (2018). Gomar et al. (2014), for example, concluded that national scale implementation of international principles has lagged due to weak feedback loops between governance levels. These claims are supported by the findings of this study which has also shown weak feedback loops in Zambia because of the absence of comprehensive data collection and reporting systems.

Other studies on the implementation of international environmental conventions have reported similar findings elsewhere (e.g. Chayes, Chayes & Mitchell, 2000; Brown Weiss & Jacobson, 2000). These studies suggest that difficulties encountered during the implementation process (rather than a conscious choice to refrain from implementation) are the reasons why states fail to implement international principles. Therefore, identifying and addressing these difficulties could greatly enhance implementation outcomes.

Additional studies have identified such implementation difficulties (Bruner, Gullison, Rice, & da Fonseca, 2001; CBD, 2003; Leverington, Costa, Pavese, Lisle, & Hockings, 2010; Yates, Payo Payo & Schoeman, 2013). For example, Bruner et al. (2001) identified poor funding as the primary reason for the poor implementation in protected areas, especially in the Global South. Similarly, the Secretariat of Convention on Biological Diversity (CBD, 2003) noted that less than 6% of the countries that reported on the performance of protected areas in 2003 indicated that resources for management of protected areas were adequate.

Other factors that undermine effective implementation of international conventions include poor governance quality and bureaucratic inefficiency (Borrini-Feyerabend, Dudley, Jaeger et al., 2013) as well as political corruption and armed conflict (Irland, 2008). Similar challenges were identified in Zambia (Lindsey et al., 2014; Aongola et al., 2009). According to Aongola et al. (2009), government budgetary allocations to protected areas in Zambia have not been commensurate with their global and national environmental responsibilities, resulting in heavy dependence on international support.

Conversely, from this study, a common feature of the parks which achieved relatively high-performance scores is that they have been home to conservation projects supported by international organisations (GRZ/UNDP, 2007). For instance, the Kafue National Park has been implementing a project entitled Programme for the Development of Kafue National Park as a Model of Sustainable Economic Use and Biodiversity Conservation in a Management Extensive Environment since 2005 (ZAWA,

2004). The project aims at reversing the loss of biodiversity in the park and its adjacent game management areas as well as developing sustainable tourism, has been supported by the United Nations Development Programme (UNDP) and the GEF (Global Environment Facility) (ZAWA, 2004). Similarly, the North Luangwa National Park has been implementing the North Luangwa Conservation Programme with the support of the Frankfurt Zoological Society since 1986 (Frankfurt Zoological Society, 2016). As a result of these projects, the parks' governance structures including park administration and management, research and monitoring, private sector-public partnerships, community participation, and human and technical capacities have been strengthened resulting in improved park performance. Such collaboration could likely explain the viability and extent of incorporation and implementation of international principles in the parks. These examples also highlight the importance of external support in achieving effective implementation of international principles.

In addition to the above and viewing Zambia's national park system within academic theories on policy transfer, and the researcher's personal experience in Zambia, some central ideas emerge. Chief among these is the notion that appropriate and effective institutions are fundamental for the effective development and implementation of environmental policies, laws, and plans. However, in this respect, there are many sub-themes in Zambia's institutional structure.

As discussed in Chapter Two, Zambia is characterised by a decentralised system of governance with each sector being governed by different institutions, stakeholders, laws and policies. Within the natural resources sector, the Ministry of Tourism and Art (MTA) through its Department of National Parks and Wildlife (DNPW) is directly responsible for the management of national parks. While the DNPW returns overall management responsibility of national parks, other key institutions such as the Forestry Department, Fisheries Department, the Environment and Natural Resources Management Department, and the National Heritage Conservation Commission are directly or indirectly responsible for the management of national parks.

Prior, to the establishment of the DNPW, the Zambia Wildlife Authority (ZAWA), a semi-autonomous public institution, was responsible for the management of Zambia's national parks. According to Simasiku et al. (2008), the ZAWA assumed a mandate too ambitious for a single institution and as such remained inefficient. It could not facilitate inter-sectoral coordination required to develop and implement policies and plans and was ill-equipped to support community initiatives required to ensure effective national park management (Sichilongo, Mbewe, Machaya & Mulozi, 2011; Nyirenda & Nkhata, 2013).

Other researchers such as Ng'andwe and Chundama (2012) have attributed the institutional challenges in Zambia to the high turnover of Cabinet Ministers and Permanent Secretaries in Government Ministries. Undoubtedly, this instability at critical policy level impedes the policy formulation and implementation processes and appears to be the most significant factor in the rather slow pace of policy and legal reforms in Zambia's natural resources sector (Ng'andwe & Chundama, 2012). Furthermore, the Government Ministries are subjected to frequent portfolio realignments that have posed more challenges for coordination among the different institutions involved in the management of national parks. For instance, in 2011, the Ministry of Tourism, Natural Resources and Environment was abolished while two new Ministries – the Ministry of Tourism and Art, and the Ministry of Lands, Natural Resources and Environment Protection were created. These changes resulted in the separation (placement in different ministries) of critical departments such as the then ZAWA (Agency that managed wildlife within the protected areas) and the Forestry Department (department that manages the forests), further weakening the linkages between them.

Furthermore, some studies contend that Zambia's institutional challenges are aggravated by the limited political support to conservation as evidenced by the low annual budgetary allocations from government (Simasiku et al., 2013; Lindsey et al., 2011; Sichilongo, Mbewe, Machaya & Mulozi, 2011). Political support remains tentative with a little sense of purpose (Lindsey et al., 2011; Simasiku et al., 2013). To illustrate this point, in 2005, 176,000 nature tourists had a direct contribution of US$194 million,

and contributed to direct employment of 19,000 people. In the same year, the government collected over US$5 million in fiscal revenues from nature-based international tourists. These earnings represented more than 6.5% of Zambia's Gross Domestic Product and nearly 10% of the formal sector employment (World Bank, 2011, Sichilongo et al., 2011). Yet, the budget allocation to the then Zambia Wildlife Authority (ZAWA) in 2006 did not reflect these earnings. A meagre US$1 million was allocated to ZAWA, making it impossible for it to implement the 1998 Wildlife Policy (Sichilongo, Mbewe, Machaya & Mulozi, 2011).

Because of these institutional paucities, coupled with an institutional culture (dating back to the 1960s) that emphasises conservation rather than community development, national park managers and wardens tend to allocate the meagre available resources to the most pressing conservation needs, which is the surveillance of its national parks, therefore, promoting a preservation-oriented approach to conservation.

As earlier mentioned, the Department of National Parks and Wildlife (DNPW) in the Ministry of Tourism and Arts, currently has the responsibility for the management of national parks. Like its predecessor, DNPW faces several challenges, including the lack of trained staff, infrastructure, and financial resources. Together, these institutional paucities constrain the effective implementation of international environmental agreements in Zambia and therefore need to be addressed if the Zambian government is to strengthen the integrity and sustainability of its national parks system.

9.4. Policy misalignment

There are different degrees of misalignment in relation to the IUCN park management principles in the Zambian policy documents examined in this study. This misalignment can have significant implications on the implementation of national park policies, plans and programmes. Implications may include little tangible support for implementation at subsequent levels and, in certain cases, ineffective targeting of policy problems, resulting in non-compliance across the different governance tiers. Implications may include little tangible support for implementation at subsequent levels and, in certain

cases, ineffective targeting of policy problems, resulting in non-compliance across the different governance tiers. In Zambia, policy misalignment is, at least in part, a reflection of the fragmentation of the institutions involved in the policy development processes. There is fragmentation in terms of awareness and interpretation of policy issues. International principles, for example, are either not mentioned nor consistently interpreted across the policy documents used at the different governance levels. There is also fragmentation in terms of actors, because the actors involved in the policy development process are often different at each governance level and interaction and exchange of knowledge among them is limited, making it difficult for them to learn from each other's experiences.

Policy misalignment between national level policies and international policy frameworks is not unusual. It has been reported as a central challenge to the management and conservation of biodiversity globally (Zinngrebe, 2018). Several studies undertaken in different countries have reported a lack of harmonisation and coherence as the major factors that contribute to policy misalignment (Gomar et al., 2014; UNEP, 2012; Oberthur & Gehring, 2011; Pittock, 2011; Chasek, 2010; Cowie, Schneider, Montanarella, 2007; Leslie, & McLeod, 2007; Brechi et al., 2003). Harmonisation here refers to the

> process of ensuring that different laws are in agreement with each other, forming a compatible or well-matched whole, thereby reducing technical issues in the laws and minimising clashes and conflicts through coordination while coherence refers to the unity in principle of policies and regulations, reduction of ambiguities and fragmentation in order to generate higher levels of effectiveness and efficiency of laws (Pokwana & Kyobe, 2016, p. 3).

Gomar et al. (2014), for example, observed a lack of coherence between IEAs and national policies in 15 Latin American and Caribbean countries. Likewise, Pittock (2011) reported weak synergies between national and international climate and energy policies from Australia, Brazil, China, the European Union (EU), India, Mexico, South Africa, Tanzania, and the United Kingdom. Along the same lines, Gelcich et al. (2018), examined the extent of implementation of ecosystem-based management (EBM) principles in fisheries and marine management policies in Chile and concluded that "measures are

often not included in political agendas or drafted as fast as expected into national policies" (p. 45). Specific to Zambia, Kalaba et al. (2014) examined the coherence and interplay between Zambia's agriculture, energy and forestry policies and international policies within the United Nations Rio conventions. They employed iterative content analysis and reported limited incorporation and weak linkages between international environmental conventions and national level policies in Zambia and highlighted the need for national level legal and policy frameworks to resonate with international frameworks, a claim that is supported by the findings of this study.

However, Kalaba et al. (2014) did not identify any specific themes within international policy frameworks on which to base the evaluation of the national policy frameworks. Neither did they identify country-specific barriers that would need to be addressed to help achieve national and international environmental commitments. They used a set of goals derived from policy statements and programmes (by the researchers) as the basis of the evaluation. This approach was inadequate as it did not include the goals of a wide range of stakeholders. Thus, the results of this study extend those by Kalaba et al. (2014) by permitting insight into the extent to which specific international principles are considered and revealing opportunities where enhancements to the national policy documents may be made.

From the researcher's experience and work in the natural resource and environment sector, the lack of harmonisation and coherence are also major factors in Zambia. Challenges exist in the policy development processes. Policy development processes at each tier of Zambia's governance structure (national, provincial and district) are led by different government officials (policymakers), and there is limited interaction between these officials. In addition, there are no standardised procedures or framework to guide policymakers at the different governance levels on how to harmonise policies. As such, harmonisation and coherence of policies is often at the discretion of policymakers in-charge of the policy development processes at the different governance levels. This results in the development of policies that are poorly aligned, which in turn leads to non-compliance. A framework that is easy to use by policymakers at all governance levels

would be useful in guiding the alignment of policy documents in Zambia. Such a framework would encourage effectiveness in investigation techniques and assist in mitigating inconsistencies.

Several other international studies have attributed the lack of alignment of national laws, policies and plans to a country's domestic factors such as financial resources, technical capacities, institutional structures and political will (Najam, 1995; Brown Weiss & Jacobson, 2000; Underdal & Hanf, 2000; Cortell & Davis, 2000; Breitmeier, Young & Zürn, 2006; Zakane, 2008; Gomar, Stringer & Paavola, 2014). These studies emphasise the need to understand the domestic context in which international principles are interpreted as one possible way to explain/enable effective alignment of policies at national level. The factors identified in the above studies are also present in Zambia. Other domestic factors that contribute to the lack of alignment of national laws, policies and plans in Zambia include poor drafting of the laws, policies and plans, poor consultation process, concerns about privacy and confidentiality, lack of well-trained policymakers to lead the process and no quality control and assurance during the policy development process. In this study, two main factors that contribute to the misalignment Zambia's national park laws, policies and plans were identified: uneven uptake of international principles across governance levels and ambiguous definitions of international principles. These are discussed below.

9.4.1. Uneven uptake of international principles

The results of this study also show marked differences in how the international principles are reflected at the national and sub-national and level – revealing a lack of vertical policy alignment. The practical implications of this lack of vertical policy alignment can be seen in the shape and pattern of uptake of the international principles at the two governance levels. The 'taking an international perspective' principle illustrates this point. This principle is among the three highly scored principles at the national level, having been mentioned in six of the seven national level documents examined in this study. However, at sub-national level, the taking an international perspective principle is only reflected in two of the nine management plans and there is hardly any evidence of its implementation in all the national parks.

Why, then, has the taking an international perspective principle not been reflected at sub-national level? What is the cause of the lack of consistency? The answer perhaps lies in the existing institutional setting of Zambia's policy development processes. As earlier discussed in Chapter Two, multiple actors are involved in the development of laws, policies and plans. Essentially, the development of national level policies and plans is driven by actors (policymakers) at the national level. By contrast, the development of park management plans recognises the importance of additional actors at provincial and district levels. Together, these actors contribute to shaping the detailed park management plans. As such, there are more opportunities at the sub-national level to incorporate principles that could have been omitted at the national level. The participation of actors other than public authorities (e.g. local communities, NGOs, research institutions and the private sector) at the sub-national level enhances chances for development of comprehensive management plans. Such participatory processes need to be encouraged and embedded within legal and regulatory frameworks to increase the knowledge base for implementation (Jørgensen & Hønneland, 2003).

It is also important to note here that policy ideas or practices diffuse gradually over an extended period. The policy development process continues long after policies are formulated and formally enshrined in legislation at the national level. This perspective suggests incremental changes in policy as it diffuses across different governance levels. Therefore, it comes with no surprise that more references to the IUCN principles were found in the sub-national documents than in the national level documents examined in this study.

Another view that is implicit in the relevant literature is that the uptake of an international principle at national level tends to be higher when the principle is of high salience at the international level (Betti, 2011; Brown Weiss & Jacobson, 2000; Underdal & Hanf, 2000; Wiener, 2009). However, this trend does not always hold. The results of this study show that even though all the international principles considered are internationally endorsed and firmly established, some have been adopted at national

level while others have not. The variable uptake of the principles suggests that their institutionalisation at international level is a less important factor in explaining their uptake of national level in Zambia. As such the institutionalisation and/or different levels of recognition of the principles at international level as argued by Betti (2011) and Wiener (2009) cannot be the main reasons for the variable uptake of the IUCN park management principles in the Zambian documents reported in this study.

9.4.2. Ambiguous definition of international principles

Explicit definitions or concise explanations of the meaning of the IUCN principles and other terminologies used are, in most cases, absent in Zambia's national level policy documents. Where the principles are defined, the definitions are ambiguous leaving them wide open to variable interpretation. The absence of definitions suggest that little time/attention is devoted to understanding the meaning of the principles and providing detailed information on their implementation. The absence of definitions may also be linked to the benefits of ambiguity. Ambiguous terms can minimise push-back from stakeholders working at the implementation level (Baker, Kousis, Richardson, & Young, 2005).

Roos and Zaun (2014) argue that the explicit definition of a norm or principle is crucial for it to be sufficiently robust to make its way into legislation. Dhliwayo, Breen and Nyambe (2009) add that terminology, which is poorly defined and understood by policymakers and practitioners, can facilitate different interpretation and subsequently undermine implementation. For McNeely et al. (2001), the use of common definitions not only underpins the operational components of legal frameworks at national and sub-national level, but also provides a basis for international exchange. A large body of national resource policy related studies have reached similar conclusions (e.g. Andresen, Skjaerseth & Wettestad, 1995; McNeely et al., 2001; Roos & Zaun, 2014).

Commenting on adaptive management, Doremus (2001) comments that incoherent or vague definitions can be easily abused by agencies and make it harder for non-public actors to hold the agencies accountable for their actions. In this respect, he has shown how agencies can use the highly malleable term of adaptive management "as a ploy to

placate demands for environmental protection without actually imposing any enforceable constraint on themselves" (Doremus, 2001, p. 54). These observations reinforce the conclusions drawn by Ruhl (2008, p. 10) that "[m]ushy definitions" of terminologies are likely to make for "mushy standards" of implementation. Overall, these studies support the use of universal definitions in natural resources management policy.

In line with the above arguments, the absence of explicit definitions and/or limited use of internationally recognised definitions in Zambia's national level documents may potentially contribute to the limited uptake of international principles and constrain their implementation at subsequent governance levels. Interestingly though, further review of the results in this study shows no direct relationship between the use of internationally recognised definitions of principles and the extent to which the principles are reflected in the laws, policies and plans. Little differences were noted between principles that are explicitly defined and those that are not, with respect to the extent to which they are reflected in the laws, policies and management plans as well as how they are implemented in the parks. Overall, the results suggest that international definitions seem to play a secondary role in determining how the principles are interpreted, reflected and subsequently implemented in the parks.

One possible explanation for the limited influence of international definitions in determining how the principles are defined is that internal contextual factors such as institutional capacities, culture and structure (Berrisford, 2011), quite probably, constitute more proximate determinants of how the principles are interpreted and operationalised. To illustrate this point, the IUCN principles reported in this study appear to be contextualised within frames that correspond to the existing institutional context, which are implicitly defined at the national or sub-national level in Zambia (i.e., at the level of departments within a government organisation). Contextualisation here refers to the process of debating, determining and agreeing upon the meaning of global principles in a given local situation (Laub, 2013). More specifically, with respect to the IUCN principle of System Planning, the findings show that this principle is contexualised

(interpreted/framed) within existing policy paradigms in Zambia, such as 'integrated planning', 'holistic planning', or 'ecosystem planning', and it is these frames that determine the interventions that are put in place to operationalise the principle. Such contextualisation, if well facilitated, can foster country-specific definition and understanding of the global principles, making the content of the principles appropriate and meaningful to the given domestic circumstances.

Fünfgeld and McEvoy (2014) made similar observations in Australia where they examined the common differences in the framing of climate change adaptation. They contend that, in the policy making process, policy makers "think about policy issues along particular normative and conceptual lines, which influences not only the way they define the issues at hand but also the policy goals and the range of policy options that are taken into consideration for addressing those issues" (Fünfgeld & McEvoy, 2014, p. 608). Therefore, Fünfgeld and McEvoy (2014) conclude that clear-cut universal definitions have little use in local organisational contexts.

Considering the above discussion, the use of internationally recognised definitions could help support translation and adoption of international park management principles at national level. However, policymakers should acknowledge that international principles are adaptable and can thus, be indigenised as appropriate. Furthermore, the definitional ambiguity of the principles could also be used as a strength because it provides park agencies and practitioners with a wider range of legitimate activities.

In addition to highlighting the policy misalignment in the Zambian laws, policies and plans, this study also showed the international principles are hardly mentioned and/or consistent across the national park policy documents. The principles of good governance, social equity and justice, management of climate change and management of invasive alien species were the least consistently mentioned principles across the policy documents. This might suggest that these international principles are not associated at policy level with the implementation of sustainable development in national parks. Even so, there are reasons to seek adoption and consistency for these

international principles in national and sub-national policy documents. The principles of good governance, social equity and justice, management of climate change and management of invasive alien species are critical for the effective performance of national parks and indeed the survival of the global protected area systems and are discussed below.

9.4.3. Good governance

The integrity and success of national parks depend in part on the governance systems within which they exist. Governance refers to the "interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken, and how citizens or other stakeholders have their say" (Graham, Amos & Plumtre, 2003, p. ii). Good governance as an underlying principle may crucially influence whether a national park can achieve its objectives, is able to fairly share benefits and costs, and seeks and gains enough support. On the contrary, 'poor' governance undermines national park effectiveness, specifically by alienating stakeholders and eroding support for management decisions (Borrini-Feyerabend, Dudley, Jaeger et al., 2013; Getzner, Vik, Brendehaug & Lane, 2014).

Notwithstanding the general work on development of the national park laws, policies and plans by the Zambian government, the results of this study show that the uptake and application of the good governance principle is, in many respects, a challenge in Zambia. Zambia's national park policy documents do not provide meaningful outcomes on a variety of governance dimensions. More specifically, the results of this study (Chapter Seven) show that the Governance principle is applied on a 'piecemeal' basis where some dimensions are embraced while others are neglected. Among the four dimensions of good governance considered in this study (performance, accountability, transparency and subsidiarity), only the performance dimension is well referenced in the national park laws, policies and management plans. The other three dimensions are poorly referenced, and evidence of their implementation was not found. Yet, these three dimensions of good governance are central to effective protected areas management and are fundamental to securing the political and community support management decision (Lockwood, 2010; Borrini-Feyerabend, Dudley, Jaeger et al.,

2013). Because of this partial application of the good governance principle, the overall impact of the Governance principle in the parks is diluted.

Partial or fragmented application of protected areas management principles is not uncommon among protected areas management agencies. Previous studies have shown that agencies tend to interpret principles in a way that maximises their own discretion, embracing some parts while neglecting others (Doremus, 2001, Nie & Schultz, 2011). For instance, Doremus (2001) has noticed that agencies may embrace some principles or approaches as a "smokescreen" to avoid political controversy from unpopular decisions without imposing any enforceable constraints upon themselves. According to Nie and Schultz (2011, p. 454), "agencies are not to blame here, but rather a set of built in agency biases and political pressures influencing what questions are asked in adaptive management, what controversies are avoided, and how information is collected, interpreted, and acted upon". To this end, Craig (2010) suggests that while law reform is necessary to embrace flexibility in the interpretation and application of international principles, it will simultaneously need to limit agencies' discretion to do nothing or to deviate materially from regulatory goals.

The partial application of the good governance principle in Zambia potentially hampers management efforts to maintain the status of its national parks over the long term. For example, a Zambian report of '*the Reclassification and Effective Management of the National Protected Areas System Project'* (GRZ/UNDP, 2007), identifies the lack of transparency on the sharing of conservation revenues as one of the causes of conflict and tensions between the wildlife management authority and Community Resource Boards (CRBs). CRBs are supposed to receive 45% of hunting license fees, but they are often unsure whether what they receive is a fair share because the total hunting licence fees are not disclosed. The same type of problem exists between CRBs and the Village Action Groups (VAGs) and community members. This lack of transparency in revenue sharing has led to conflict and mistrust among these bodies and consequently continues to foster ill feeling towards conservation efforts within local communities in Zambia (GRZ/UNDP, 2007; Lindsey, Nyirenda, Burnes et al., 2014). Therefore, national park

management could be enhanced by consistently including the good governance principle in national and sub-national policy documents.

These findings of this study also confirm an earlier study by Child and Bergstrøm (2001) which concludes that Zambia is generally characterised with weak governance because of structural deficiencies that undermine the ability of state agencies to effectively respond to, or mitigate, threats to populations, deficiencies in social and political inclusiveness, and accountability challenges. Child and Bergstrøm (2001) further assert that the weak application of good governance principles has given way to corruption, patronage, poor service delivery and the lack of inclusiveness. As a result, conventional processes of policy discussion and formulation needed to reform and expand the nature resource sector are hindered.

9.4.4. Social equity and justice

The social equity and justice principle in the context of protected areas can be considered in terms of distributive and procedural processes, where the former relates to the distribution of costs and benefits that affect human wellbeing, and the latter, in this theoretical framing, to how and by whom decisions on resource use and management are made (Boone, 2008). Within the same context, the right to justice "means that members of the public, and especially affected and concerned persons, have legal mechanisms they can use to gain review of and to appeal decisions made by protected area authorities under the law" (Lausche, 2011, p. 47). These elements are critical for effective and sustainable management of resources in national parks because they contribute towards the integration of conservation, local participation and sustainable development (Getzner et al., 2014).

The results of this study (Chapter Seven) show that the social equity and justice principle is in many respects not well referenced and applied in Zambia. Table 7.3 show that while some dimensions of social equity and justice, such as cost and benefit sharing, access to resources, and dispute resolution are recognised, there are no concrete measures reflected to ensure their practical application. For instance, Zambia's current wildlife legislation asserts the right of equality in access to and distribution of benefits derived

from wildlife for all regardless of socio-economic status (Zambia Wildlife Act, 2015, Part I s 4[e]). However, such provisions have not been accompanied by empowering mechanisms to translate meaningfully into positive gains, especially so for historically disadvantaged communities. As a result, there is inequitable access to resources and the local communities are marginalised in the distribution of benefits accrued from the national parks. Child and Bergstrøm (2001) have shown that the primary beneficiaries of wildlife resources in Zambia are the wealthy, powerful, urban people while the poor rural people who bare the social costs of conservation receive limited benefits. This situation has contributed to widening gaps in well-being and to unsustainable natural-resource use. It has also inhibited effective local participation in natural resource management (Child & Bergstrøm, 2001; Lindsey, Nyirenda, Burnes et al., 2014). Similar results have been reported in other studies elsewhere (Harper 2002; McLean & Straede, 2003; Magome & Murombedzi, 2003).

A failure to recognise successful informal or traditional governance mechanisms and integrate them with formal ones is likely the reason for the limited application of the social equity and justice principle in Zambia. Previous studies on the history of Zambia's national parks show that the local people, through Chiefs, actively participated in the management of wildlife during the pre-colonial period (Chomba et al., 2011; Gibson, 1999). Traditional rules and mechanisms for conflict resolution were in place and honoured by the local people. As Gibson (1999) explains, wildlife was used for the benefit of the community and formed an integral part of their lives. However, during the colonial era (1924 to 1964), a 'protectionist' philosophy to natural resource management was adopted leading to the nationalisation of natural resources - a situation that led to the disintegration of local traditional structures, alienating indigenous people's access to resources. Post-colonial hierarchies used the nationalisation of resources to their advantage and made further social, economic, political, and institutional changes but without any comprehensive system to replace the traditional rules and mechanisms for conflict resolution that were in place. More specifically, the National Parks and Wildlife Act of 1968 completely centralised control and management of wildlife in the country by vesting the absolute ownership of wildlife

in the President and abolishing powers, which had been delegated to the traditional leaders (Chomba et al., 2011). This meant that the chiefs and their native authorities, whose areas had been declared private game areas by the Government, no longer had access to resources in their areas. As a result of these changes, wildlife declined through "illegal use by both politicians/government officials and local people, with no one having incentives to conserve it" (Child & Bergstrøm, 2001, p. 27).

Brechin, Wilshusen, Fortwangler and West (2003) argue that to be successful in the long-term, social equity and biological conservation must go hand in hand. They explain that protection of nature is a complex social enterprise, and much more a process of politics, and of human organisation, than ecology. As such, this socio-political complexity should not only be recognised by practitioners but must be at the core of conservation policy if fair and just outcomes are to be achieved (Hockings, 2003). Linkages between social equity and conservation have not been adequately supported by Zambia's national parks laws, policies and plans. This may explain the weak partnerships between local communities and protected area agencies in Zambia.

It might be argued that the limited application of the social equity and justice principle, particularly the fact that resource distribution schemes benefit some classes of stakeholders at the expense of others, may contribute to the poor performance of Zambia's national park system. Therefore, to ensure the long-term success of Zambia's national parks, careful facilitation and guidance to promote the application of the social equity and justice principle are needed at national and sub-national level. According to Lockwood et al. (2010, p. 13), such guidance should "account for (a) the novelty of dealing with overlapping public and private interests; (b) clear and fair allocation and acceptance of roles and responsibilities by stakeholders; (c) tensions between strategic priorities and equitable resource allocation; and (d) the needs of those without a voice, including non-humans and future generations".

9.4.5. Management of climate change and invasive alien species

The other key international principles least mentioned and consistent across the policy documents examined in this study are the management of climate change and invasive

alien species (IAS). While the threats of climate change and IAS have been acknowledged in the Zambian documents examined, little attention is paid to the management of these threats. The results of this study suggest that management of climate change and IAS receive less attention, in that these principles are neither frequently referenced nor assigned specific goals or action steps in the national park laws, policies, management plans, and reports. This conceptual vagueness extends beyond the management plans into the practical aspects of implementation; there is hardly any evidence of implementation of climate change and IAS programmes in the park reports.

Regarding the management of climate change, the results of this study confirms the observations made in a study by the World Bank (2013) which classified Zambia to be among the bottom 20% of countries in terms of climate change risk preparedness. In line with the observations made by the World Bank (2013), this study shows that the parks score low for having acknowledged and implemented climate change adaptation and mitigation initiatives. None of the park plans include statements or strategies for addressing on climate change risks. Neither do the plans include specific management actions in anticipation of or in response to potential climate scenarios. Where information on climate change is included, it is presented in a simplistic manner that lacks operational detail; without any quantifiable objectives linking to the identified climate risks (see Chapter Six, section 6.3.8).

Similar results have been reported in other earlier studies (Smit & Wandel, 2006, Klein, Huq, Denton et al., 2007; Ervin et al., 2010; Berrang-Ford, Ford, & Paterson, 2011). For instance, Ervin, Sekhran, Dinu et al. (2010, p. 34), through a representative survey of management plans from 22 protected areas, concluded that "protected area management planning focuses predominantly on wildlife management, tourism and threat reduction, but does not address issues related to climate adaptation, food security, sustainable livelihoods or ecosystem services". According to Berrang-Ford, Ford and Paterson (2011), there are few examples of research reporting on actual adaptation actions despite the growing recognition of the importance of addressing the

impacts of climate change. These studies also emphasise the importance of incorporating adaptation into national and sub-national strategies and policy documents as an effective way to encourage holistic solutions and improve chances of implementation. More specifically, Dudley, Stolton, Belokurov, Krueger et al. (2010) conclude that effective protected areas management will not be achieved without a comprehensive focus on the impacts of climate change.

The failure to articulate and implement climate change adaptation and mitigation goals and strategies in Zambian national parks could be due to two main reasons. The first reason could be that there is limited institutional and technical capacity within the park management authority to use the best available scientific information to develop site specific adaptation and mitigation measures for addressing the impacts of climate change. To illustrate, while recent research on the economic impact of climate change on Zambia has shown that the country has lost an estimated 13.8 billion USD due to drought and floods over the past three decades - the equivalent to 0.4 % of its economic growth annually (GERICS, 2013), specific ways for addressing these impacts have not been found. In this regard, researchers and practitioners must be pragmatic, and look for ways to systematically incorporate adaptation and mitigation strategies into protected area planning.

Second, studies in Zambian national parks assert that climate-sensitive challenges are addressed in an ad-hoc and uncoordinated fashion due to the absence of a framework to coordinate climate change interventions (GRZ, 2008). This assertion bear credence given the vague nature of the Zambian policy documents with regards to climate change. None of the laws, policies and plans clearly explain how climate change will be addressed or what types of interventions, resources and institutions will be marshalled to manage climate change impacts in national parks. This results in ad-hoc arrangements being made often at the discretion of the park officials in charge of the decision-making processes. For example, ad hoc wildlife translocation programmes have been implemented by the wildlife management authority when the climatic conditions reduce the habitats' carrying capacity (GRZ, 2008). While such programmes have been

important, their full potential has not been realised due to the ad hoc nature of planning. As such, it is not surprising that efforts towards addressing climate change impacts remains marginal in Zambia's national parks.

As is the case with the management of climate change, the results show a general failure to articulate goals and implement IAS control programmes across the plans and parks respectively. A lack of information on IAS appears to be a common challenge for all the parks studied except the Lochinvar National Park, which had identified *Mimosa pigra* as a significant threat and developed programmes for its prevention and mitigation. While four other parks were reported to be imperilled by IAS, no evidence of implementation of IAS control programmes was reported in these parks.

Inadequate information and implementation of programmes for the prevention, mitigation and eradication of IAS is a systematic problem in other areas of the world. Ervin (2003) has reported that even though 50% of all federally listed threatened and endangered species in the United States are imperilled by IAS, the identification of IAS rarely registers as a significant threat, even in areas where such species flourish. This may explain the poor implementation of programmes for the control of IAS to some extent. In most cases, however, programmes to prevent, mitigate or reverse the damage caused by IAS are not implemented because they require vast amounts of human and financial resources (Ervin, 2003). Specific to Zambia, four major barriers to effective management of IAS were identified through a project called "Removing Barriers to Invasive Plant Management in Africa" (RBIPMA): weak legal, policy and institutional arrangements, lack of information on IAS amongst key stakeholders, high cost of IAS control and prevention programmes, and limited capacity for sustainable IAS management among key stakeholders as the main barriers (GRZ, 2007c). Addressing these barriers would improve the management of IAS in Zambia's protected areas system.

The challenges highlighted in this section directly affect the integrity and sustainability of Zambia's national park system. These challenges can be linked to a host of barriers

including the lack of, and meaningful access to, information, limited technical capacities, inadequate monitoring and evaluation and implementation mechanisms. These barriers are discussed below.

9.5. Barriers to effective policy transfer and implementation

This study not only examined how international principles for national park management are reflected and interpreted in Zambia's national park legislation, policies, plans, and reports, but also provided an indication of those barriers that constrain effective adoption, translation and implementation of the international principles. Based on the study results and the researcher's experiences during the study, four key barriers were identified and are discussed below.

9.5.1. Availability and access to information

The results of this study in terms of the researcher's experience to access information from government departments indicate that there are significant data availability and access challenges in Zambia. At the beginning of the study, it was anticipated that the data/information needed for the study would be available in the public domain and/or easily accessible from government departments in a timely manner. However, the researcher's experience throughout the study showed that this is not necessarily the case.

Despite writing to the Department of National Parks and Wildlife and frequently contacting officials in the department, accessing the information required for this study proved to be a significant challenge. The challenge was not only because of the lack of information but also a lack of meaningful information systems in the Zambian national parks department to facilitate efficient and effective public access to information. Most national park annual reports were of limited value and not available or if available, not accessible to the public. Because of this paucity of information, the best available information were park management plans, consulting reports combined with the researcher's personal experience (including knowledge of the parks informed by personal relationships, reading reports, and site visits). The documents used in this

study were obtained through individual contacts, were slow to access, and limited in scope.

The lack of updated and reliable data and information entails several implications of theoretical as well as practical relevance. It adversely affects the democratisation of policy and ultimately, sustainable development implementation. Furthermore, the lack of updated and reliable data and information suggests that the policy development process, decision-making and resource allocation in Zambia's national parks occurs without sound performance information. For example, a nation-wide report on the performance of Zambia's national parks the was produced in 2007 to provide baseline information against which progress could be measured (GRZ, 2007a). However, since 2007, there has been no subsequent reports produced to show the performance trends. While another report was produced in 2011, it only covered a few national parks and is thus not comprehensive and inadequate. Timely, reliable and complete data and information are also essential for sound policy making, planning, monitoring and evaluation. Several studies have stressed the importance of reliable data and meaningful access to information (Hazell, Worthy & Glover, 2010; Lockwood, 2010; Dhliwayo, Breen & Nyambe, 2009). Hazell, Worthy and Glover (2010), for example, noted that availability and access to information enhances the public's ability to access, respond to, and augment information utilised in the government decision-making processes, and ultimately promotes participatory democracy. With respect to the management of national parks, Lausche (2011) postulates that meaningful access to information enhances transparency, which in turn promotes legitimacy, accountability and performance. Along the same lines, Lockwood (2010) asserts that reporting mechanisms such as annual reports, reports of achievements against management plan objectives, governance and management effectiveness evaluations are imperative to reveal progress towards sustainable development. Therefore, if public documents are not accessible, then there is no transparency and no possibility of the democratisation of policy.

Given the challenges experienced by the researcher of accessing information, it may be no exaggeration to say that if an individual (such as myself) working within a government ministry cannot access public documents, then it would be practically impossible for the public to access the documents. This conclusion is expected given the lack of freedom of information legislation in Zambia. A report by Media Institute of Southern Africa MISA-Zambia (2012) illustrated that there is no transparency and efficiency in providing information to members of the public across government institutions in Zambia (MISA, 2012). Eight government institutions were surveyed to ascertain how they respond to requests for information by the public and the time taken for these institutions to respond to such requests. Of the eight institutions, only three responded to the requests for information. Thus, the reported concluded that information held by public institutions is not easily accessible by the public in Zambia.

Updated and reliable data and meaning access to information plays an important part in ensuring effective policy transfer and sustainable development implementation. Without reliable data, other activities such as adoption, translation and implementation also fail. In Zambia, the absence of the freedom of information legislation makes it difficult for the public to access information from public institutions. Enactment of such legislation would increase public participation in Zambia which would, in turn, enhance the transparency and accountability within government institution and ultimately, sustainable development implementation.

9.5.2. Technical capacity

Technical capacity building remains an essential component for progress towards effective transfer of global principles within the context of sustainable development. Technical capacity usually represents the cornerstone of an organisation's intellectual capital and is a key determinant of its performance and competitive factor (Camuffo & Comacchio, 2005). As discussed earlier, many of Zambia's national park laws, policies, and plans mention the IUCN principles, but ways to be specific about them, particularly in terms of their implementation, have not been found. This is because the policymakers and planners responsible for the development of the plans may not have adequate technical understanding of the meaning of the principles and how to ensure their

translation into practice. Inadequate technical capacity is one of the most limiting factors in effective protected area management (Ervin et al., 2010). Ervin et al. (2010, p. 73) assert that "staff numbers have a direct correlation with high ecological integrity, community relations, management planning and other factors of management effectiveness". This perspective is supported by the results of this study and is shared by other related studies undertaken in Zambia (Mulungushi, 2007; Berrisford, 2011). For example, Mulungushi (2007) identified a lack of qualified planners at all levels of planning as a major problem in Zambia. According to Mulungushi (2007), the lack of capacities at these levels means that effective consultation and policy planning remain weak, which casts doubt on the extent to which the plans will be successfully implemented.

Commenting from a perspective of a consultant closely involved in the policy review process, Berrisford (2011) notes the acute shortage of technical skills in Zambia and adds that limited time and effort is allocated to support the policy review process. His observations on the challenges faced by planners in Zambia are insightful:

> The capacity of officials in the Ministries was severely stretched. In addition to their having to fulfil the conventional responsibilities of national officials, they were also frequently, and with little warning, given Ministerial instructions to do very localised work municipalities, often far away from their head office in Lusaka. They were under immense pressure to meet tight deadlines, often in a highly charged political context. Their ability to devote the amount and quality of time needed to consider the best options for designing a new planning system was thus limited. If the Ministry officials had indeed set aside the time to engage at the level of detail that the process demanded, that would have been at the expense of their ability to meet short-term targets set by the Minister. This would have had negative consequences for their career advancement (p. 236).

Intuitively, this situation has the effect of slowing the transfer of international principles into Zambia's laws, policies, plans, and reports. It is also reflective of the nature of local struggles encountered by policymakers over sustainability. As such, the limited uptake international principles should point us towards understanding not only the capacity needs of policymakers but also the nature of the struggles over sustainability which are taking place in Zambia.

9.5.3. Monitoring and evaluation

Chapter Seven of this study has shown that while the IUCN principles are reflected in most of Zambia's national park management plans, the principles are, in most cases, not linked to specific goals, action steps or mechanisms that may increase the likelihood of their implementation, a common problem in conservation plans (Game, Kareiva & Possingham, 2013). The results show that the park management plans also lack comprehensive monitoring and evaluation (M and E) plans. Six of the nine management plans examined in this study acknowledge the importance of M and E in providing timely information and baseline data for future park planning. However, none of the plans include detailed indicators, baselines and targets that could facilitate effective M and E. Together, this lack of goals, action steps, and M and E systems means that the management plans are in most respects incomplete and vague, propagating a high level of inaction, which may impede the achievement of any actual change (Dhliwayo, Breen, & Nyambe, 2009).

These results were not unexpected. Prior research indicates that most management plans tend to be weak with respect to including provisions relating to M and E (Berke & Godschalk, 2009; Stevens & Mody, 2013). According to Berke, Godschalk and Kaiser, (2006), It is rare to find plans that include measurable objectives that reflect the desired goals within the plans. Most management plans do not include a plan for monitoring and evaluation. The challenges mostly lie with the quality of monitoring data. For instance, in their meta-analysis of sixteen plan evaluation studies from the USA, Canada, the Netherlands, and New Zealand, Berke and Godschalk (2009) found that the plans evaluated in the studies included just 44% of the implementation-related items that the researchers were looking for, and just 38% of the items relating to M and E. Within the context of protected areas, research has shown that M and E are among the weakest aspects of protected areas management (Dudley, Belokurov, Higgins-Zogib et al., 2007; Ervin, 2003). Ervin et al. (2010, p. 40), for example, assert that M and E are "traditionally among the lowest priorities in protected area management because more pressing needs – such as law enforcement, wildlife management, infrastructure planning, and financial and business planning – have taken precedence".

In Zambia, it is not surprising that the park management plans give little attention to monitoring and evaluation given the weak governance arrangements. According to Chabwela and Gaile (2004), the existing M and E systems in Zambian national parks focus on a few practices that are easy to measure and do not allow effective evaluation of the ecological, economic, and socio-cultural objectives of the parks. Chabwela and Gaile (2004) outline four type of monitoring undertaken in Zambia's national parks: Camp level, Regional level, Hunting, and Tourist monitoring. Camp level monitoring is undertaken by Scouts or Wildlife Police officers who conduct regular patrols within the parks. These collect information on animal sightings, key animals killed, snares and traps, animal signs, species observed etc. Regional level monitoring covers staff supervision and field visits as well as special surveys at the ecosystem and functional level. Hunting monitoring focuses on collecting all hunting information, particularly in relation to Safari hunting practices while Tourist monitoring focuses on collecting data on tourist visits and use of the parks. This broad definition of the M and E objectives inhibits accurate determination of the extent to which the management activities contribute to the park objectives (Chabwela & Gaile, 2004).

There is, therefore, a need to develop comprehensive monitoring and evaluation frameworks that include site-specific information on the performance of the park activities and programmes in Zambia. These can include programme outputs and outcomes that demonstrate trends in ecological characteristics, socio-economic benefits and management effectiveness over time. The WCPA of the IUCN provide a set of tools and methodologies, detailed in the work of Hockings et al. (2007) that can support development of site-based monitoring and evaluation planning. These tools provide, *inter alia*, in-depth participatory assessment of important aspects of management for all six of the IUCN-WCPA Framework elements (context, planning, inputs, processes, outputs, and outcomes).

9.5.4. Implementation mechanisms

In addition to inadequate monitoring and evaluation systems, another important finding of this study is the absence of adequate implementation mechanisms for national park

operations. From the example of the 11 IUCN principles considered in this study, four of the principles (management of IAS and climate change, social equity and justice, and good governance) show little evidence of implementation in the national parks, are not associated with any implementation mechanisms.

As in the study by Chandra (2011), inadequate implementation mechanisms present a significant barrier to effective implementation of national policies and plans. The absence of any policy requirements, including institutional and technical capacities make it difficult for policymakers and planners to develop effective implementation mechanisms. This study concludes, as did Chandra (2011), that additional efforts are required by countries in the Global South to design effective enforcement and implementation mechanisms if conservation of biodiversity is to remain a priority.

If sustainable development is to be implemented in Zambia's national parks, addressing the barriers discussed above could help. The barriers (a lack of and poor access to information, inadequate technical capacities, monitoring and evaluation, and implementation mechanisms) could be addressed by strengthening institutional and technical capacities within Zambia national park management agencies. This will require strong leadership on the part of government to shape institutional relationships and provide the required human and financial resources. Research on the effects of the barriers on the policy development process and practices of policymakers could inform the specific management measures required to address each of the barriers.

Successful policy transfer and implementation requires willingness and ability on the part of government to mitigate against the barriers that can derail process. This study has shown that Zambia's national park governance systems fail because they cannot match their willingness to implement national park laws, policies, plans and programmes with the ability to do. For any country in the world, the sustainability of its national parks and surrounding communities and the effectiveness of its governance systems a function of natural, human and financial capital assets. This study has demonstrated that natural capital assets are available (though under threat) in Zambia,

while human (composed of the knowledge, skills and experience of actors) and financial capital assets are lacking. All three capital assets are needed for successful policy transfer and implementation and must be aligned in concert with one another to move forward with the alignment of national park policies in Zambia. What this perhaps suggests, in keeping with previous studies, is that approaching any of the capital assets in a discrete manner cannot maintain the momentum required to strengthen the integrity and sustainability of Zambia's national parks into the 21st century.

9.6. Conclusion

The aim of this chapter was to discuss the research findings, particularly how they contribute to advancing understanding of the transfer of international park management principles into Zambia's national park laws, policies, and plans. Zambia's national park laws, policies, plans and reports mention the IUCN park management principles (PMPs), to varying degrees, and generally express the need to comply with them. However, despite the mention of the IUCN PMPs, the policy documents examined are largely void of action steps to guide their implementation at park level. Four broad areas that constrain effective translation and implementation of the IUCN PMPs in Zambia's national park system include: (i) a lack of, and poor access to, information; (ii) inadequate technical capacities; (iii) inadequate monitoring and evaluation; and (iv) inadequate implementation mechanisms. Any future interventions that aim to improve the management and sustainability of Zambia's national parks should address these areas.

This chapter also illustrates a nuanced understanding of how specific IUCN park management principles are interpreted, including and the extent to which they are mentioned, in current national park policy documents. The IUCN PMPs least mentioned and consistent across the policy documents reveal opportunities where enhancements to current and future policy documents may be made to improve the chances of successful implementation. At the same time, the lack of consistency in the interpretation of the IUCN PMPs across the policy documents bears the risk of sub-optimal or even perverse outcomes as well as policy misalignment across different

governance levels, ultimately hindering progress towards improving the sustainable development of Zambia's national parks.

Exploration of the policy implications of the results of this study suggest that the transfer of IUCN PMPs into national policy documents and their implementation in national parks are all contingent on local policy realities. The IUCN PMPs are translated through time, and the ongoing local policy development processes constantly modify the conditions in which changes in the interpretation and focus of public policy are discussed by local actors. Indeed, these processes influence the construction of national park policy documents and their implementation at local level. This points to the importance of understanding the nature of the global/local tensions over sustainability and the need for policymakers to recognise and understand the interconnectedness of the global and local to achieve a wider commitment to national park sustainability. The final chapter provides a conclusion delineating the main findings of the study and the implications for future research.

CHAPTER 10. CONCLUSIONS AND RECOMMENDATIONS

10.1. Introduction

Zambia is signatory to several international environmental agreements with remits to national parks. It is also a member of several international environmental organisations, such as the International Union for the Conservation of Nature (IUCN), that provide members with technical and institutional support to achieve their in-country conservation goals (IUCN, 2013). There is an inherent expectation by stakeholders that membership to these international environmental agreements and organisations, and subsequent adoption of the systematic and homogenous mechanisms they offer will potentially lead to effective conservation outcomes at national and sub-national level (Watson, Dudley, Segan & Hockings, 2014). Despite this, conservation outcomes in many of Zambia's protected areas, including national parks, have not improved and 80% of the wildlife species in are in decline (Lindsey, Nyirenda, Barnes, Becker et al., 2014; Frederick, 2013). Watson, Dudley, Segan, and Hockings (2014a) suggest that mitigating the decline of national parks worldwide relies, at least in part, on close collaboration, or coordination of conservation action across different governance levels, from the global to the local. Along the same lines, the global sustainable development agenda emphasises the need for a universal and integrated approach and considers alignment of policy as key towards addressing the problems associated with sustainable development.

This study responds to these concerns by identifying a set of international park management principles and examining how these are considered in Zambia's national park laws, policies, plans, and reports to illustrate progress towards sustainable national park development. The data were drawn from Zambia's national park laws, policies, plans, and reports alongside existing literature and the researcher's critical reflections and have led to several conclusions that can help understand how to drive Zambia's national park system towards sustainability.

This study makes a notable contribution to previous research addressing policy transfer generated by the international environmental agreements and organisations concerning the sustainable development of national parks and other protected areas. First, the study identified a set of key international park management principles for a framework to examine the alignment of national policy documents with global policy models, within the context of sustainable development. Potential global park management principles that could be employed in the analytical framework were reviewed (Chapter Four) and a set 11 principles suggested by the IUCN were chosen as the most appropriate for this study. These included: (i) Perpetual integrity; (ii) System planning; (iii) Management by conservation objectives; (iv) Management plans; (v) Precautionary approach; (vi) Management of invasive alien species; (vii) Management of climate change; (viii) Taking an international perspective; (ix) Good governance; (x) Public participation; and (xi) Social equity and justice. One of the contributions of this study is that it brings these diverse principles together within the context of examining national park policy documents. Whilst these principles are by no means exhaustive, they offer a potential starting point to identify appropriate indicators and measures of sustainability for national park policy frameworks.

Second, the research stands as an example of using a framework approach to understand and identify the challenges involved with the transfer of global sustainable development requirements for national parks. The analytical framework employed in this study was useful to understand the alignment of national policy documents with specific global principles. It also offered an opportunity to identify in policy documents where enhancements could be made. Considering the lack of mechanisms for examining the transfer and implementation of global frameworks, this study complements research on policy transfer by providing a clear typology for methods developed to examine the alignment between domestic and global policy frameworks. While this study's empirical focus is Zambia (and a set of IUCN park management principles), comparative work (involving policy documents from multiple countries) could be undertaken using this framework to investigate how these and other international principles diffuse from the global to the local. Such research could further

enhance understanding of how policy transfer takes place under different social and normative environments and help identify and explain the local conditions that influence policy transfer processes.

Overall, this study represents an effort to broaden the wider context of knowledge around policy transfer regarding what should be considered by policymakers when assessing the sustainability of national park policies, plans and programmes. The study employs a principle-based assessment approach based on broader sustainability principles. This approach has significant potential to assist policymakers not only develop better policies, plans and programmes but also assess progress toward sustainability in Zambia and beyond.

The recommendations of this study include institutional reforms needed to drive Zambia's national park system towards sustainability. Prior to outlining the recommendations however, the limitations and conclusions relating to approaches for the selection, assessment and transfer of international park management principles are provided.

10.1.1. Selection of key park management principles

The idea that national parks and other protected areas policy frameworks should reflect some set of minimum acceptable ethical principles, applicable worldwide, is far from new. As discussed in this study, there have been several attempts to define such principles. At the global level, the IUCN *Guidelines for Protected Areas Legislation* (Lausche, 2011) are one approach. The Convention on Biological Diversity's Programme of Work on Protected Areas (PoWPA) and the Strategic Plan for Biodiversity 2011–2020 (CBD, 2010) can also be understood in this way. Yet, despite the system of governance developed at the international level and the existing body of knowledge to inform conservation practice, there is limited consensus on the key international park management principles. As a result, the selection and application of international park management principles remains ad hoc, albeit with different emphases depending on the context. This raises the question of whether the sustainable development agenda will ever reach a point at which it will be possible to identify a set of globally applicable

management principles. The use of international principles (such as the IUCN park management principled applied in this study) establishes a certain degree of legitimacy for their application as a basis for national policy frameworks. However, it is important to stress that efforts to define a set of globally applicable park management principles should not inhibit efforts to build an equitable balance between globally and locally determined principles, local contexts, and locally appropriate visions of sustainability.

10.1.2. Assessment of international principles

The challenges associated with the assessment of environmental principles highlighted in this study support the comments made by Martin et al. (2016) that the environmental principles confound simple analysis. The assessment framework used in this study shows that it is a useful tool for analysing policy alignment across multiple governance levels (international, national and sub-national). Its multi-dimensional approach offers the opportunity to understand the dynamics through which various international principles are translated into practice. The framework makes it, for example, possible to examine whether policy pronouncements or commitments are being consistently interpreted and followed up by actual policy goals and steps/practices that may increase the likelihood of implementation. The major challenge experienced was finding appropriate performance metrics or indicators for studying progress towards successful transfer and/or implementation. No documents were found that could provide insight on generally accepted performance metrics or indicators to assess the relative degree of transfer or implementation of international principles. As such, assessment of international principles was associated with subjective judgments. These challenges show that current methods for assisting policymakers with decisions on how to ensure progress towards sustainable development are inadequate. Policymakers need guidance or methods to guarantee consistency and meaningfulness assessment of progress toward achieving individual principles within the context of sustainable development. Such methods should also make explicit the subjectivity inherent in decision-making.

Another challenge associated with the assessment of international principles relate to the access and availability of data. The data limitations highlighted in this study support

calls for more effort on collecting and managing good data about the operations of national parks and other protected areas. In this study, it was difficult to determine the actual extent to which the international principles are implemented because data collection and reporting is poor in Zambia. Annual reports, for example, are in most cases not filed, and even when available, not easily accessible. Because of the absence of comprehensive data collection and reporting systems there are no clear feedback loop to ascertain what happens in practice or determine whether the goals and objectives set in the policies and management plans are achieved. As a result, it is difficult for national governments and other stakeholders to know the actual extent to which policies or plans are being implemented and to accurately report to supranational bodies. The problem of insufficient data is relevant to all protected areas, particularly in the Global South. Therefore, there is a clear need for national park management agencies to recognise the importance of ecological and socio-economic data in national park management. Comprehensive data collection and reporting systems at all levels of governance could enhance progress towards sustainable development implementation in national parks.

10.1.3. Tension between global and local policy agendas

Having explored the way in which international principles are reflected in Zambia's national park policy documents, there is little doubt that their transfer is partial in Zambia. One assumption that can be inferred from literature on both sustainable development and policy transfer is that there are conflicts and inconsistencies between global and local policy agendas (e.g. Biermann et al., 2009). Contributing to this tension, perhaps, is the tendency of policymakers to rather deal with locally determined principles (more relevant to domestic context) than internationally determined principles. From this perspective, it seems logical to suspect that international principles are adopted and implemented only under specific local conditions. Indeed, local policymakers select, re-define, and modify international principles within the local context. In addition, a multitude of other contextual factors, such as availability of resources, access to information, technical capacities and policy development processes, influence the translation of international principles into practice. At the same time, however, policymakers find it difficult to evade the adoption of international

principles because of the global interdependence of the environment. Specific to national parks, the adoption of international principles is necessary in the pursuit of sustainable development, particularly when dealing with cross-cutting challenges faced by national parks (e.g. climate change and invasive alien species). As a result, policymakers seem to partially amend their local and individual values and practices in line with international principles. Consequently, the transfer of international park management principles is partial because the global dimension remains secondary to the local context.

Therefore, a balance between the respect for international principles and an understanding and appreciation of the national/local context appears to be one potential way to strengthening progress towards sustainable development in national parks. Policymakers must recognise and, perhaps, consider the conflict and interconnectedness of the global and local as a useful opportunity to re-define longer-term direction for national park systems. This conclusion also follows previous policy related studies (Betti, 2011; Brown Weiss & Jacobson, 2000; Underdal & Hanf, 2000) that have not only acknowledged the tension between the global and local but also recognised their interconnectedness, including the necessity of balancing the transfer of global principles against the increasing demand for local autonomy. Within this context, a common theme for all stakeholders involved in national park management is the need constantly to debate 'what is a good national park?'.

Furthermore, considering that the translation of global principles into practice remains, in part, contingent of local contexts, it would be unrealistic to expect Zambia and similar countries in the Global South to absolutely replicate ideas, principles, best practices and/or policy models espoused by global institutions or successful in the Global North. This does not mean that the transfer of global principles or achievement of global goals (e.g. the SDGs) in Zambia or elsewhere is doomed to failure. Rather, it suggests that in Zambia as elsewhere in the Global South, the translation of global environmental principles into practice or progress towards achieving the SDGs is likely to follow a progressive approach. Thus, there is a legitimate need for a phased rather than an

absolute approach to enhance effective translation of global principles into practice. International and local level policymakers retain an important responsibility in this regard.

The conclusions arising from this study show that opportunities exist for countries in the Global South to strengthen their protected area policies and achieve their international environmental obligations. This can, in part, be achieved by understanding and coordinating policy transfer efforts across different governance levels. Availability and access to information, as well as adequate institutional and technical capacities, have an important role to play in facilitating effective translation of global policy ideas, principles or best practices into practice. However, transfer of global policy ideas, principles and best practices matters less in situations where governments lack the resources and political will to translate them into practice. Given this, national governments have an important role to play in providing clear leadership that will encourage collaboration and progress towards the sustainability of national parks into the 21st century. Opportunities for leadership exist in Zambia.

10.2. Recommendations

The recommendations arising from the study are grouped into two categories. The first set of recommendations are of a higher order, focusing on key institutional reforms needed to transform the functioning of Zambia's national parks management agencies. The second set of recommendations are of a lower order, focusing on how to enhance national park performance.

10.2.1. Recommendations for institutional reforms

The solution to strengthening the integrity and sustainability of Zambia's national park system is largely one that not only addresses the regulatory gaps but also the overall institutional and governance challenges. Implementation of national park laws, policies, and plans in Zambia has stayed largely within the traditional sectoral or silo approach to development, caused partly by separate budgets and accountability. This approach not only undermines integrated planning but also the potential to address implementation

challenges. Effective national park management will require coordination across ministries to ensure sectoral synergies and coherence across different governance levels. Four key recommendations for institutional reforms in Zambia include the following:

1. Institutional reforms should address improvement of coordination among the different institutions involved in the management of national parks. To achieve this, cross-ministerial coordination platforms should be established to help promote a more integrated approach to policy implementation. Such platforms will facilitate information-sharing, collaboration and help prevent duplication of effort between government departments. Indeed, Zambia's Department of National parks and Wildlife (DNPW), if supported, can ease coordination across government agencies, and help strengthen institutional capabilities to respond effectively to implementation of national park laws, policies and plans.

   Examples from other countries such as Ghana and Columbia have shown that establishment of inter-ministerial coordination platforms can lead to successful outcomes (UNDP, 2017). In these countries, high-level inter-ministerial committees have been established to bring together sectoral working groups across ministries and oversee planning and implementation of natural resources policies and plans, including the SDGs.

2. Institutional reforms should focus on addressing overall governance challenges. Currently in Zambia, there is no legal requirements for various aspects of governance to be integrated across public institutions. As such, governance tends to be perceived as an additional factor that may be considered, leaving much discretion to decision-makers to avoid its meaningful application. Therefore, there is a need to establish planning mandates that require government institutions to formally integrate various aspects of governance. This will not only strengthen institutional capacities but also facilitate collaboration, accountability and performance. To achieve this, key national

park legislation, such as the Zambia Wildlife Act (2015) should include governance as a primary consideration for policymakers and planners to bring it to the forefront of the policy/plan development processes and thereby promote its application.

3. The institutional reforms should address the importance of government's role in engaging Civil Society Organisations (CSOs) in national park management. It is essential to create formal working relationships with CSOs to enhance dialogue and their contribution to policy outcomes. There is a need for one or more CSOs (with the necessary expertise) to work closely with the government agency responsible for national parks. This work could include provision of advice on governance as well as playing a liaison and coordination role among other CSOs. In the absence of such initiatives, limited stakeholder participation in national park management will continue, and policy and plan development will remain the preserve of government officials. The establishment of formal collaborative working relationships with CSOs is thus a key reform that will strengthen CSO support for policy development and implementation, crucial for driving and sustaining Zambia's national parks system. In Zambia, there is limited capacity among CSOs for research, planning, coordinating, monitoring and evaluating conservation programmes and projects. Therefore, it will be useful to involve international organisations such as the IUCN and WWF to support capacity building among CSOs to enhance their contribution to policy outcomes.

4. The institutional reforms should also address the importance of government's role in providing financial resources to the national park management agency. National park management agencies require sustainable funding to operate effectively. While there are several sources of funding for national parks, government funding is the most reliable source over the long term in many countries (Spergel, 2001). In Zambia, reports show that government budgetary allocations to the then Zambia Wildlife Authority were not commensurate with the costs associated with its establishment and maintenance (see section 2.3.3).

The Department of National Parks and Wildlife (DNPW) should be adequately funded if sustaining Zambia's national park system is to remain a priority. Examples from other countries show that when such institutions are well funded by government, such as SANParks in South Africa, efficiency and management effectiveness improves (Sichilongo et al., 2011). As such, the Zambian government should provide resources to build DNPW's institutional and technical capacities that facilitate collaboration, information flows, monitoring, evaluation, and reporting.

10.2.2. Recommendations to enhance national park performance

The second set of recommendations address the four most prominent themes that emerged from the analyses as barriers to effective national park performance in Zambia: (i) a lack of information; (ii) a lack of technical capacities; (iii) inadequate monitoring and evaluation; and (iv) inadequate implementation mechanisms.

Availability and access to information

Reliable information can support effective decision-making and management of national parks. In this study, accessing information on the operations of the national parks presented a significant challenge. For most of the national parks considered, reports on the park operations were not available, or if present, were not readily accessible. There is therefore, a clear need for improving information/data collection and management systems in Zambia's national parks system.

To achieve this, initial attention should be directed towards identifying the data/information needs, including the human and institutional capacity needs, as well as challenges to data acquisition. One common challenge to effective data acquisition in Zambia is the weak collaboration between the DNPW and other institutions such as the Central Statistical Office (CSO) and universities involved in national park data compilation. In this regard, it will be important to enhance collaboration among these institutions. These institutions already undertake several research-related activities, such as wildlife population and socio-economic surveys, and can therefore, provide reliable data cost-effectively. As such, formal collaborative arrangement such as

research partnerships between the DNPW and universities are needed to help conduct critical research, and generate the information needed. The information/data obtained from such arrangements would help the Zambian Government and DNPW to develop more effective national park policies, programmes, and plans.

In retrospect, document mapping (establishing what documents are available prior to undertaking the study) could have been beneficial for this study and would be useful for other studies of a similar scale in determining the scope initial analysis. The use of grey literature could also provide policy context and implications not found in the published literature, and thus add depth to the analysis and results. Further research could utilise other data collection methods, such as interviews, expert consultations and questionnaires, to mitigate the data limitations identified in this study.

Capacity building

The institutional reforms should focus on development and strengthening of staff capacities for implementation. One challenge noted in this study is that the policymakers and planners lack the necessary technical skills and knowledge to translate and ensure effective adoption and implementation of international principles. Therefore, long-term capacity-building programmes should be developed and embedded with national development programmes. These programmes should target staff within the DNPW and other government ministries and departments responsible for national park policy development and implementation. Such capacity development programmes will assist policymakers and planners to develop a clear understanding of the existing challenges and design policies and plans best suited to their contexts and capabilities.

Further, the DNPW should develop short-term capacity-building programmes aimed at raising policymakers' awareness on the need to foster an integrated approach to policy development and providing guidance on the national framework conditions required to support effective protected area management. For instance, DNPW could consider supporting park managers, rangers and wardens to develop a shared understanding of key international park management principles. In this regard, it may be useful to involve

international environmental organisations such as the IUCN to support the development of the course materials for the short-term capacity-building programmes.

Monitoring and evaluation

There is also a need to monitor the realisation of national park policies, plans, and programmes that are vital to the integrity and sustainability of national parks. Demonstrating the implementation of the policies and plans within the national parks is an important point of convergence for all stakeholders involved in national park management. As such, institutional reforms should support guidance, learning and tools for monitoring and evaluation actions. In this regard, it may be useful to involve international organisations to provide resources to build the institutional and technical capacities for monitoring, evaluation and reporting. For example, to support monitoring of SDGs in Indonesia, the government in consultation with other stakeholders has developed monitoring guidelines to help monitor and evaluate SDG performance and achievement at national and local level (UNDP, 2017).

Implementation mechanisms

The type of implementation mechanism developed will shape the integrity and sustainability of Zambia's national parks system, in part. Comprehensive implementation mechanisms that will satisfy the criteria of participation, equity, transparency, and accountability should be developed. While comprehensive, such mechanisms should not be too sophisticated for the existing institutional capacities to implement. Where the park goals are to implement specific principles, principle-specific implementation mechanisms may be more appropriate. For example, in relation to the social equity and justice principle, the Department of National Parks and Wildlife (DNPW) should facilitate the development a comprehensive cost and benefit sharing mechanisms across all the national parks. Such mechanisms will require the DNPW to make its financial records available to other stakeholders to encourage transparency and accountability. Furthermore, the mechanisms should include dispute resolution processes that communities can use to gain review of and to appeal decisions made by protected area authorities.

Such mechanisms have been trialled in the Liuwa National Park in Zambia. In this park, a co-management governance system was established among Strichting African Parks Foundation as an independent private partner, the then Zambia Wildlife Authority as the government management agency; the Barotse Royal Establishment representing local communities, and a partnership Board which oversees the partnership. These organisations have worked together since 2003 and developed various mechanisms for effective park management. For example, they have developed effective cost and benefit sharing mechanisms through which surrounding local communities are supported. The communities are supported through formal employment, school scholarships, classrooms and teachers' housing, boreholes and solar cookers (Nyirenda & Nkhata, 2013). Therefore, wildlife populations in Liuwa National Park have recovered and large mammal biomass increased from 966 kg/km^2 in 2003 to 1,921 kg/km^2 in 2013 (Lindsey, Nyirenda, Barnes et al., 2014).

In addition to the above, the Department of National Parks and Wildlife should: (a) update national park management plans to reflect all the IUCN park management principles, along with action steps; (b) undertake annual/regular reporting on implementation and progress; and (c) conduct a national or park-by-park approach to managing the effects of climate change and invasive alien species.

10.3. Future research

The examination of Zambia national park policies, laws and management plans through the lens of a selected set of IUCN park management principles has provided useful information to decide both the scope and attention to sustainable development in terms of policy development and practice in Zambia's national parks. This study provides valuable information regarding vertical policy alignment and related implications. Previous research on policy transfer and sustainable development has established that compliance with global policy frameworks by member states plays an important role in maximising conservation benefits, and as such provide general guidance on compliance mechanisms by which countries may translate and implement global policy frameworks. This study complements these studies by specifying the principles that policymakers

may use as an essential basis for effective national park policies within the context of sustainable development. It also offers a systematic method to study degrees of policy alignment between national level laws, policies, plans, and reports with global policy frameworks. Here, four areas for future research that would enhance the findings of this study are presented.

- Sustainable development implementation in Zambia's national parks is undermined by a lack of data on parks operations and performance. Therefore, future research should not only utilise other data collection methods (e.g. interviews, expert consultations and questionnaires), but also explore in more detail the barriers to effective data collection and reporting within national park management institutions. Future research could also identify incentives that would encourage participation of both public and private stakeholder to mitigate the data limitations identified in this study, particularly the lack of updated and reliable reports such as annual reports, reports of achievements against park management plan objectives, governance and management effectiveness evaluations.

- Because the way international principles are introduced, or interpreted, are contingent on specific local conditions, detailed studies that pay greater attention to domestic factors such as financial resources, institutional structure and local politics are needed to better explain and improve policy transfer and implementation outcomes.

- The international principles least mentioned and consistent across the policy documents examined in this study (i.e. good governance, social equity and justice, management of climate change and management of invasive alien species), provides a helpful future planning tool to decide both the scope and attention to sustainable development in terms of policy development and practice in national parks. Further research should identify the individual and collective organisational paucities that account for the marginal outcomes in

relation to these international principles. Research could, for example, investigate the potential impacts of climate change and threats including invasive alien species and ways to mitigate them.

- Internationally, further research should be undertaken to identify criteria or measurable variable variables and develop tools and methods for evaluating the application of international principles in practice. Such research could enhance understanding of the challenges in the transfer and application of international policy models and contribute towards achieving the Sustainable Development Goals.

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APPENDICIES

APPENDIX A

IUCN

Guidelines for Protected Areas Legislation

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IUCN Environmental Policy and Law Paper No. 81

COMMISSION ON ENVIRONMENTAL LAW

WCPA WORLD COMMISSION ON PROTECTED AREAS

Introduction to the guidelines

A The setting

As the first decade of the 21st century draws to a close, most countries of the world have established protected areas. Virtually all such areas enjoy some form of legal protection. Growth in protected areas has continued to trend upward since the 1960s, when data showed only about 1.5 per cent of the earth's surface covered. Today, more than 12 per cent of the earth's surface is part of some type of formal protected area (see Box Intro-1). But scientific assessments indicate that biodiversity and ecosystem integrity are continuing to decline at an accelerating rate. As never before, protected areas are being recognized as essential for nature and biodiversity conservation in order to maintain the basic ecosystem services and functions that sustain human life as we know it. They complement other land uses, promote environmental protection and support regulations aimed at the sustainable use of biological resources outside protected areas. 1

Despite progress made in recent decades with the expansion of classic state-owned or state-controlled protected areas, there is growing scientific agreement and policy recognition that existing areas are not sufficient to meet the increasing challenges of biodiversity conservation. This is particularly evident in the case of marine protected areas (MPAs), where less than 2 per cent of the total marine area within the exclusive economic zones of most countries is so designated. 2

Today the world's biodiversity is estimated to be experiencing rates of extinction at least 1,000 times higher than any time previously in Earth's history, with some 20,000 species known to be threatened with extinction and many more likely to be threatened (Barber et al., 2004, p. 30). Globally, ecosystem services are also being degraded or used unsustainably at accelerating rates. 3

Protected areas face increasing threats from both direct and indirect causes (Worboys et al., 2006, pp. 223–261). Direct threats arise within protected area boundaries, for example, from poor management, illegal logging, the introduction of invasive alien species, on-site pollution, mineral resource extraction, unsustainable use of plants and animals, unsustainable visitor use, and on-site natural events (tsunami, fire, earthquake, volcanicity, avalanche, glacier break-up). Indirect threats come from outside protected areas and are caused by factors such as inappropriate land use decisions, off-site pollution, urban expansion, off-site ecosystem degradation, off-site natural events, and the consequences of poverty and civil conflict. 4

Over the last decade, climate change has come to be recognized as one of the most significant indirect threats to human and natural systems. According to some protected areas practitioners, climate change presents "the greatest threat ever" to national parks and other protected areas (Saunders et al., 2009). Protected areas will be affected by climate change at least as much as other lands and waters. In fact, some scientists expect that the impact on protected areas may be greater because fewer adaptation options may be available in such areas, compared to lands and waters that are more actively manipulated. Climate change will create the need to expand existing protected areas, designate new protected areas and pay increased attention to connectivity conservation. This will be important in order to cover species and ecosystems in need of protection in their current and future ranges, as well as to protect and expand the capacity of forests, grasslands and marine systems to prevent the loss of carbon already stored in plants and soils and to sequester further carbon from the atmosphere. 5

Box Intro-1: Worldwide coverage of protected areas

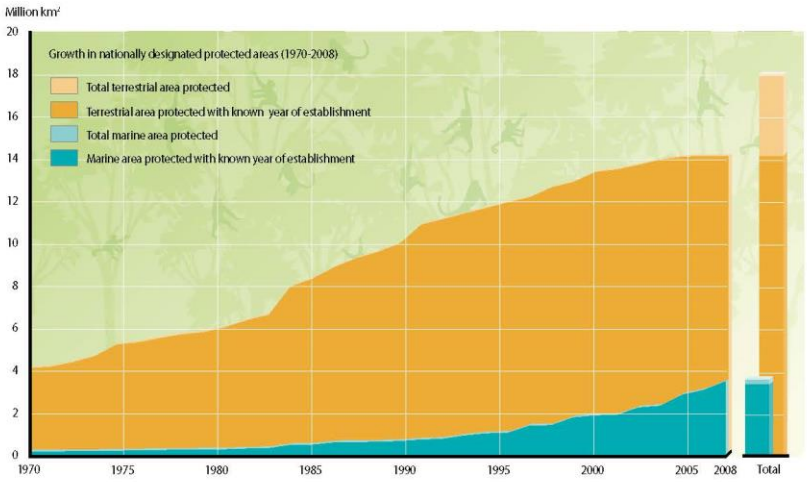
As of January 2009, 122,512 nationally designated terrestrial and marine protected areas in 235 countries and territories were included in the World Database on Protected Areas (WDPA). These areas cover 21,242,195 sq km, or about 12.1 per cent of the earth's surface. This includes both terrestrial and marine protected areas but does not include sites designated under the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) (1972), or national sites that have been proposed but are not officially declared. Of the 122,512 national protected areas included in the WDPA, 5,674 are situated in marine areas under national jurisdiction, covering roughly 0.7 per cent of the world's oceans and approximately 2.58 million sq km (Laffoley, 2008; UNEP-WCMC, 2009; Lucy Fish, personal communication). Marine ecosystems continue to be critically under-represented.

There has been considerable progress in the growth of protected areas over recent decades (see Figure A). According to the United Nations Environment Programme (UNEP) World Conservation Monitoring Centre (WCMC), in 1962 there were 9,214 sites covering 2.4 million sq km. By 1992, these figures had grown to 48,388 protected areas covering 12.3 million sq km. Since 1992, the latest figures reveal that the number of recorded areas has grown some 250 per cent and surface coverage has increased by roughly 174 per cent.

As of 2007, transboundary protected areas between two or more countries numbered 227, covering 4.6 million sq km (GTPAN, 2007c). The methods used to derive these numbers are not as developed as those for national protected areas. However, significant advances were made with the 2007 inventory, where the methods employed included: an adjacency analysis of protected areas done with geographic information systems (GIS) that used international borders, and the results of an earlier survey which asked protected area managers if they had cooperative relationships with neighbouring countries.

The UNEP-WCMC regularly adds new parameters to the WDPA, particularly for marine and transboundary protected areas.

Figure A: Growth in nationally designated protected areas



The WDPA is a joint project of the UNEP and IUCN (International Union for Conservation of Nature), produced by the UNEP-WCMC and the IUCN World Commission on Protected Areas (WCPA), working with governments and collaborating non-governmental organizations.

Source: WDPA website.

6 Beginning in the 1990s, heads of state and multilateral organizations intensified efforts in international environmental law and policy in response to growing scientific evidence concerning the loss of biodiversity and the degradation of ecosystems and habitats. Among the many actions taken, the Convention on Biological Diversity (1992) (CBD) was adopted and the United Nations Conference on

Environment and Development (1992) produced the Rio Declaration and Agenda 21, the latter also known as the 'earth's action plan'. By 2000, several global conventions directly relevant for protected areas had entered into force and were well into implementation at the national level. Among the most prominent, in addition to the CBD, are the Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971); Convention Concerning the Protection of the World Cultural and Natural Heritage (1972); Convention on the Conservation of Migratory Species of Wild Animals (1979); United Nations Convention on the Law of the Sea (1982); United Nations Framework Convention on Climate Change (1992); and United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994).

Regional agreements also experienced significant growth, for example, in Africa where a revised African Convention on the Conservation of Nature and Natural Resources was concluded in 2003. There were significant advances in the European Union (EU) as well, with the Habitats Directive and the Birds Directive that generated the Natura 2000 network of protected areas spread over EU member states. 7

These global actions underscore the growing concern about environmental changes on the planet and reflect efforts to promote effective international responses. This has been reinforced by the United Nations General Assembly in the United Nations Millennium Declaration (2000) which contains eight Millennium Development Goals to be achieved by 2015, including Goal 7, to 'ensure environmental sustainability'. Among the indicators for measuring progress with Goal 7 is the "ratio of area protected to maintain biological diversity to surface area" (UN, 2003, indicator 26). 8

In this context, protected areas have become an important tool for the conservation and maintenance of biodiversity in all its aspects, including the diversity of species, genes and ecosystems. In this fast-changing, globally connected world, no protected area or wild species will be secure over time without a supportive legal and policy framework. Such a framework should reflect international obligations and guidance, protected area management principles with legal application, and good practice principles for effective national protected areas legislation. While legal content, style and structure will vary from one country to another, knowledge and experience is steadily improving about good practice and the basic common elements required in modern protected areas legislation. This is the focus of these *Guidelines for Protected Areas Legislation*. 9

B Purpose and audience

The purpose of these guidelines is to update and expand the original guidelines published in 1980 (Lausche, 1980), and to reflect new developments and emerging issues. These developments include significant advances in international environmental law, and an improved scientific understanding of the role of protected areas in nature conservation, including conserving biodiversity, maintaining ecosystem functions and supporting sustainable development. 10

Other advancements in the last three decades relate to improved scientific understanding about certain types of protected areas that require special attention in legislation. In particular, MPAs are now recognized as needing special legal treatment because of their unique biophysical features, management and enforcement needs, and in many cases the multiple authorities and laws involved. In the past, it had been assumed that MPAs could fit within a generic legal framework for protected areas which was overwhelmingly focused on and governed by the needs of terrestrial protected areas. 11

Today there is also broad consensus that protected areas must be planned and managed using an ecosystem approach. This approach requires that other public policy tools, such as those related to land 12

use planning, forestry, fisheries, land and marine resource use, tourism, and economic development are compatible with protected areas legislation.

13 Other developments related to the management and governance of protected areas also have implications for protected areas legislation. Today, in addition to the classic state-owned or state-controlled protected area, new governance types offer important management options. This is especially relevant in countries where possibilities exist to recognize voluntarily conserved areas as part of the formal protected areas system.

14 In light of these developments in international law, scientific understanding and management, countries will need to examine their own protected area laws with a view to updating them. One of the main purposes of these guidelines is to identify new or strengthened legal elements that countries should take into account in their protected area legal frameworks. These elements have broad applicability and general value because in many aspects of protected areas law the legal approach is similar, if not identical, across countries and jurisdictions. These guidelines are intended to serve as an aid in a legislative review and drafting process across the spectrum of national and local needs. It is also envisioned that these guidelines will stimulate ongoing dialogue between government authorities and stakeholders in all segments of society, with the aim of continuing to modernize national policy and legal frameworks to be most responsive to and supportive of conservation priorities, international law commitments, adaptive needs and sustainable development goals.

15 As with the original 1980 guidelines, the primary technical audience for these new protected areas legislation guidelines is the legal drafter working closely with protected area authorities as well as others involved in the legislative process. These guidelines will also be a valuable resource for those employed in executive agencies that oversee and implement other policies and programmes affecting or affected by protected areas legislation. In addition, these protected areas legislation guidelines will be useful for those involved with or interested in the progress, review or drafting of protected areas legislation. This includes all stakeholders, whether concerned or affected communities, organizations, corporations, groups or individuals. Another important audience anticipated for these guidelines includes those who are interested in the progressive development of protected areas law, whether students, professors or researchers.

C Scope

16 These guidelines cover terrestrial and marine protected areas within national jurisdiction. They apply to national legal frameworks as well as sub-national legal frameworks in federal states and in states where powers to enact protected areas legislation have been decentralized. They do not address protected areas beyond national jurisdiction.

17 These guidelines contemplate national protected area legal frameworks that provide for a full range of conservation objectives, from strict protection to multiple use. The principal consideration is that such areas should be established primarily for conservation, even though there may be multiple objectives. These guidelines also incorporate considerations for new approaches to the governance of protected areas that are included in the formal protected areas system. These approaches relate principally to voluntarily conserved areas of indigenous peoples, local communities, non-governmental organizations (NGOs), corporations and private individuals.

18 These guidelines take into account the fact that national legal frameworks are normally composed of several different types of instruments with varying degrees of legal authority and reach. Decisions

about the legal instruments best suited to give effect to various elements considered in these guidelines are left to the legal drafter working with protected area and other authorities as appropriate. Tools available may include executive policies, codes, laws, acts, decrees, norms, regulations, rules and subsidiary orders. Within a country's legal system, a hierarchy of legal instruments and operational tools is typically in place with standards for the content of each. Principal legislation (an act or law) may be comprehensive and all-inclusive, or may provide only overarching authority and principles, leaving subsidiary legal instruments to define details about specific components or requirements.

It is important to stress that not all legal elements considered in these protected areas legislation guidelines will apply in every country, fit within a single legal instrument or involve the same level of authority. The intention is to cover the full array of core legal principles and considerations for the legal drafter and the protected area authorities to draw upon, within the context of the country's international law obligations, local legal practice, and specific protected areas goals and needs. 19

The principles, concepts and elements laid out in these guidelines should not be seen as prescriptive but rather as information and guidance. They are not meant to provide a model. Every country's legal requirements and approaches with respect to national protected areas should be tailored to that society's needs. 20

D Sources of information and guidance

These guidelines rely on many sources of legal and technical information and guidance relevant for protected areas legislation. The primary sources of information are international treaties of relevance to protected areas, along with the guidance provided by decisions of the Parties to these treaties. Many of these decisions address obligations and formal commitments made by the Parties which require national legislative action in order to be fulfilled. Other important sources of information at the international level are the relevant decisions of international bodies such as those within the United Nations family and other international organizations, including IUCN, the International Union for Conservation of Nature. 21

Peer-reviewed publications in science, policy and law related to protected areas are a third important source of information. They reflect the latest understanding about the state of the world's protected areas with regard to biodiversity conservation, as well as best practice management principles for effective protected areas, and key tools and techniques that are necessary or important for protected area legal frameworks to meet the challenges of the 21st century. 22

IUCN membership decisions and technical guidelines carry special weight. The members of IUCN meet formally every four years as the World Conservation Congress (WCC), the highest decision-making body of the Union (known as the IUCN General Assembly until 1996). Many decisions in the form of recommendations and resolutions on protected areas have been taken by IUCN General Assembly and WCC sessions, and these form an important body of principles and guidance for protected areas law. From a global policy perspective, these decisions are particularly significant because IUCN has more than 1,000 members worldwide, including 84 states, 116 government agencies, 784 national NGOs, 96 international NGOs and 30 affiliates (IUCN, 2010a). 23

IUCN is also known for its sectoral and cross-sectoral policy and technical work, providing guidance through its six Commissions of volunteer experts and through its Secretariat programmes. In the field of protected areas, such policy and technical work is primarily carried out by the IUCN World Commission on Protected Areas (WCPA) and the secretariat's global Programme on Protected Areas (PPA) which administers IUCN-WCPA. The IUCN-WCPA mission is to promote the establishment and effective 24

management of a worldwide representative network of terrestrial and marine protected areas. Over more than 50 years since its creation, it has developed a global network of protected area specialists who help governments and others plan protected areas, provide strategic advice to policy makers, and work to strengthen capacity in protected areas planning and management on the ground.

25 Every 10 years, IUCN-WCPA and IUCN-PPA convene the IUCN World Parks Congress (WPC), a global forum of protected areas experts. While decisions of the IUCN-WPC are taken by the participating experts rather than by IUCN members, the forum provides policy and technical guidance on protected areas planning and management and helps define new concepts for the future of protected areas. Key recommendations made by the participants of each IUCN-WPC are normally submitted for consideration by IUCN members at a subsequent IUCN-WCC for endorsement. IUCN-WPC decisions are also an important source of information for these guidelines.

26 Other sources of technical information and guidance for these guidelines are the publications of IUCN-WCPA derived from its protected areas work in the field. In particular, it is worth singling out the IUCN-WCPA Best Practice Protected Area Guidelines series, which was launched in the late 1990s and has grown to 16 publications.

27 In addition, these protected areas legislation guidelines use the protected area management categories developed by IUCN-WCPA, adopted by the IUCN General Assembly in 1994 (IUCN, 1994) and further elaborated in 2008 (Dudley, 2008) as the frame of reference when discussing protected area conservation and management objectives. These management categories are recognized internationally. The CBD, among others, has endorsed their use. These categories are also used to record national and transboundary protected areas in the World Database on Protected Areas (WDPA), from which the United Nations List of Protected Areas is produced.

28 Virtually all other IUCN commissions and programmes deal with protected areas in some way. The two that are most prominently involved in protected areas issues are the IUCN Environmental Law Programme (ELP) and the IUCN Commission on Environmental, Economic, and Social Policy (CEESP). They have also generated numerous documents analysing specific issues, articulating principles and producing case studies relevant for protected area legal frameworks. These guidelines also rely heavily on such publications. Considering their important contribution, it is worth elaborating on the functions and scope of the ELP and CEESP.

29 IUCN-ELP is comprised of the Environmental Law Centre (ELC) and the Commission on Environmental Law (CEL), a worldwide network of environmental law specialists. IUCN-ELP's mission is to advance sustainability through the development of legal and policy concepts and instruments, and by building the capacity of societies to develop and implement environmental law and policy. Among its main contributions over more than 40 years are the conceptual development of international and national environmental law, the provision of technical legal advice, and the production of studies, guidelines and analyses, including surveys and synopses, of developments and trends in the field of environmental law. Many IUCN-ELP guidelines and legal technical publications have been critical sources of information for these protected areas legislation guidelines. It is worth highlighting, in particular, the IUCN Environmental Policy and Law Paper series which began in 1972 and has grown to 80 publications, many of which are available online.

30 IUCN-CEESP is an interdisciplinary network of professionals who provide technical expertise and advice on the environmental, economic, social and cultural aspects of IUCN's mission, including in relation to protected areas. IUCN-CEESP also generates significant information and guidance through its publications. IUCN-CEESP publications on protected areas governance in particular are important sources of information for these guidelines.

In addition to the sources noted above, secondary sources of information have also been consulted. These sources, in the form of studies, surveys, evaluations, reviews and commentaries, have been valuable as a reflection of the latest scientific and legal thinking on concepts and principles important to meet current and emerging challenges to protected areas, including climate change. Online sources of information have been identified wherever possible. 31

E Generic terms

The range of terrestrial and marine protected area types with conservation as the primary objective is broad, and the terms used for specific protected areas (for example, national park, marine reserve) vary considerably from country to country. An effort has thus been made in these protected areas legislation guidelines to minimize the use of specific labels or protected area classifications. 32

These protected areas legislation guidelines use a number of terms interchangeably or with special meaning: 33

- **Co-management** is used to mean 'shared governance' as well. The IUCN-WCPA guidelines for applying protected areas management categories (Dudley, 2008) use the terms interchangeably. Co-management is already well established in protected areas legislation and is thus used throughout these guidelines. Early protected areas laws used the term 'co-management' and it has developed a legal history for lawyers and managers, including through IUCN and other best practice literature. Co-management agreements have been recognized as a legal tool and included in protected areas legislation for decades. Introducing a new term for the same concept could create significant uncertainty and confusion for continuity of implementation, interpretation and judicial review.
- **Ecosystem approach** is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.
- **Formal protected areas system** is used to refer to the system of protected areas officially declared, designated, established or recognized by the state pursuant to protected areas legislation. This system consists of state-owned or state-controlled protected areas and may also include the voluntarily conserved areas of indigenous or traditional peoples, local communities, corporations, NGOs, or private individuals that have been recognized as part of the official system.
- **Indigenous** includes tribal or traditional peoples, as well as aboriginal peoples in jurisdictions where that term is preferred.
- **Legislation**, **legal framework** and **legal provisions** are used interchangeably to refer to legal instruments that have statutory force, such as national laws or acts, executive decrees, or executive orders, as well as supporting subsidiary instruments such as regulations, rules, norms and other tools with legal or operational effect that are able to withstand judicial review.
- **Marine protected areas** refers to protected areas located within marine and coastal areas under the jurisdiction of a coastal state, and may include transboundary MPAs. Depending on the context, the term refers to MPAs as well as marine and coastal protected areas.
- **National**, in relation to protected area systems and authorities, includes the sub-national (province, state) level in federal systems of government and decentralized government systems where protected area legal powers and responsibilities have been delegated or devolved.
- **Protected areas authority** and **protected areas agency** are used interchangeably.
- **Stakeholder** includes rightsholders and all parties with ownership, tenure, use or other special rights or interests, including traditional or customary rights to lands, waters or resources.

- **State-owned or state-controlled protected areas** refers to the classic type of protected area in land or sea that is established and managed by the state. In some jurisdictions, these protected areas are known as conventional, government or public protected areas.
- **Treaty** includes conventions, agreements, protocols, accords and other legally binding instruments concluded in writing between two or more states.
- **Voluntary conservation initiatives** refers to conservation initiatives by communities, corporations, NGOs or individuals. These may include indigenous or local communities holding property rights in common or collectively, as well as private landowners.

F Organization

34 These protected areas legislation guidelines are divided into four parts. Parts I and II discuss basic principles and obligations, providing background for the generic elements of protected areas legislation that are laid out in Part III. Part I focuses on best management principles, good governance, global and regional multilateral legal obligations, and international policy guidance. Part II provides an overview of the diverse governance types increasingly being recognized in protected areas legislation for possible inclusion in formal protected area systems. These governance types include voluntary conservation initiatives undertaken by indigenous and local communities, and private entities.

35 Part III concentrates on the elements of modern protected area legal frameworks, the overall purpose of this project. It begins with a summary of pre-drafting preparations and consultations that the legal drafter working with protected area authorities should undertake, where relevant and feasible. It then examines each of the core elements for protected areas legislation. In explaining and illustrating these elements, Part III draws upon and incorporates principles, concepts, obligations and guidelines introduced in Parts I and II. Part III is divided into two chapters. Chapter 1 discusses the generic elements of principal protected areas legislation, while Chapter 2 examines additional considerations important to take into account when drafting legal provisions for MPAs under national jurisdiction.

36 Part IV examines the special case of transboundary protected areas (TBPAs). It focuses on the legal considerations associated with international or transboundary arrangements between the countries involved in a TBPA. Legal considerations associated specifically with the national components of TBPAs are included in the generic elements discussed in Part III.

37 It is worth noting that throughout these four Parts, important ideas and concepts are repeated from time to time. This technique is used for emphasis as well as ease of reference. The aim is to allow individual sections of the guidelines to be read independently as far as possible.

38 At the conclusion of these guidelines, a thematic bibliography is provided in addition to a list of references. The thematic bibliography has been included to assist the reader in identifying and viewing sources in specific areas of interest. Wherever possible, online access information has been included so that readers may download documents that are available in electronic form. In the case of websites, however, it is worth keeping in mind that URLs are frequently subject to change.

39 Eight case studies of national and sub-national legal frameworks for protected areas, and seven case studies of legal frameworks governing specific protected area types have been prepared to accompany these protected areas legislation guidelines. The case studies provide on-the-ground insights into experiences being gained and lessons learned from legislation currently in force in 13 countries around the world. The case studies are supported by nine matrices identifying specific legislative provisions in eight jurisdictions, using a common outline to facilitate comparative study.

The case studies of national or sub-national frameworks are: 40

- Australia (federal)
- Australia (New South Wales)
- Canada (federal)
- Canada (Ontario)
- France
- Peru
- Philippines
- South Africa.

The case studies of legal frameworks governing specific protected area types are: 41

- community conserved areas (Natural Park of the Ampezzo Dolomites, Italy)
- indigenous and community conserved areas (India)
- indigenous–government co-management (Booderee National Park, Australia)
- marine protected areas (the Gully off the Coast of Nova Scotia, Canada)
- private protected areas (Pumalin Park, Chile)
- transboundary protected areas (W Transboundary Biosphere Reserve, Benin, Burkina Faso, Niger)
- ecological corridors (Baekdu Daegan Mountain System, South Korea).

The matrices that accompany the case studies are: 42

- Australia (federal)
- Australia (New South Wales)
- Australia (Great Barrier Reef)
- Canada (federal)
- Canada (Ontario)
- France
- Peru
- Philippines
- South Africa.

The *Guidelines for Protected Areas Legislation* are available in print in English, French and Spanish. Each of the printed volumes is accompanied by a CD-ROM which contains the relevant electronic version of the guidelines as well as the case studies and matrices. 43

G Looking ahead

Law evolves in response to changing societal needs. Protected areas law and policy will continue to emerge and progress as new scientific information is gained about biodiversity and how it is affected by human activities, such as changing land uses, as well as natural factors, such as climate change. Protected areas law will also continue to respond to developments in international law. Similarly, developments will continue to occur at the administrative level and in the courts, as governments and societies integrate this new understanding into law. The complexities of these issues will unfold and shape national protected areas law, land use law, climate change law and other associated areas in the decades ahead. 44

45 The outputs of this project represent a significant step forward from the original guidelines of 1980. But guidelines in law are always a work in progress. The collective efforts of lawyers, scientists, protected area managers and conservationists must continue in a multidisciplinary way to address ongoing and new challenges in the field of environmental law. These ongoing efforts should continue to elaborate elements that are important to include in protected area legal frameworks. This is essential if the law is to remain effective in supporting national protected areas and bolstering their critical global role in nature conservation and sustainable development. It is hoped that users of the *Guidelines for Protected Areas Legislation* will find them to be a practical and instructive aid for advancing this goal.

APPENDIX B

Low Risk Ethics Notification 4000015904

Tuesday, August 2, 2016 4:12 PM

From: "Lindsay Alice" <A.Lindsay@massey.ac.nz>

To: "Ackim.Mwape.1@uni.massey.ac.nz" <Ackim.Mwape.1@uni.massey.ac.nz>

Cc: "Prinsen Gerard" <G.Prinsen@massey.ac.nz> "Holland John"<J.D.Holland@massey.ac.nz> "Farrelly more ...

Sent on behalf of Dr Brian Finch (Director of Ethics)

Dear Ackim

You will be aware that the Human Ethics approval and notification procedures include an audit of a sample of Low Risk Notifications so that we can assure our accreditation body that the low risk process is robust.

In June you submitted a low risk notification through the Human Ethics online system for your project, entitled," Contributing towards strengthening the integrity and sustainability of Zambia's national park system".

At an audit meeting held in June 2016, the above project was randomly selected by the Research Ethics Office for review by the Chairs of the Massey University Human Ethics Committees.

The Chairs provide feedback from the audit to researchers and, in this case, are pleased to confirm that the notification was deemed as meeting low risk criteria.

The Research Ethics Office is available to support your future notifications and applications and trusts that this research project proceeded satisfactorily.

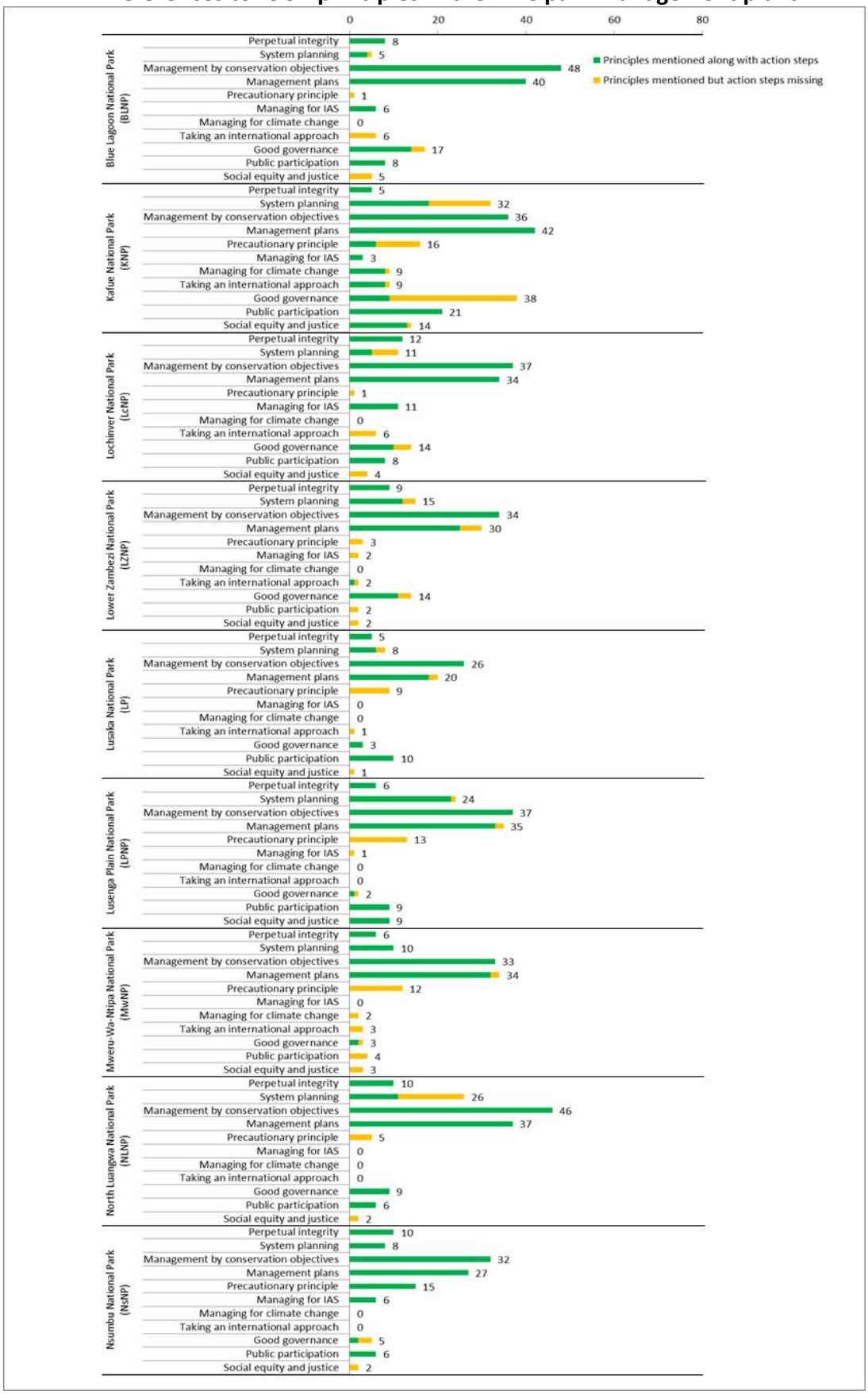
Regards,

Alice

Alice Lindsay
Research Ethics Administrator
Massey University Human Ethics Committee Northern
P O Box 102 904 NSMC AUCKLAND
_____
Courier Address: Room 3.01, Quadrangle A Building,
Massey University at Albany
Gate 1 State Highway 17 Albany AUCKLAND 0745
_____
T (09) 414 0800, extn 43276
F (09) 414 0814, internal 9414
email A.Lindsay@massey.ac.nz
http://humanethics.massey.ac.nz/
_____

APPENDIX C

References to IUCN principles in the nine park management plans



APPENDIX D

Statutory Instrument for Gazettment of Lochinvar National Park

GOVERNMENT OF ZAMBIA

_____

STATUTORY INSTRUMENT NO 58 of 1973

_____

The National Parks and Wildlife Act
(Laws of the Republic of Zambia, 1995 Edition, Volume XII, Cap.201)

_____

The Lochinvar National Park Declaration Order, 1973

WHEREAS Section eight of the National Parks and Wildlife Act confers on the President the power to declare with the consent of the National Assembly signified by resolution any area of land within the Republic to be a National Park for the purposes of the said Act;

AND WHEREAS the consent of the National Assembly has been signified by a Resolution passed by it on the twenty-third day of November, 1971:

NOW THEREFORE, I make the following Order:-

This Order may be cited as the Lochinvar National Park Declaration Order, 1973. — Title

The areas set out in the Schedule to this Order is hereby declared to be a National Park for the purposes of the National Parks and Wildlife Act — Declaration Cap. 201.

LUSAKA
8th February, 1973
[MLNR.102/18/1]

KENNETH D. KAUNDA
President

SCHEDULE

NATIONAL PARK No. 13: LOCHINVAR

Starting at Beacon V on the south bank of the Kafue River approximately 16 kilometers upstream from the confluence of the Kafue and Nampongwe River, the boundary follows the thalweg of the Kafue River downstream for approximately 17.7 kilometers to Beacon Z; thence in a southerly direction for approximately 24.1 kilometers to Beacon I1; thence in an easterly direction for approximately 1.6 kilometers to Beacon H1; thence in a southerly direction for approximately 6.4 kilometers to Beacon G1; thence in a westerly direction for approximately 14.4 kilometers to Beacon J1; thence in a northerly direction for approximately 20.9 kilometers to Beacon K1; thence in a north-easterly direction for approximately 9.6 kilometers to Beacon V, the point of starting.

The above-described area, in extent approximately 410 square kilometers, is situated in the Monze District and is shown bordered in red on Plan No. N.P. 13, deposited in the office of the Surveyor-General and dated 1st February, 1971.

APPENDIX E

SYNTHESIS OF COMPLETED MANAGEMENT EFFECTIVENESS TRACKING TOOL FOR PROTECTED AREAS MANAGED BY THE ZAMBIA WILDLIFE AUTHORITY FOR THE YEAR 2007

Prepared by

Henry Kankomba MWIMA

for
The Ministry of Tourism, Environment and Natural Resources

October 2007

Global
Environment
Facility

EXECUTIVE SUMMARY

This report is based on the results of the work assignment commissioned in February 2007 by the United Nations Development Programme (UNDP) aimed at modifying the WWF/World Bank Management Effectiveness Tracking Tool to the Protected Area System of Zambia. The report provides a comprehensive review of the approach undertaken and presents results from analyses of completed ***M***anagement ***E***ffectiveness ***T***racking ***T***ool for ***P***rotected ***A***reas managed by the ***Z***ambia Wildlife Authority (METTPAZ) data sheets. The report also presents a short conclusion and recommendations.

Report structure – the report has seven sections: - Introduction; Assignment Context; Assignment Implementation; Objectives of METTPAZ; General Information, Protected Area description and Assessment Elements; Analysis of Results; Conclusions and Recommendations.

A. Introduction

Rationale for the establishment of the *Management Effectiveness Tracking Tool* (METT) by the World Bank / World Wide Fund for Nature (WWF) Alliance in 1998 was to respond to continued depletion of the world's forest biodiversity. METT was designed to fulfill the elements of protected area (PA) evaluation included in the World Commission on Protected Areas (WCPA) Framework of the World Conservation Union (IUCN). The WCPA Framework aims to provide some overall guidance in the development of PA assessment systems and to encourage standards for assessment and reporting.

B. Assignment Context

The two major objectives in the terms of reference were:

1. Modify the WWF/World Bank Management Effectiveness Tracking Tool to be used in the Zambian context; and
2. Develop baseline information on management effectiveness in Zambia against which progress can be measured.

Within these major objectives, the detailed scope of work involved designing a framework for undertaking consultations at national and site-levels and defining strategies and approach for undertaking the assignment in consultation with the Working Group.

C. Assignment Implementation

Implementation of the assignment involved four major elements:

- Inception Report: I prepared the Inception Report in which I explained my understanding of each task in the terms of reference and how I intended to go about fulfilling the expectations. The report was presented to the Working Group which provided some inputs and guidance. After acceptance of the report, I proceeded with the assignment.

- National and Site-level Consultations: Based on the advice of the Working Group and my own experience, I made consultations with a number of people at national and site- levels. I developed a self-administered questionnaire which I used during the consultation process. Emphasis – during the consultation process – was placed on the following:
  - Establishing available knowledge on METT;
  - Barriers (threats and pressures) to effective management of PAs including degree of threats and pressures;
  - Causes of barriers to effective management of PAs;
  - Key stakeholders;
  - Indicators for inclusion in the modified management tracking tool with particular focus on six categories: ecological, socio-economic, geographical, management, policy and information; and not the least
  - Characteristics of effectively managed PAs.

- Training Workshop: I prepared a Training Manual which was approved by the Working Group. Based on this document, a one day training workshop was held on April 27, 2007

- attended by the Zambia Wildlife Authority (ZAWA) Director General and 30 members of staff.

- Modification of METT and development of METTPAZ: I modified METT to METTPAZ. This tool offers ZAWA the opportunity to assess management effectiveness of PAs based on the six management components of the WCPA Framework: *Context*, Planning, *Inputs*, *Process*, *Outputs* and *Outcomes*. In addition to assessing management effectiveness based on the six management components, METTPAZ offers two opportunities that are not available under METT: (i) to identify and analyze threats and pressures and (ii) to assess the key resource values based on four criteria – *poor*, *good*, *very good* and *excellent*.

A. Objectives of METTPAZ

The five objectives of this tool are to:

1. Provide harmonized and consistent reporting system of PA management effectiveness;
2. Provide reliable assessment to enable easy tracking of PA management effectiveness over time;
3. Offer a simple and cost-effective management effectiveness tracking system to be completed by PA staff and partners;
4. Provide a consistent reporting and tracking system on threats and pressures to effective PA management; and
5. Provide a consistent reporting and tracking system on the status of the PA key resource values.

B. General Information, Protected Area description and Assessment Elements

The information to be collected for each PA includes:

- General information including geographic location, extent in square kilometers, boundary description, etc.;
- Information on the PA current status, plans for the future, resource requirements, management interventions / actions, results of management interventions / actions;
- Threats and pressures; and
- Key resource values.

C. Analysis of Results

Overall management effectiveness for each PA based on six management components of *Context*, *Planning*, *Inputs*, *Processes*, Outputs and *Outcomes* has been assessed according to the following categories:

Category	Description
• Very Low	- for overall management effectiveness score of 0 – 30 %
• Low	- for overall management effectiveness score of 31 – 40 %
• Low Intermediate	- for overall management effectiveness score of 41 – 50 %
• Intermediate	- for overall management effectiveness score of 51 – 60 %
• High Intermediate	- for overall management effectiveness score of 61 – 70 %
• High	- for overall management effectiveness score of 71 – 80 %
• Very High	- for overall management effectiveness score of 81 – 100 %

METTPAZ data sheets also provides for assessment of threats and pressures to PA management effectiveness. A **threat** is defined as a process, event or activity that *could* lead to impairment or impoverishment of a natural resource while a **pressure** is defined as a process, event or activity that *has* led to impairment or impoverishment of a natural resource. The degree of threat and pressure is based on scores ranging from 1 (***not very serious***) to 10 (***very serious***) and is categorized as indicated below:

Score range	Description
1 – 3	Individual elements of PA are removed, but without overall alteration
4 – 7	There is overall impoverishment of the ecology of the PA
8 – 10	Major conversion and serious degradation of the PA

Furthermore, METTPAZ data sheets provide for assessment of key resource values of each PA. **A key resource value** is defined as a unique feature of biodiversity, ecological, cultural / historical, archaeological and geological importance. The status of key resource values is qualitatively assessed based on the assessment criteria summarized below:

Status	Description
Poor	Impoverishment due to conversion and/or depletion of the key resource
Good	Individual elements of the key resource removed with little signs of alteration
Very Good	Insignificant elements of the key resource removed but without overall alteration
Excellent	Individual elements of the key resource intact / available without signs of alteration

Analyses of completed METTPAZ data sheets were done for all 19 National Parks (NPs). None of the 19 NPs fell within the ***Very High*** management effectiveness category. One NP (South Luangwa) fell in the ***High*** management effectiveness category and 1 NP (Liuwa Plain) fell within the ***High Intermediate*** management effectiveness category. Six NPs (Mosi-Oa- Tunya, North Luangwa, Lower Zambezi, Lochinvar, Kafue and Kasanka) fell within the ***Intermediate*** management effectiveness category. Five NPs (Blue Lagoon, Nyika, Luambe, Sumbu and Lusenga Plain) fell within the ***Low Intermediate*** management effectiveness category. Two NPs (Lukusuzi and Sioma Ngwezi) fell within the ***Low*** management effectiveness category while the remaining four NPs (Lavushi Manda, Isangano, West Lunga and Mweru Wa Ntipa) fell within the ***Very Low*** management effectiveness category.

Analyses of another set of completed METTPAZ data sheets were done for 36 Game Management Areas (GMAs), but management effectiveness assessments were actually done for 38 areas because Kafue Flats GMA was divided into North and South Banks while Musalangu GMA was divided into East and West blocks. For the purpose of this report, the 38 areas will be treated as separate GMAs. None of the 38 GMAs fell within the ***Very High*** management effectiveness category. Lupande GMA fell in the ***High management*** effectiveness category; Chiawa GMA fell within the ***High Intermediate*** management effectiveness category while Sandwe GMA fell within the ***Intermediate*** management effectiveness category. Eight GMAs (Mukungule, Luano, West Petauke, Rufunsa, Kafinda, Lumimba (lower), Nkala and East Musalangu) fell within the ***Low Intermediate*** management effectiveness category. Thirteen GMAs (Mumbwa, Munyamadzi, Lower West Zambezi, Bangweulu, Tondwa, Sichifulo, Lunga Luswishi, Mulobezi, Namwala, Upper West Zambezi, Kafue Flats – North Bank, Kafue Flats – South Bank and Kasonso Busanga) fell within the ***Low*** management effectiveness category. The remaining 14 GMAs (Kalasa Mukoso, West Musalangu, Chizera, Chibwika Ntambu, Mufunta, Bbilili Springs, Chisomo, Lukwakwa, Musele Matebo, Machiya Fungulwe, Kaputa, Chambeshi, Luwingu and Mansa) fell within the ***Very Low*** management effectiveness category.

The terms of reference did not include Bird Sanctuaries on PAs to be assessed; however, analyses of completed METTPAZ data sheets were done for three Bird Sanctuaries. None of the three Bird Sanctuaries fell within the ***Very High***, ***High***, High ***Intermediate or Intermediate*** management effectiveness category. Chete Island fell within the ***Low Intermediate*** management effectiveness category; Sekula Island fell within the ***Low*** management effectiveness category while Chembe fell within the ***Very Low*** management effectiveness category.

Results of overall management effectiveness for National Parks, Game Management Areas and Bird Sanctuaries are presented in Figures 1, 2 and 3 respectively. If we take the ***Intermediate*** management effectiveness category as a cut-off point to determine which PAs meet the minimum management effectiveness, the results of the baseline information suggests that only 8 NPs (in order of descending management effectiveness: South Luangwa, Liuwa Plain, North Luangwa, Lower Zambezi, Mosi-Oa-Tunya, Kasanka, Kafue and Lochinvar) and 3 GMAs (in order of descending management effectiveness: Lupande, Chiawa and Sandwe) meet the minimum management effectiveness requirements. Using the same cut-off point suggests that the 3 Bird Sanctuaries do not meet the minimum management effectiveness requirements.

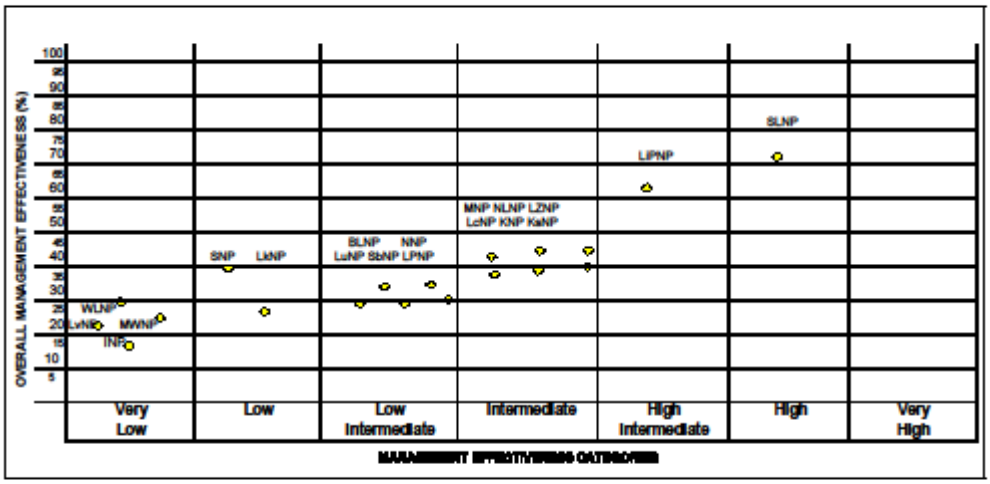


Figure 1: Management effectiveness of National Parks on the spectrum ranging from *Very Low* to *Very High*

Abbreviations: (BLNP: Blue Lagoon, KsNP: Kasanka, LvNP: Lavushi Manda, LuNP: Luambe, LPNP: Lusenga Plain, LkNP: Lukusuzi, SNP: Sioma Ngwezi, SbNP: Sumbu, KNP: Kafue, LcNP: Lochinvar, MNP: Mosi-Oa-Tunya, LiPNP: Liuwa Plain, LZNP: Lower Zambezi, SLNP: South Luangwa, NLNP: North Luangwa, NNP: Nyika, INP: Isangano, MWNP: Mweru Wa Ntipa, WLNP: West Lunga)

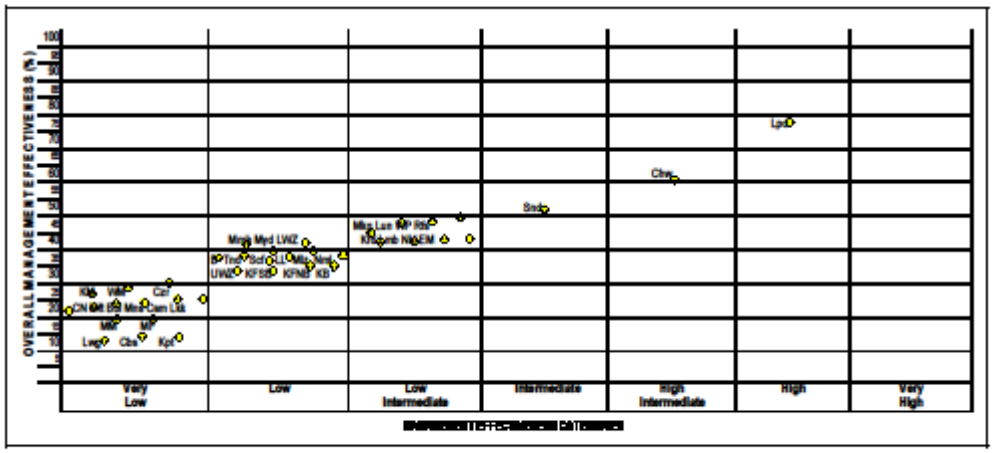


Figure 2: Management effectiveness of Game Management Areas on the spectrum ranging from *Very Low* to *Very High*

Abbreviations: (B: Bangweulu, Bbl: Bbilili Springs, Czr: Chizera, CN: Chibwika Ntambu, Csm: Chisomo, Nkl: Nkala, Chw: Chiawa, Cbs: Chambeshi, KM: Kalasa Mukoso, KFNB: Kafue Flats – North Bank, MF: Machiya Fungulwe, KFSB: Kafue Flats – South Bank, WM: West Musalangu, MM: Musele Matebo, Mkg: Mukungule; Myd: Munyamadzi, Lkk: Lukwakwa, Lwg: Luwingu, Mft: Mufunta, KB: Kasonso Busanga, LL: Lunga Luswishi, Lpd: Lupande, Lun: Luano, EM: East Musalangu, Kfd: Kafinda, Kpt: Kaputa, UWZ: Upper West Zambezi, Mlz: Mulobezi, Rfs: Rufunsa, Mmb: Mumbwa, Mns: Mansa, Nml: Namwala, Scf: Sichifulo, Tnd: Tondwa, Lmb: Lumimba, Snd: Sandwe, WP: West Petauke and LWZ: Lower West Zambezi)

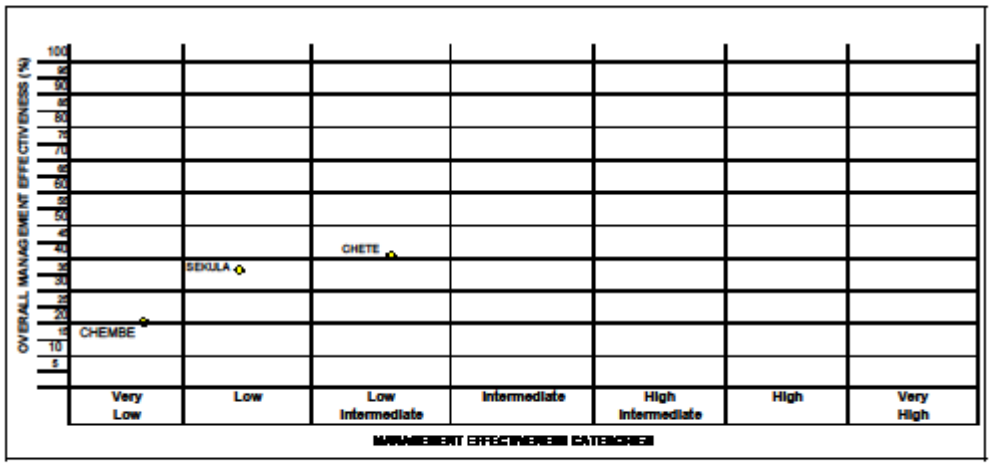


Figure 3: Management effectiveness of Bird Sanctuaries on the spectrum ranging from *Very Low* to *Very High*

The outcome of threats and pressures considered in the assessment for NPs and GMAs are presented in Figures 4 and 5 respectively. The most serious problems across NPs include fire, poaching, illegal fishing and not the least, subsistence agriculture while the most serious problems across GMAs include poaching, human encroachment, fire, deforestation, subsistence agriculture and not the least, illegal fishing. No analysis of threats and pressures across the three Bird Sanctuaries was done because of their different geographic factors.

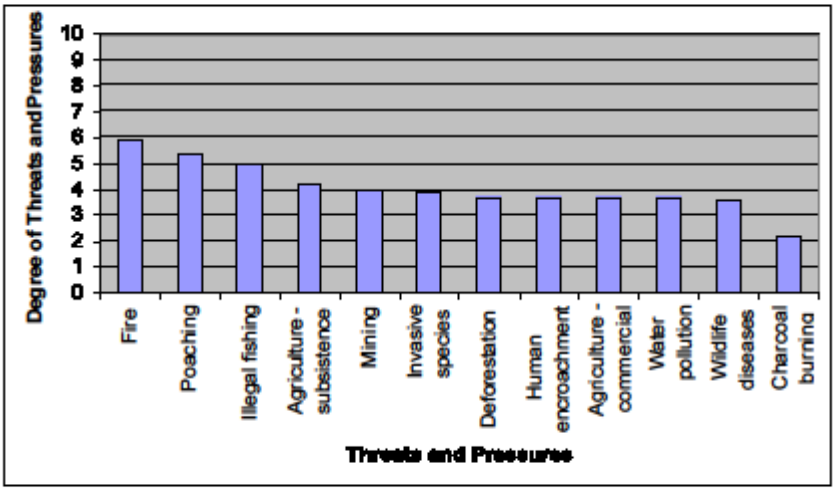


Figure 4: Assessment of threats and pressures in National Parks

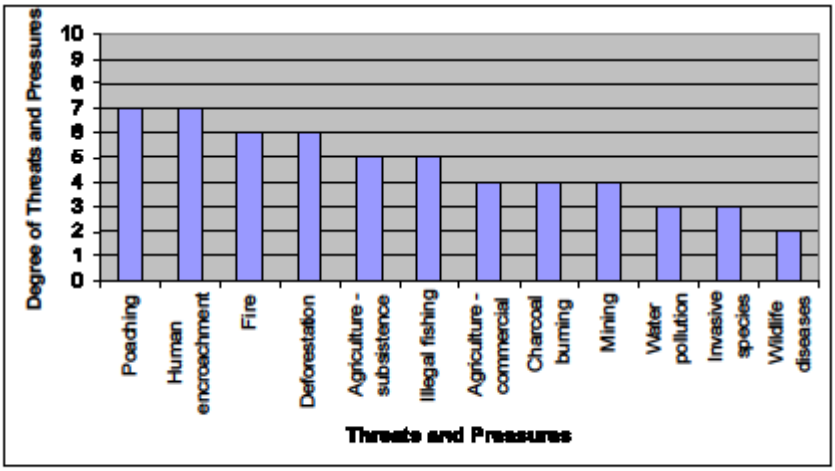


Figure 5: Assessment of threats and pressures in Game Management Areas

To get a comparative impression of management effectiveness for the NPs and GMAs, average management effectiveness percentage for all the six management components has been determined (Figure 6). In every management component, management effectiveness is comparatively higher in NPs than in GMAs. The bars under the *Context* and *Outcomes* management components for both PA categories suggests that current status, effectiveness of management interventions and partner support are almost adequate, but requires some improvement. The *Planning* bar for NPs suggests comparatively higher efforts in management planning and implementation of annual work plans, but still requires a lot of improvement. The bars for *Inputs*, *Process* and *Outputs* suggests that there is generally inadequate resource allocation, inadequate management tools, inadequate delivery of services and lack of effective implementation of management programmes and actions. Bird sanctuaries have not been included in these analyses because of their different geographic factors and management regimes.

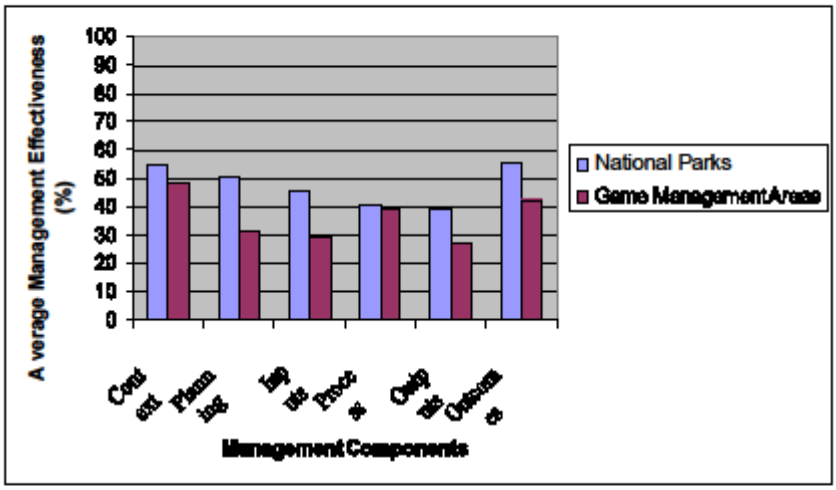


Figure 6: Management effectiveness comparison for National Parks and Game Management Areas

A. Conclusion and Recommendations

The process of modifying the WWF/World Bank Management Effectiveness Tracking Tool is a commendable attempt by the Reclassification and Effective Management of the National Protected Areas System Project (REMNPAS) – with support from UNDP / GEF – to come up with a management tracking tool specific to protected areas managed by the Zambia Wildlife Authority (ZAWA). The process involved consultations with stakeholders at national and site levels and has culminated in the establishment of METTPAZ: ***M***anagement ***E***ffectiveness ***T***racking ***T***ool for ***P***rotected ***A***reas managed by the ***Z***ambia Wildlife Authority. However, one drawback noticed in the process is that not sufficient time was initially accorded, but I am grateful to the contracting party (UNDP and REMNPAS) for the flexibility to allow the process to proceed beyond the 42 days contract period.

As indicated in the main METTPAZ document, METTPAZ does not completely eliminate subjective assessment; however, the assessment done has provided critical baseline information against which progress will be measured.

Increasing the effectiveness of PA management is considered to be one way of responding to the growing concern that many PAs around the world are not achieving the

1. Introduction

The World Bank / World Wide Fund for Nature (WWF) Alliance for Forest Conservation and Sustainable Use known as the *Alliance* was formed in April 1998, in response to the continued depletion of the world's forest biodiversity and of forest-based goods and services essential for sustainable development. As part of its programme of work the Alliance set an initial target relating to the management effectiveness of protected areas of: *50 million hectares of existing but highly threatened forest protected areas to be secured under effective management by the year 2005* (Stolton, *et al* 2003; WWF 2005). This target was revised in 2005 to: *bringing 75 million hectares of existing forest protected areas under improved management to achieve conservation and development outcomes by 2010* (Higgins-Zogib and MacKinnon 2005). To evaluate progress towards this target, the Alliance has developed a tracking tool to facilitate reporting on management effectiveness of protected areas. The tracking tool known as **Management Effectiveness Tracking Tool** (METT) has been designed to fulfill the elements of evaluation included in the World Commission on Protected Areas (WCPA) Framework of the World Conservation Union (IUCN) (Ervin 2003). The WCPA Framework aims to provide some overall guidance in the development of protected area assessment systems and to encourage standards for assessment and reporting (WWF 2005).

2. Assignment Context

The two major objectives of this assignment were to:

1. Modify the WWF/World Bank Management Effectiveness Tracking Tool to be used in the Zambian context; and
2. Develop baseline information on management effectiveness in Zambia against which progress can be measured.

Within these major objectives, the detailed scope of work involved designing a framework for undertaking consultations at national and site-levels and defining strategies and approach for undertaking the assignment in consultation with the Working Group.

2.1 Terms of Reference

Full terms of reference for this assignment are included in Appendix I. After signing the contract on February 2, 2007, I worked on preparing the Inception Report which was presented to the Working Group (Appendix II) on February 13, 2007.

3. Assignment Implementation

Implementation of the assignment was mixed with positive and negative attributes. The positive attributes included the support received in review comments from the Working Group and logistical arrangements by the Reclassification and Effective Management of the National Protected Areas System Project (REMNPAS). The negative attributes included delays in getting the data sheets completed by a few members of staff of the Zambia Wildlife Authority (ZAWA).

3.1 Inception Report

The Inception Report included the following:

- **Background to the assignment** – principally based on the information provided in the terms of reference and literature review;
- **My understanding of the terms of reference** – I explained my understanding of each task in the terms of reference and how I intended to go about fulfilling the expectations;
- **Methodology** – I discussed six main elements: (i) literature review; (ii) consultations with ZAWA, Project Technical staff, Ministry of Tourism, Environment and Natural

- Resources (MTENR), donor representatives and other key stakeholders; (iii) consultations with site-level stakeholders; (iv) modification of METT; (v) training manual and data base; and (vi) training on the use of the modified METT;
- **Detailed Work plan** – covering the period between February 2 and March 22, but in the end it turned out to be a serious implementation challenge because the logistics and amount of time needed to complete data sheets were not clearly envisaged at the Inception Report stage;
- **Expected outputs** – I discussed three main outputs: (i) Modified WWF/World Bank Management Effectiveness Tracking Tool code-named METTPAZ for *M*anagement *E*ffectiveness *T*racking *T*ool for *P*rotected *A*reas managed by the Zambia Wildlife Authority; (ii) Reports (Inception Report, Training Manual and Final Report); (iii) Data base designed to run in Microsoft Access and I presented the database design;
- **Suggestions and solicitation of inputs** – Finally, I made some suggestions such as making provision for more resources and time to develop a versatile database and I solicited for inputs, recommendations of protected areas (PAs) to be visited and key stakeholders to be consulted.

The Working Group approved the Inception Report and the work plan. Furthermore, the Working Group recommended the following national parks (NPs): Kafue, South Luangwa, Mosi-Oa-Tunya and Sumbu and Game Management Areas (GMAs): Bangweulu and Mumbwa to be visited. The suggestion for a Microsoft Access data base was found to be beyond the scope of this assignment and was therefore not approved by the Working Group.

1.2 National and Site-level Consultations

Based on the advice of the Working Group and my own experience, I made consultations with a number of people at national and site-levels (Appendix III). I developed a self-administered questionnaire (Appendix IV) which I used during the consultation process. Emphasis – during the consultation process – was placed on the following:

- Establishing available knowledge on METT;
- Barriers (threats and pressures) to effective management of PAs including degree of threats and pressures;
- Causes of barriers to effective management of PAs;
- Key stakeholders;
- Indicators for inclusion in the modified management effectiveness tracking tool with particular focus on six categories: ecological, socio-economic, geographical, management, policy and information; and not the least
- Characteristics of effectively managed PAs.

Information from these consultations helped me in the process of modifying METT into METTPAZ [details under section 3.4 and Mwima (2007a)].

3.3 Training Workshop

After approval of METTPAZ by the Working Group, I prepared a Training Manual which was also approved by the Working Group. Based on this document, a one day training workshop was held on April 27, 2007 attended by the ZAWA Director General and 30 members of staff. Training was divided in two modules:

- **Module I**: Consisted of two main components – (i) Objectives and Expected Outputs and (ii) Review of METT;
- **Module II**: Consisted of four main components – (i) METT modification process; (ii) Interpretation of METTPAZ; (iii) Completion of METTPAZ and (iv) Time table for 2007 data sheet completion.

Full details of the training workshop including the presentations made are included in the Training Manual (Mwima 2007b).

3.4 Management Effectiveness Tracking Tool for Protected Areas managed by the Zambia Wildlife Authority

METTPAZ has been modified from METT and offers ZAWA the opportunity to assess management effectiveness of PAs based on the six management components of the WCPA Framework: *Context*, *Planning*, *Inputs*, *Process*, Outputs and *Outcomes* (Table 1). Furthermore, METTPAZ offers an opportunity to identify threats and pressures and to help plan effective management interventions for PAs. Finally, METTPAZ provides another component that is not available in METT; an opportunity to assess the key resource values based on four criteria: *poor*, *good*, *very good* and *excellent*.

Table 1: Summary of the WCPA Framework

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	***Where are we now?*** Assessment of importance, threats and policy environment	- Significance - Threats - Vulnerability - National context - Partners	Status
Planning	***Where do we want to be?*** Assessment of protected area design and planning	- Protected area legislation and policy - Protected area system design - Reserve design - Management planning	Appropriateness
Inputs	***What do we need?*** Assessment of resources needed to carry out management	- Resourcing of agency - Resourcing of site	Resources
Processes	***How do we go about it?*** Assessment of the way in which management is conducted	- Suitability of management processes	Efficiency and appropriateness
Outputs	***What were the results?*** Assessment of the implementation of management programmes and actions; delivery of products and services	- Results of management actions - Services and products	Effectiveness
Outcomes	***What did we achieve?*** Assessment of the outcomes and the extent to which they achieved objectives	- Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

From: Stolton *et al* (2003)

4. Objectives of Management Effectiveness Tracking Tool for Protected Areas managed by the Zambia Wildlife Authority

METTPAZ is a tool intended to track and monitor management effectiveness for PAs managed by ZAWA. The objectives of this tool are to:

1. Provide harmonized and consistent reporting system of PA management effectiveness;
2. Provide reliable assessment to enable easy tracking of PA management effectiveness over time;
3. Offer a simple and cost-effective management effectiveness tracking system to be completed by PA staff and partners;
4. Provide a consistent reporting and tracking system on threats and pressures to effective PA management; and

5. Provide a consistent reporting and tracking system on the status of the PA key resource values.

The tool has been designed in such a way that it can be completed quickly and provides a score for each of the six management components and an overall score for all the components. Furthermore, the tool offers an opportunity for qualitative assessment of threats, pressures and key resource values. The tool is capable of providing a quick overview of the progress in improving effectiveness in the management of each PA.

5. General Information, Protected Area description and Assessment Elements

Data sheets (Appendix V) have been designed to enable ZAWA and partners collect information useful in completing METTPAZ. Guiding principles for completing METTPAZ have been described in the METTPAZ document (Mwima 2007a). The information to be collected for each PA includes:

- General information including geographic location, extent in square kilometers, boundary description, etc;
- Information on the PA current status, plans for the future, resource requirements, management interventions / actions, results of management interventions / actions;
- Threats and pressures[1]; and not the least
- Key resource values[2].

There is also provision for scoring in order to facilitate tracking of management effectiveness over time.

6. Analysis of Results

During the training workshop, participants were introduced to all the data sheets and were trained on the use of data sheets. Furthermore, participants were introduced to the Microsoft Excel worksheet designed to capture data and to do basic calculations of management effectiveness scores. The data sheets were distributed to all four Regions through REMNPAS. Below is a summary of the analyses of completed data sheets for NPs, GMAs and Bird Sanctuaries. This summary presents baseline information on PA management effectiveness against which progress will be measured.

Appendix F: Statements from the METTPAZ report on the implementation status of the IUCN principles in Zambian national parks*

IUCN Principles	Key Features	National Park							
		BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP
Perpetual integrity	• Secure conservation status over the long term demonstrated through high policy-level designation								
	• Clearly defined land tenure rights	PA boundary not well demarcated; Boundary dispute between ZAWA and local people	PA boundary not well demarcated; Ad hoc aerial and ground surveys done	Eastern PA boundary not demarcated	PA boundary not very well demarcated	PA boundary not well demarcated	PA boundary is not known; No recent surveys undertaken	PA boundary not well demarcated - western boundary known	PA boundary not well demarcated; No recent surveys undertaken
System Planning	• Plan within ecosystem/large-scale context	Participatory management planning process in place	Participatory management planning process in place				Participatory management planning process in place	Participatory management planning process in place;	Management planning process initiated;
	• Long-term science-based site planning	No research work	Research policy being developed; Ad hoc research work	No research work done; Information to manage the PA inadequate	Ad hoc research work; Insufficient information for effective management	No research	No research work done	Research policy exists; Ad hoc research work done	No research work done
	• Take into account multiple, complex interactions that occur within an area								
Management by conservation objectives	• Recognition that management should be in accordance with the goals and objectives for which the site was designated	Not managed according to agreed objectives	Managed according to agreed objectives			Managed partly according to agreed objectives;	Agreed objectives partially met	Agreed objectives partially met	Agreed objectives partially met
	• Recognition of the IUCN management categories	No serious problem with design features	Design features effectively contribute to PA management objectives	Inadequate PA design	Inadequate PA design	Design constraint - no buffer zone	No PA design problem	No PA design problem	No PA design problem

***Appendix F** (Continued)*

IUCN Principles	Key Features	National Parks							
		BLNP	**KNP**	**LcNP**	**LZNP**	**LPNP**	**MwNP**	**NLNP**	**NsNP**
Management plans	• Clear objectives, and management strategies within given timeframes	Up-dated GMP and approved Annual Work plan exists	GMP being updated	Updated GMP and strategic investment management plan in place; No Annual work plan exists	GMP being updated but some key elements are being implemented		Draft GMP exists	Key elements of the updated GMP and Annual Work Plan being implemented	GMP does not exist
	• Clear monitoring & evaluation plan	Ad hoc M & E	Ad hoc M & E	No M & E	No M & E	No M & E	Ad hoc M & E system	Good M & E	Ad hoc M and E
Precautionary principle	• High standard of proof requirements								
	• Adaptive management								
Management of invasive alien species	• Recognise the threat of invasive alien species	IAS among the major threats identified	IAS among the major threats identified	invasive species (Mimosa pigra) problem		IAS among the major threats identified			
	• Prevent the intentional or accidental introduction of Invasive alien species								
Management of climate change	• Clear objectives, targets and management strategies								
	• Recognition of the threat of climate change								
Taking an international perspective	• Regional and global coordination and collaboration								
	• Recognises compliance with global and regional conventions as essential								

***Appendix F** (Continued)*

Principle	Key Features	National Parks							
		BLNP	**KNP**	**LcNP**	**LZNP**	**LPNP**	**MwNP**	**NLNP**	**NsNP**
Good governance	Accountability - Existence of staff roles, reporting and answerability mechanisms	Personnel management system adequate but could be improved, Excellent financial management system	Acceptable staff and equipment capacity, but not adequate for effective law enforcement	Inadequate equipment and staff; No incentives for staff	Staff below required number - more serious for Finance section	Low skills for law enforcement, finance and administration		No law enforcement, administration and research staff;	Inadequate law enforcement staff; No research and administratio n staff
	Performance - Mention of staff requirements for wise-use of park resources		Inadequate personnel management system; Financial management system in place but require improvement	Very low staff levels, no ecologist & staff to man revenue collection points; Inadequate personnel management	Capacity not adequate for effective law enforcement	Adequate human resource management	Inadequate personnel and financial management systems; Inadequate law enforcement staff	Adequate personnel management system but could improve	Inadequate capacity in terms of staff and equipment
Public participation	Participation in decision making	Local people occasionally contributing to conservation	Passive contribution to PA management by local people	Local people not involved in decision-making	No local community involvement		Local people not contributing to PA conservation efforts	Local people working with PA management	Local people not contributing to protected area conservation efforts
	Co-management partnerships	Very few government supporting partners; No donors and private sector supporting partners	No significant government support institutions, a few donor and private sector support institutions available	Only WWF and one private sector partner supporting conservation efforts	Inadequate support from private sector	Few donors and government partners supporting PA conservation efforts	Few government supporting institutions; Insignificant donor support; No private sector support	Few government and private sector partners supporting conservation efforts;	Very few government and private sector institutions; Few donors supporting PA conservation
	Access to information	No conservation awareness programme	No conservation awareness programme		Inadequate visitor facilities and services; No visitor information centre	Excellent conservation awareness programme	Limited / unplanned conservation awareness programme	Conservation awareness programme in place	Limited conservation awareness programme

***Appendix F** (Continued)*

IUCN Principles	Key Features	National Parks							
		BLNP	KNP	LcNP	LZNP	LPNP	MwNP	NLNP	NsNP
Social equity and justice	• Maintenance of livelihood opportunities	No direct benefits going to local people				No direct benefits going to local people		Direct benefit to local people in form of employment	
	• Effective dispute resolution mechanisms								
	• Intra- and intergenerational equity								

* These sentences were derived from the METTPAZ report (GRZ, 2007)