



REPUBLIC OF ZAMBIA

MINISTRY OF TOURISM AND ARTS

Strategic Elephant Conservation and Management Plan for Zambia 2021 - 2025

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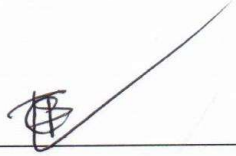
DNPW (2019) Strategic Elephant Conservation and Management Plan for Zambia, 2021 - 2025. Department of National Parks and Wildlife, Chilanga, Zambia



A 250+ herd of elephants in Sioma-Ngwezi National Park

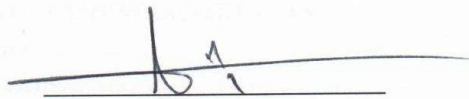
APPROVAL PAGE

The Government of the Republic of Zambia through the Ministry of Tourism and Arts hereby approve implementation of this Strategic Elephant Conservation and Management Plan for Zambia, 2021 – 2025.



Chuma Simukonda, DSc
ACTING DIRECTOR-NATIONAL PARKS AND WILDLIFE

Date: 5/02/21



Hon. Ronald K. Chitotela, MP
MINISTER OF TOURISM AND ARTS

Date: 18/02/2021

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DNPW further extends its thanks to all participants of the first and second workshops whose views and valid opinions enriched this document.

Chuma Simukonda, DSc

DIRECTOR-NATIONAL PARKS AND WILDLIFE

Foreword by the Honourable Minister of Tourism and Arts

The African Elephant hardly requires any description in Zambia. They are known to every one including those who have not seen one in the wild. They are well portrayed in our culture, song and folklore and are used as a symbol of strength by traditional leaders in many of our ethnic groups. Commercially, it is an important attraction for tourists and one of the big five animals which every tourist to Zambia wants to see. Ecologically, it is a key keystone species and therefore critical to the maintenance of biodiversity.

Unfortunately, elephants are also a source of conflict with humans particularly in Game Management Areas. There is therefore a need to find a balance between the positives and negatives of elephant conservation by upscaling benefits through enhanced wildlife economies.

Therefore, I am pleased that after many years since the first 5-year elephant management plan expired in 2010 we have now successfully completed the review process and formulated a new and comprehensive Strategic Elephant Conservation and Management Plan to cover the period 2021 – 2025.

Further, given the wide ranging nature of elephants and its status and a species of global concern , enhanced cooperation with neighbouring countries through various agreements and protocols, and at global level through Conventions such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on Biodiversity (CBD) just to name a few, will be necessary to address international elephant management and trade issues. Our proactive participation in these matters requires use of good science, monitoring and surveillance, active and voluntary participation by all stakeholders. This will undoubtedly require well trained and equipped personnel as well as sustained support from governments and multi-laterals at regional and international levels.

In this mammoth task, I call upon individuals, cooperating partners, NGOs, and the general public to join us in this noble task of securing the long-term survival of the world's largest living land animal and one of Zambia's pride symbols, the elephant.

It is now my special privilege and honor to launch this plan, the success of which will not only be a source of joy for us but for our children's children.



Hon. Ronald Chitotela, MP
MINISTER OF TOURISM AND ARTS

ABBREVIATIONS AND ACRONYMS

ADCM	Assistant Director Conservation & Management
ADLA	Assistant Director Legal
ADRVs	Assistant Director Research & Veterinary Services
REWG	Regional Elephant Working Group
AMU	Area Management Unit
AfESG	African Elephant Specialist Group
CBNRM	Community Based Natural Resources Management
COP	Conference of the Parties
CRB	Community Resources Board
DNPW	Department of National Parks and Wildlife
ETIS	Elephant Trade Information System
GIS	Geographic Information System
GMA	Game Management Area
GMP	General Management Plan
GRZ	Government of the Republic of Zambia
HEC	Human – Elephant Conflict
HRM	Human Resource Manager
IIU	Intelligence and Investigations Unit
IUCN	The World Conservation Union
K9 Unit	Dog investigation unit
KAZA TFCA	Kavango Zambezi Transfrontier Conservation Area
MIKE	Monitoring Illegal Killing of Elephants
MoTA	Ministry of Tourism and Arts
MoU	Memorandum of Understanding
NEC	National Elephant Coordinator
NGO	Non-Governmental Organisation
NP	National Park
PE-R	Principal Ecologist, Research
PIIO	Principal of Intelligence and Investigations
PIKE	Proportion of illegally killed elephants
PNRMO	Principal Natural Resource Management
PPP	Public-Private Partnerships

PRO	Public Relations Officer
PVO	Principal Veterinary Officer
PW-C	Principal Warden - Conservation
PW-O	Principal Warden - Operations
REWG	Regional Elephant Working Group
SADC	Southern African Development Community
SGIS	Senior GIS Officer
SI	Statutory Instrument
SMART	Spatial Monitoring & Reporting Tool
SOP	Standard Operating Procedure
TFCA	Transfrontier Conservation Area
TPC	Thresholds of Potential Concern
TRAFFIC	Trade Records Analysis of Flora and Fauna in Commerce
VAG	Village Action Group
WPAZ	Wildlife Producers Association of Zambia
WPO	Wildlife Police Officer
ZAWA	Zambia Wildlife Authority

GLOSSARY

Adaptive Management: A systematic process for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices.

Biodiversity: the variety of plant and animal life on earth or in a particular habitat at all its levels, from genes to ecosystems.

Biological population growth: the natural increase in the size of a population, being the net result of additions from breeding and losses from natural mortalities.

Carrying Capacity: the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water, and other necessities available in the environment.

CITES: 'Convention on International Trade in Endangered Species of Wild Fauna and Flora', a treaty signed in 1975 by many countries to regulate the international trade in wild animals and plants and their products.

Community Resources Board: a local community along geographic boundaries contiguous to a chiefdom in a Game Management Area, an open area or a particular chiefdom with common interest in the wildlife and natural resources in that area that applies to the Minister for registration as a community resources board 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.

Community Scout: a person employed by a Community Resources Board to enforce the Wildlife Act within a Community Partnership Park, Game Management Area or open area under the jurisdiction of the board.

Conservation Farming: maintenance of a permanent soil cover, minimum soil disturbance, and diversification of plant species, which contributes to increased efficiency of water and nutrient use and to improved and sustained crop production.

Ecological Monitoring: the collection, analysis and interpretation of data on the natural environment to record changes that occur in a certain ecosystem over time.

Ecosystem: a living functional system which contains all organisms, their environment and the relationship that exists between them.

Encroachment: unlawful entering (gradually and without permission) upon land belonging to another to take control or possession of something in a gradual way and often without being noticed.

Extirpated: a species or population that no longer exists within a certain geographical location. Human activities are largely responsible either directly through hunting or trapping, or indirectly through processes such as habitat disturbance and destruction, introducing invasive species, removing or damaging resources, or polluting.

Game Management Area: an area of land declared a Game Management Area under section twenty-eight of the Wildlife Act No. 14 of 2015.

General Management Plan: 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.

Habitat: a natural environment where a species or ecological community naturally occurs.

Habitat fragmentation: a process by which habitat loss results in the division of large, continuous habitats into smaller, more isolated remnants.

Ivory: a hard white substance, consisting mainly of dentine, that composes the main part of the permanent tusks of an elephant.

Keystone species: a species that plays a unique and crucial role in the way an ecosystem functions. When a keystone species is removed from a habitat all other species are affected and some may disappear from that ecosystem or even become extinct.

Landscape Connectivity: the degree to which the landscape facilitates or impedes movement of wildlife among resource patches.

Non-consumptive use of Wildlife: wildlife is watched, studied, or recorded without being killed.

Open Area: an area in Zambia other than a National Park, bird or wildlife sanctuary, Community Partnership Park or Game Management Area, where wild animals are found.

Population: a group of organisms of one species that interbreed and live in the same place at the same time.

Predicate Crime: an offence that is a component of a more serious crime; usually used in reference to money laundering or terrorism financing activities.

Protected Animal: a wild animal *ferae naturae* which is endemic, threatened or endangered and is subject to strict control in order to further its survival and is so specified by regulation under section thirty-six of the Wildlife Act No. 14 of 2015.

Species: a kind of animal, plant or other organism that does not normally interbreed with an animal, plant or organism of another kind, and includes any sub-species, cultivar, variety, geographic race, strain, hybrid or geographically separate population.

Transboundary: moving or having effect across international boundaries.

Transfrontier Conservation Area: a component of a large ecological region that straddles the boundaries of two or more countries encompassing one or more protected areas as well as multiple resource use areas.

Vulnerable: a category under the IUCN Red List that describes an organism that is facing a high risk of extinction in the wild unless the circumstances that are threatening its survival and reproduction improve.

EXECUTIVE SUMMARY

Elephants are a species of conservation concern at local, national, regional and international levels. At the local level elephants are usually perceived as a source of conflict in their interactions with humans. At the national level, elephants are an important source of tourism revenue and a keystone species that is important to overall biodiversity conservation. At regional and international levels, elephants are seen as a shared resource bringing together different countries through trade, law-enforcement or monitoring of transboundary populations. For Zambia the main concern is to build numbers and extend the species range while ensuring harmonious co-existence with humans. Historical records show that populations declined from about a quarter million in the 1970s to below 20,000 in the early 1990s mainly due to poaching.

The management of elephants and their habitats requires a strategic approach in setting ambitious goals with measurable targets and milestones against which we can determine our levels of success in attaining a long-term vision. It is for this reason that DNPW decided to embrace a multi-stakeholder consultative process in developing this strategy, based on the internationally accepted best practice as determined by the IUCN Species Survival Commission, African Elephant Specialist Group, among others. The review process inherited some of the key aspects of the 2005 – 2010 National Policy and Action Plan on Elephant Management, but these were further enhanced and realigned in both content and structure with other elephant conservation plans in the region in order to keep pace with current norms and best practices in elephant conservation and the new Zambia Wildlife Act No 14 of 2015.

This Strategic Elephant Conservation and Management Plan for Zambia 2021 – 2025, will help to define the elephant conservation goals and provide guiding principles and best practices for the management of elephant populations in Zambia. The development of this strategy is a refocused undertaking which should be science based and ambitious. Ambitious because there are new challenges that have emerged, one among them being ‘Climate Change’ and its expected impacts on water availability, habitats and human livelihoods. Further, in an agrarian based economy, the need for opening up new lands for subsistence agriculture will continue to rise as human populations increase. This is likely to heighten the discord between local communities and elephant conservation needs.

The Strategic Plan is focused on five defining themes and their objectives and actions, through which the recovery of Zambia's elephant population can be achieved. Although the population appears to have stabilised after the poaching scourge of the 1970s to 1980s, poaching is still a challenge and therefore this Strategic Plan seeks to redouble efforts in order to safeguard elephant populations from increased poaching incursions and enhance growth of the current population. Importantly, this Strategic Plan will also facilitate major awareness programmes to garner government and community support for the plight of the African elephant and its diminishing habitat, and the need for additional resources to improve the species’ management as Zambia seeks to attain its long-term vision of **'well secured elephant habitats with thriving**

elephant populations that are providing socio economic and ecological benefits for the present and future generations'. With the successful implementation of this Strategic Plan, it is expected that Zambia's position as a progressive recovery state will be consolidated and enable it to hold one of the largest elephant populations in the region.

1.0 INTRODUCTION

This chapter provides a brief synopsis of the background to the development of this Strategic Elephant Conservation and Management Plan.

1.1 Rationale for a Revised Conservation and Management Plan

Zambia is still an important elephant range state in the region, although numbers are still far lower than the available habitat. Its strategic geographic location sharing boundaries with Botswana, Tanzania and Zimbabwe, which hold the largest populations of African elephants (*Loxodonta africana*) in Africa, makes it an important range state in many aspects such as conservation, sharing of intelligence information, policy orientation and trade in elephant specimens. As a recovery state therefore, efforts will be channeled towards ensuring growth of the current population, securing movement corridors and generally meeting range expansion needs and providing effective security. Alignment of Zambia's Strategic Elephant Conservation and Management Plan with the Strategic Planning Framework for the Conservation and Management of Elephants in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA 2019) will help to meet regional objectives for the long-term viability of the largest global meta-population of elephants. Currently, African elephants are protected in Zambia under the Wildlife Act No. 14 of 2015 and they are listed as a 'Protected Animal' under Statutory Instrument No. 42 of 2016. Internationally, African elephants are listed as Vulnerable to extinction on the IUCN Red List of Threatened Species, and international trade in elephant specimens is regulated under CITES conventions to which Zambia has been a party since 1980.

For the sake of conservation of biological diversity and sustainable development in Zambia, efforts will be upscaled to create an enabling environment for elephant conservation in Zambia, maintain habitats, and increase levels of security for elephant populations by increasing the numbers of well equipped and trained manpower to minimise poaching levels. This Strategic Elephant Conservation and Management Plan, with its broad-based stakeholder input, provides a new and enriched long-term vision for Zambia to revive, restore and sustain elephant populations and their habitats while promoting a peaceful co-existence with humans and enhancing socio-economic benefits. It is also expected that the effective implementation of this plan will have a positive impact on the promotion of tourism and conservation of biodiversity.

1.2 Background to the Review Process

In 2017, the Department of National Parks and Wildlife (DNPW) with the financial support of the Worldwide Fund for Nature (WWF) and The Nature Conservancy (TNC) initiated the process of reviewing the 2005 National Policy and Action Plan on Elephant Management that expired in 2010, to formulate this Strategic Elephant Conservation and Management Plan for the period 2021 -2025.

The review process followed an all-inclusive approach and an exhaustive stakeholder consultative process based on the internationally accepted standards and best practices as determined by the IUCN Species Survival Commission, African Elephant Specialist Group (AfESG).

The review process officially commenced when a National Technical Multi-Stakeholder Workshop was held at Ibis Gardens Lodge, Chisamba between 3rd and 5th May 2017, with participants drawn mainly from the Department of National Parks and Wildlife (comprising mainly elephant managers, scientists and law enforcement officers), representatives of the Community Resource Boards (CRB) (on behalf of local communities), Non-Governmental Organisations (NGOs), and the Private Sector.

The key objectives of the workshop were:

- i) To provide an expert assessment of the 2005 National Policy and Action Plan on Elephant Management with respect to major successes and failures in its implementation, and its relevance, design, effectiveness and impact,
- ii) To determine the current relevance of the objectives in the 2005 plan,
- iii) To identify major gaps and barriers to effective implementation and suggest ways of bridging such gaps and removing such identified barriers,
- iv) To provide consensual input into the review of the 2005 National Policy and Action Plan on Elephant Management,
- v) To identify major successes and challenges in elephant security, biological management, ivory management and conflict with humans experienced during the lifespan of the expired plan (2005-2010), and
- vi) To propose new strategies that would be incorporated and improve the quality and depth of coverage of the 2021 -2025 Strategic Elephant Conservation and Management Plan.

In August 2018 a Review Validation Workshop was held at Ibis Gardens Lodge, Chisamba, Lusaka to review the first draft of the 2021 -2025 Strategic Elephant Conservation and Management Plan, with participants representing DNPW, CRBs, NGOs, IUCN/SSC AfESG, and international experts in elephant conservation. The key objectives of the workshop were:

- i) To share experiences, best practices and challenges in elephant management in the East and Southern African regions for integration into the revised Strategic Plan,
- ii) To identify gaps/weaknesses and validate the contents of the working draft of the Strategic Plan,
- iii) To propose the Strategic Plan's implementation and monitoring frameworks.

After the Review Validation Workshop, a smaller drafting committee was formed which compiled all recommendations made by the workshop and prepared a working draft. The revised draft of the Strategic Plan was then circulated to various stakeholders locally and in the region and comments received were incorporated into the final document.

The Strategic Elephant Conservation and Management Plan has six chapters. Chapter one is the introduction which provides a rationale for the Strategic Plan and the formulation process. Chapter two outlines the status of Zambia's elephant population. Chapter three is an overview of the basic structure of the plan which provides a Summary Table of the *Vision, Targets, Themes, Objectives* and *Outcomes*. Chapter four outlines the long term vision for elephant conservation and management in Zambia, and the associated 5 year targets. Chapter five provides the implementation framework. Chapter six covers monitoring and evaluation of the whole plan to ensure that intended targets are achieved for the period 2021 – 2025.

2.0 ELEPHANT POPULATION STATUS, RANGE AND DISTRIBUTION

2.1 Historical (post independence)

At the time of independence in 1964, elephants were widely distributed until the early 1970s as shown in Figure 1. Although comprehensive population statistics are hard to find, the available limited data suggests that the country had approximately 250,000 elephants until the 1970s when poaching increased. The poaching surge was triggered by a sudden and dramatic increase in the price of ivory mainly in East Asia and the oil rich Asia minor, which created a demand for ivory.

Motivated by the exorbitant ivory prices in the Middle East, commercial poaching gangs armed with automatic weapons hunted with impunity in Zambia's protected areas. This period also coincided with the liberation wars in most of Zambia's neighbouring countries, which resulted in declining economies and heightening levels of corruption and provided a cheap source of military firearms and ammunitions. The fall in copper prices and a subsequent increase in global prices of oil in particular, meant that the Zambian government could not provide adequate finances to the Department of National Parks and Wildlife Service (DNPWS) to counter the surging levels of elephant poaching.

The increasing levels of unemployment due to the poor performance of the economy and rising poverty levels provided a pool of desperate citizens that could easily be used by organised criminal syndicates and cartels operating across borders that easily tapped into this pool of labour. These factors exacerbated poaching to the point of endangering the existence of the species as the population fell from an estimated 200,000 elephants in 1972 to approximately 18,000 by 1989 (ZAWA 2005). With such poaching levels, DNPWS banned the annual trophy hunting quota of more than 1,000 elephants in 1982. As an additional security measure to safeguard the elephant population, Government further supported CITES Appendix I listing of the African elephant during the Seventh Conference of the Parties (COP 7), held in Lausanne, Switzerland in 1989.

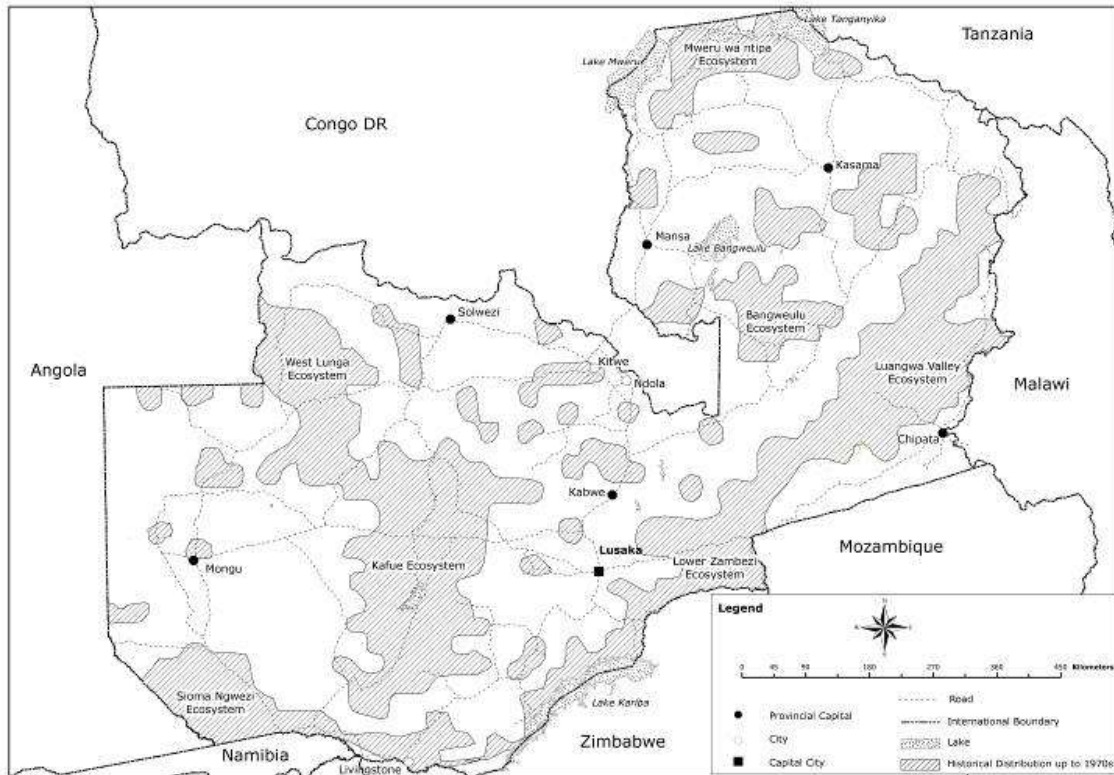


Figure 1: Historical distribution of elephants in Zambia, up to 1970s (Ansell, 1978)

In the mid to late 1980s, government developed and implemented Community Based Natural Resources Management strategies, namely; Administrative Management Design for Game Management Areas (ADMAGE) which covered most of Zambia's Game Management Areas, the Luangwa Integrated Resources Development Programme (LIRDPA) and the WETLANDS project. These programmes facilitated the active participation of local communities in the management of the wildlife estate, but they came late as they were initiated at a time when a lot of damage had already been done to the elephant population, however, they may have helped to stabilise elephant populations through the 1990s (Figure 2).

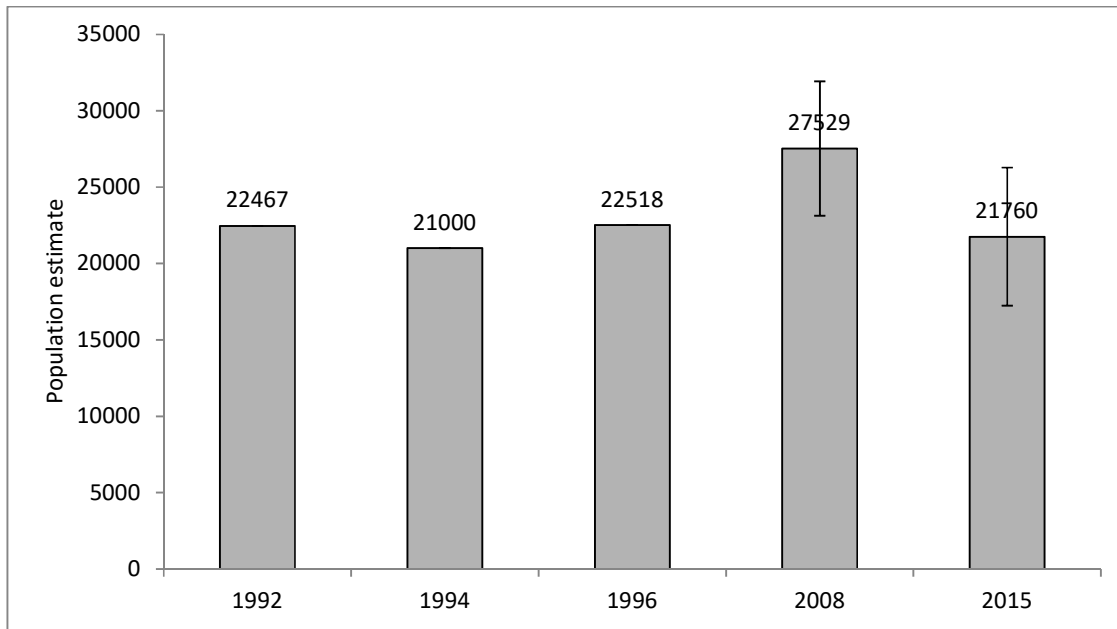


Figure 2: Zambia's elephant population status 1992 – 2015 ($\pm$ 95% confidence intervals where available) (Chomba et al 2012; DNPW 2016)

*Note that the 2015 survey did not cover the entire elephant range area

2.2 Current Elephant Population Status, Range and Distribution

Countrywide elephant population surveys were conducted in 2008 and 2015 yielding estimates of 27529 ± 4405 and 21760 ± 4523 respectively (Figure 2). However, the area covered by each survey differed (2008 - 166713 km²; 2015 - 84859 km²) and therefore these national population estimates cannot be strictly compared. There is an essential need to develop standardised and robust survey procedures for elephant population assessments so that changes in population sizes can be reliably detected at the country level. Elephant population aerial surveys have however been carried out relatively consistently for core elephant populations in the Luangwa ecosystem, Kafue ecosystem and Lower Zambezi Valley ecosystem, which has enabled population trends for these individual areas to be assessed (Figures 5 to 7; DNPW 2016).

2.2.1 Elephant Range

The geographical range of elephants in Zambia covers 170466 km² (Thouless et al. 2016), which has reduced in the past 50 years due to expanding human settlements and the associated disturbance and habitat loss and fragmentation, with the majority of the elephant population now confined to the major protected areas within the country (Figure 3).

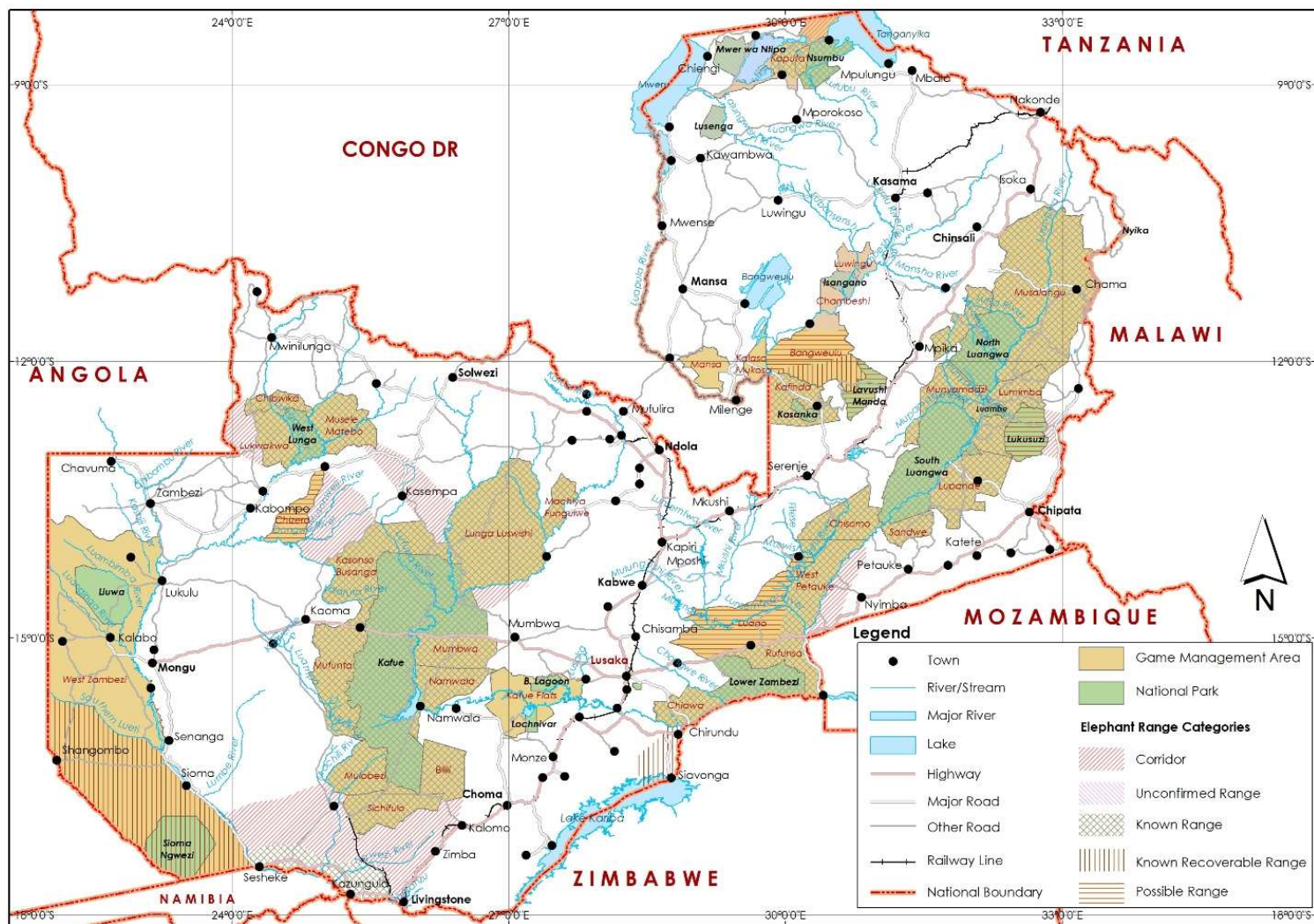


Figure 3: Current range of elephants in Zambia

The definitions of the six elephant range categories are derived from those described by the AfESG (Thouless et al. 2016) and are as follows:

Known range: Areas of suitable habitat, which, if searched with reasonable intensity, are likely to yield signs of elephant presence. If no information is obtained confirming presence of elephants for a 10-year period, **Known** range is downgraded to **Possible** range.

Known Recoverable range: land where habitat remains over sufficiently large areas that either natural or assisted recovery of elephants might be possible within the next 10 years if reasonable conservation action were to be taken.

Possible range: Areas within previous elephant range where there is no confirmation that elephants still occur, but no evidence that they have been lost. Areas of Possible range are considered to be a priority for studies to establish the presence or absence of elephants.

Corridor: land where elephants are not thought to be resident, but which dispersing animals may use to move between occupied areas, or to recolonise historical range areas, or use intermittently. Such connections might take the form of corridors of continuous habitat or refuges of habitat fragments.

Unconfirmed range: Areas where there are reasons to believe that elephants are no longer present, but for which there is no recent positive or negative information. If further corroborative evidence is obtained, areas of **Unconfirmed** range will be re-classified as **Non-range**.

Non-range: Areas that are believed to hold no elephants, due to local extirpation, habitat transformation or high human population densities.

2.2.2 Elephant Population Distribution and Status

The distribution and status of Zambia's elephant population is shown in Figure 4 and can be described as follows:

Core: large populations of elephants that are resident in large connected tracts of habitat.

Transboundary: elephant populations that occur adjacent to international borders and exhibit cross border movements.

Recoverable: minimum viable populations of less than 100 individuals where habitat remains over sufficiently large areas that either natural or assisted recovery might be possible within the next 10 years if reasonable conservation action were to be taken.

Extirpated: elephant populations that have been extirpated in habitats that are so heavily modified or fragmented as to be uninhabitable by elephants for the foreseeable future.

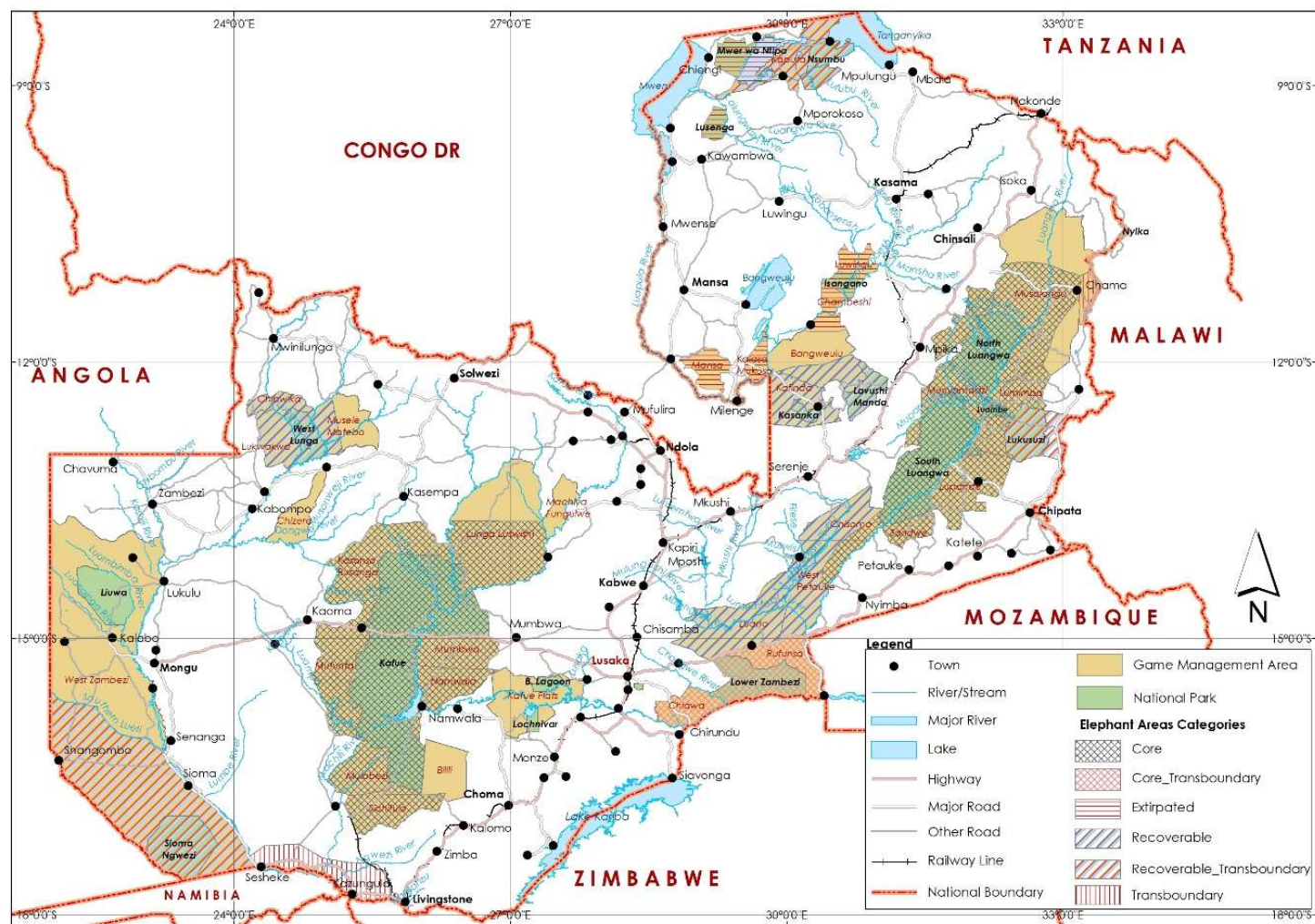


Figure 4: Distribution of elephant populations in Zambia

[In legend title “Elephant Areas Categories refers to “Elephant Population Categories”]

Zambia's three Core elephant populations are resident in the Luangwa, Kafue and Lower Zambezi Valley ecosystems (Figure 4), although movement between the Core populations is not currently well documented. The major threats that are shared by all Core elephant populations, albeit with different degrees of severity, are poaching, human-elephant conflict and habitat loss/human disturbance. Site-specific population estimates and mortality rates are shown in Table 1 to provide an overview of the current status of each Core elephant population, followed by a brief description of each ecosystem.

Table 1. 2015 status of Core elephant populations in Zambia (DNPW 2016)

Location	Population estimate	95% confidence range¹	Carcass ratio%²
Luangwa ecosystem	13,898	10343 - 17454	1.20
Kafue ecosystem	6,688	3945 - 9432	7.02
Lower Zambezi Valley ecosystem	1,125	512 - 1739	6.33

¹ 95% probability that the true population number falls within the range

² ratio of elephant carcasses to all elephants counted. Carcass ratios of up to 8% are considered typical of a stable or increasing elephant population (Thouless et al. 2016)

Luangwa ecosystem

The Luangwa ecosystem is the stronghold of Zambia's elephant population. It includes four National Parks (North and South Luangwa, Luambe and Lukusuzi) and six Game Management Areas (Mukungule, Musalangu, Munyamadzi, Lumimba, Lupande and Sandwe) covering an area of 50,826 km². The Luangwa ecosystem has a catchment area covering 144000 km², with diverse attributes that include miombo (*Brachystegia – Julbernadia - Isoberlinia spp.*), mopane (*Colophospermum mopane*), *Combretum* and riverine vegetation complexes, grasslands, wetlands, escarpments and the Luangwa river and valley, which contain a number of endangered, threatened and endemic species. Major threats to this ecosystem are wildlife poaching, habitat loss, uncontrolled fires, mining, dams, water pollution and reduced flow of the major rivers. The current population estimate for this ecosystem is 13898 ± 3556 elephants, which appears to be stable as there has been no statistically significant differences in estimates since 2008 (Figure 5).

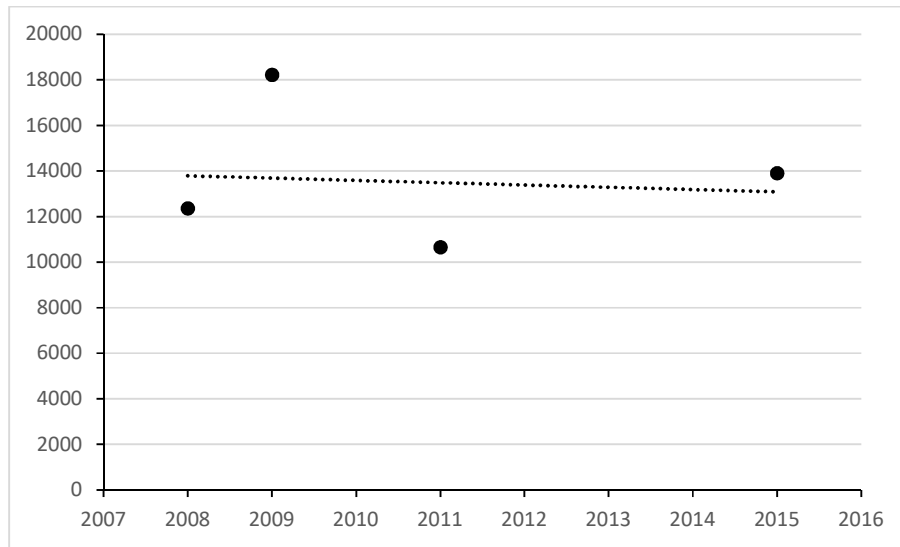


Figure 5: Elephant population trend – Luangwa ecosystem
($r = -0.02$ $p = 0.71$ ns). (DNPW 2016)

Kafue ecosystem

The Kafue ecosystem holds the second largest population of elephants in Zambia. This ecosystem includes Kafue National Park and nine Game Management Areas (Kasonso, Busanga, Lunga Luswishi, Mumbwa, Namwala, Mufunta, Nkala, Sichifulo, Mulobezi, Bilili) covering an area of 68,000 km². The Kafue ecosystem includes important habitats such as the Kafue river, Busanga and Nanzhila floodplains, dambo grasslands, thickets, miombo and mopane woodlands, termitaria zones, riparian woodlands and deciduous teak forests, all of which provide refuge to the greatest diversity of animal species found in any National Park in Zambia. Major threats to this ecosystem are wildlife poaching, agricultural expansion and human encroachment, and uncontrolled fires. The current population estimate of 6688 ± 2744 elephants in the Kafue ecosystem also appears to be stable as there has been no statistically significant differences in population estimates since 2006 (Figure 6).

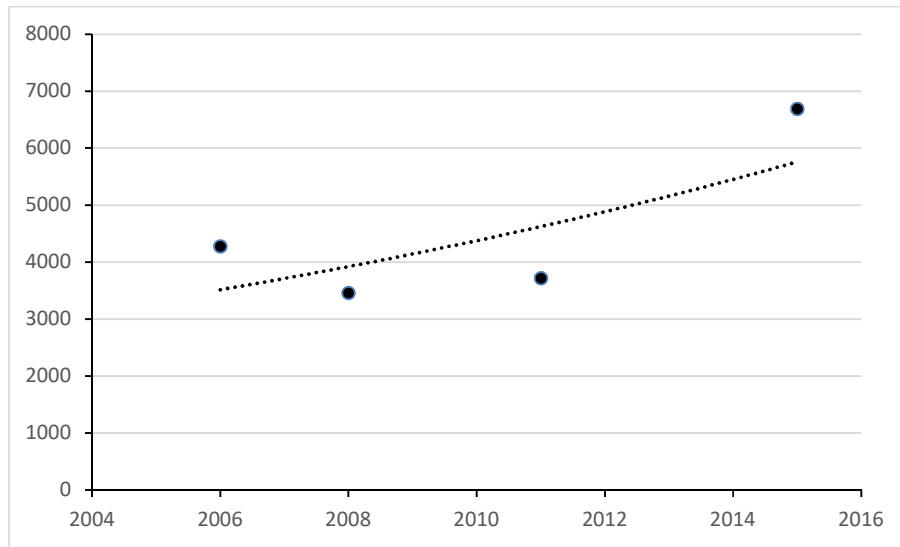


Figure 6: Elephant population trend – Kafue ecosystem
($r = 0.055$ $p = 0.27$ ns). (DNPW 2016)

Lower Zambezi Valley ecosystem

The Lower Zambezi Valley ecosystem includes Lower Zambezi National Park (4,092 km²) and Chiawa and Rufunsa Game Management Areas. The area is adjacent to the Zambezi River and shares an international border with Zimbabwe. Much of the area is inaccessible escarpment, therefore elephants tend to concentrate below the escarpment in the Zambezi valley, which provides an important tourist attraction for the park. The Zambezi valley provides a mosaic of *Acacia* and mopane woodlands, thickets, grasslands and riverine vegetation. Major threats to this ecosystem are wildlife poaching, human encroachment, uncontrolled fires, extensive areas of erosion and exotic plant infestations in the waterways. The current population estimate of 1125 ± 614 elephants appears to be stable (Figure 7) although elephants are known to exhibit cross-border movements, therefore variability between population surveys is expected.

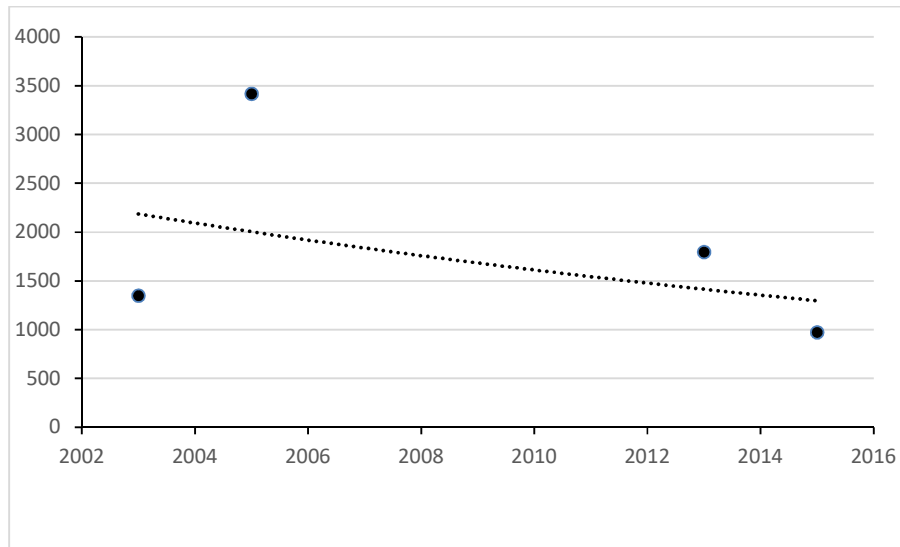


Figure 7: Elephant population trend - Lower Zambezi Valley ecosystem
($r = -0.044$ $p = 0.52$ ns). (DNPW 2016)

2.3 Transboundary Elephant Movements

Most protected areas are increasingly becoming islands due to human settlements around their borders, and elephants confined to isolated areas can cause detrimental habitat changes that impact other species. With population growth of elephants being a key focus of this Strategic Plan, it will be imperative that fluid elephant movements between protected areas are facilitated to limit overabundance and ensure that healthy elephant populations and habitats are maintained. For this reason, it is important to consider other ecological systems extending beyond protected area boundaries and those overlapping international borders (Figure 8).

Due to the characteristic nature of cross border illegal activities, transboundary wildlife populations are inherently at risk of poaching activity. Corridors and regular movement routes must be identified and secured. This will require collaboration with other countries in the sub region so that corridors that connect protected areas are protected by law. In southern Africa, this has been made possible through the establishment of Transfrontier Conservation Areas (TFCAs), of which Zambia has established two TFCAs through signed international treaties, with potential for a further three TFCAs to be established with neighbouring countries in the future.

To date, cross border movements have been recorded between Zambia and Zimbabwe, Zambia and Namibia around the Zambezi Region, Botswana and southern Angola, and Zambia/Malawi to and from the Luangwa valley (Figure 4). This presents a major management challenge as management strategies may vary from country to country. There is need to coordinate studies on the migration of elephants to confirm the reported transboundary movement of elephants across range states. The results will form a basis for harmonising of conservation guidelines and policies with neighbouring countries (e.g. KAZA TFCA 2019).

The largest transboundary elephant population in Zambia is situated in the Lower Zambezi valley ecosystem with a 2015 population estimate of 1125 ± 614 individuals (DNPW 2016), followed by Sioma Ngwezi National Park in the Kavango Zambezi Transfrontier Conservation Area with a 2015 population estimate of 48 ± 60 elephants (DNPW 2016). All other transboundary elephant populations in Zambia are currently recorded at less than 100 individuals (Thouless et al. 2016). However, in transboundary populations variability in population estimates between surveys is expected due to cross-border movements of elephants into and out of Zambia.

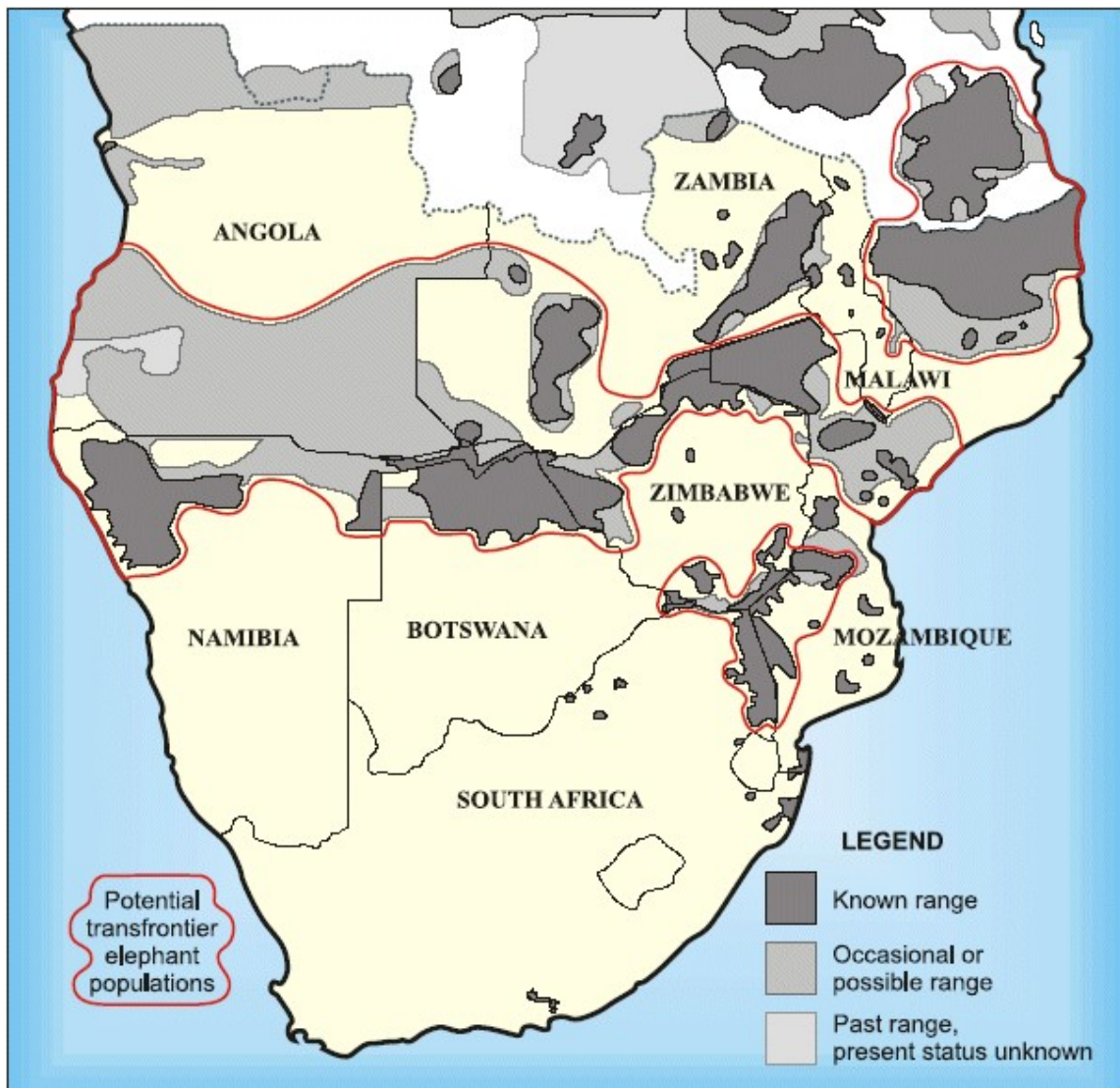


Figure 8: Southern African transboundary elephant populations (Le Bel et al. 2011).

3.0 BASIC STRUCTURE OF THE STRATEGIC PLAN

This Strategic Elephant Conservation and Management Plan is premised on a **five (5) year** planning horizon. It has a **Long term Vision** and measurable five-year **Targets** covering the time period of the conservation strategy. By achieving the targets, progress will be made over the life of this plan towards realising the longer-term Vision.

A total of five key plan **Themes** have been identified as being essential areas for action if plan targets are to be achieved:

-Biological and Ecological Monitoring & Research

- Law Enforcement

-Elephant Population and Habitat Management

-Community Support

-Enabling Environment

Each Theme has been assigned its own section under the Implementation Framework chapter and includes a **Rationale** to explain the importance of the Theme, along with its **Strategic Objective**, Expected Outcomes and Actions for achieving elephant conservation in Zambia. The **Expected Outcomes** under each Theme are SMART (Specific, Measurable, Achievable, Relevant and Time-bound) and are essential in achieving the five-year conservation Targets. A summary view of the Vision, Targets, Themes Objectives and Outcomes of this Strategic Plan is given in Figure 9.

Details of the implementation plan for each Theme are given in Tables 2 to 6 with a comprehensive list of identified **Activities**, along with the **Outputs/Results** that are needed to achieve the Theme Objectives and ultimately meet the overall Targets. Activities will be implemented at the national level and also incorporated into site specific action plans that will be developed as part of this Strategy. Each Activity lists people responsible for implementation, time frames and priority (high/medium/low). The amounts of technical and financial support (all/most/some/none) that must be sourced from outside DNPW to implement each activity are listed for each Activity. If funds were not available in the DNPW 2019 budget for a specific activity, the categories 'All' or 'Most' were assigned.

Monitoring and evaluation is an important management tool that allows management to measure progress towards achieving the plan Objectives and Targets. Performance **Indicators** have been outlined in a Log Frame (Appendix V) to measure the impact of some of the planned Activities over the course of this five-year plan. Many of the performance Indicators require a baseline value to be initially established, against which progress can be measured.

In order to ensure that set targets and intended actions are achieved, this strategy proposed the appointment of a National Elephant Coordinator to be responsible for coordinating the implementation of this Strategic Plan. The Implementation Framework (Chapter 5) and the Log Frame (Appendix V) outlined in this Strategic Plan will form the basis of more detailed Action plans, Monitoring and Evaluation Plans and financing strategies to be developed by the National Elephant Coordinator in the first year of implementation.

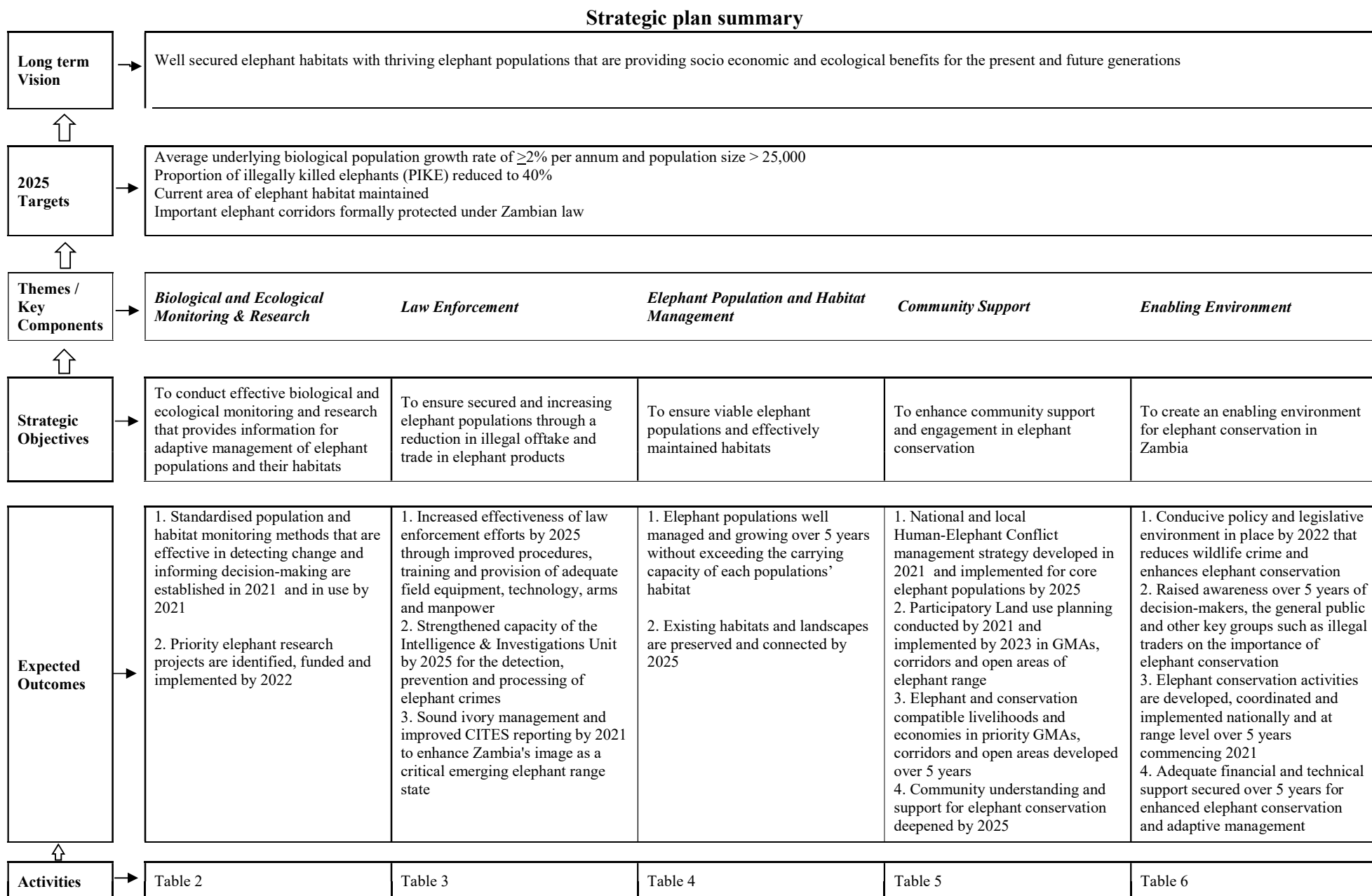


Figure 9: Summary view of the Vision, Targets, Themes, Objectives and Outcomes of the Strategic Elephant Conservation and Management Plan 2021 -2025

4.0 VISION AND TARGETS

Long Term Vision

Recognising that Zambia once had one of the largest populations of elephants on the continent, and that the available habitat is still capable of supporting large numbers of elephants, the **Long-term Vision** for the Strategic Elephant Conservation and Management Plan for the period 2021 - 2025 is:

Well secured elephant habitats with thriving elephant populations that are providing socio economic and ecological benefits for the present and future generations

2021 -2025 Targets

The measurable **Targets** for the life of the plan are:

Key Performance Indicator	Targets	Source of Verification	Frequency of data collection
Elephant population growth rate and size, disaggregated by core elephant populations	Average underlying biological population growth rate of $\geq 2\%$ per annum achieved by 2025, corrected for poaching and HEC National population size exceeds 25,000 individuals by 2025	Aerial survey reports Growth rate expressed as % over 5-year period 2021 - 2025	Survey Frequency as per SOP document for Population Surveys & Monitoring (see Table 2)
Proportion of illegally killed elephants (PIKE), national and disaggregated by core elephant populations	National rate reduced to 40% in 5 years	PIKE report	Annually
Area of elephant habitat	Current area of elephant habitat maintained over 5 years	Annual Evaluations of habitat change and fragmentation using remote sensing & satellite imagery	Baseline and Annually
Number of legally protected connecting landscapes and transboundary movement routes	Important elephant corridors formally protected under Zambian law by 2025	Land Use/General Management Plans Government Gazette	Baseline and every 2 years

This plan targets an overall elephant population growth rate of $\geq 2\%$ per annum on top of the 2015 population estimate of 21,760 elephants to achieve a national population size of at least 25,000 individuals during the life of the plan. Although the Zambian elephant population has seen little growth in the past 20 years (Fig. 2), this growth target should be possible given that the population in Zambia is a recovering population and many individuals are young and in the reproductive age group. However, to achieve this a reduction in the number of mortalities and maintenance of productive and connected habitats is required.

The 'Proportion of Illegally Killed Elephants' (PIKE) is an indicator that can be used to understand the impact of poaching on population growth. Zambia is a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). One of the requirements under CITES is the implementation of Resolution Conf. 10.10 (Rev. CoP17): 'Trade in elephant specimens', which also recommends implementation of the 'Monitoring of Illegal Killing of Elephant' (MIKE) programme. To this effect, Zambia monitors a number of sites in core elephant populations to record the illegal killing of elephants (MIKE sites). The PIKE indicator is calculated as the number of illegally killed elephants divided by the total number of elephant carcasses recorded. PIKE levels above 50% in an area indicate a declining population (i.e. more elephants die from poaching than natural, management and unknown causes combined). Therefore this plan aims for a PIKE of no more than 40% across Zambia's MIKE sites, which falls within the acceptable threshold of sustainability.

In addition to poaching, one of the biggest threats to elephant populations in Zambia is habitat loss. Deforestation mainly due to agricultural expansion currently results in losses of up to 270,000 hectares of Zambia's forests each year (Mabeta et al. 2018). Concerted efforts to monitor habitat loss and fragmentation using current technology are needed to document land conversion in ranges of core elephant populations and engage government at multiple levels to recognise its impact on biodiversity and take action to minimise it.

African elephants are vulnerable to higher temperatures, reduced rainfall and water availability, and increasing disease outbreaks as a result of climate change, and this is exacerbated by habitat fragmentation which restricts seasonal migrations (Advani 2014). Identifying and securing local and transboundary elephant movement routes is critical for elephant management to enable elephants to disperse throughout their range when higher elephant densities and changing environmental conditions dictate elephant movements.

5.0 IMPLEMENTATION FRAMEWORK

Theme: Biological and Ecological Monitoring and Research

Strategic Objective

To conduct effective biological and ecological monitoring and research that provides information for adaptive management of elephant populations and their habitats.

Rationale

This plan aims to achieve effective biological and ecological monitoring that uses consistent methodologies and robust analyses for detecting changes in elephant population sizes and areas of elephant habitat. Such sound methods and analyses that can provide defensible trends across time are needed to inform decision making, to promote awareness within other ministries relating to threats and challenges, and to gain regional and international support for Zambia's elephant management strategies based on good practice.

Standardised population survey and monitoring methods are needed to reliably inform management actions. Aerial population surveys are regularly undertaken, however there has been limited ability to compare results across years and therefore understand changes in elephant numbers over time. This is for a number of reasons:

- i) Sampling intensity and geographical coverage differ across surveys, usually because there are inadequate funds to cover all areas and to have optimal sampling intensity for every survey.
- ii) Inconsistencies between surveys due to different methods used and different seasons surveyed.

In addition, the confidence limits around population size estimates from aerial surveys have been large. This may be due to a combination of patchy elephant distribution, and being constrained to sampling intensities that are below preferred thresholds. As such, the development and use of standardised and robust survey and monitoring methods that can provide comparable results across years is an important action under this plan. Such documented standards can be a useful tool in donor engagement.

Another priority action under this plan is habitat assessment and monitoring within elephant ranges. This plan aims to achieve $\geq 2\%$ net growth rate of elephant populations. Experience has shown that high elephant densities can sometimes negatively impact on vegetation and lead to habitat transformation that may negatively affect other species. Habitat management protocols and ongoing habitat monitoring will be critical to set minimum thresholds of habitat change for which management actions are needed.

TABLE 2 - IMPLEMENTATION FRAMEWORK for BIOLOGICAL AND ECOLOGICAL MONITORING AND RESEARCH

Key Activities/Actions	Outputs	Level of external support Required	Priority	Time Frame	Responsibility
Strategic Objective. To conduct effective biological and ecological monitoring and research that provides information for adaptive management of elephant populations and their habitats					
Expected Outcome 1. Standardised population and habitat monitoring methods that are effective in detecting change and informing decision-making are established in 2021 and in use by 2022					
2.1.1 Establish population monitoring methods based on regional experience that are sensitive to change detection	SOP document for Population Surveys & Monitoring established and in use	Some financial All technical	High	1st Qtr 2021	ADRVS, PE-R, Snr Ecologists
2.1.2 Carry out regular population monitoring of elephants using appropriate methods as per SOP	Reports detailing population trends (size, structure, distribution) for each elephant range area and nationwide	Most technical & financial	High	Ongoing Survey Frequency sufficient for change detection, as per SOP	ADRVS, PE-R Ecologists
2.1.3 Collect baseline and ongoing data on status and threats for elephant habitats	Baseline status/threat Assessment of elephant habitats and important areas of landscape connectivity/ transboundary movement. Report to include Thresholds of Potential Concern (TPC) for triggering management actions that prevent habitat destruction & loss of biodiversity	Most technical & financial	High	End 2022	ADRVS, PE-R, SGIS, TFCA
2.1.4 Establish protocols for monitoring, managing and communicating habitat change	SOP document for Habitat Monitoring & Communications	Most technical & financial	High	End 2021	ADRVS, PE-R, SGIS, NEC, PRO

	Communication activities that inform decision-makers, the general public and other key groups about the rate of habitat loss in Zambia Develop and contribute Habitat, Water & Fire Management Protocols incl. TPCs to site-specific Action Plans (section 6.3.4) and Land Use/GMPs				
Expected Outcome 2. Priority elephant research projects are identified, funded and implemented by 2022					
2.2.1 Develop and prioritise a list of research topics in consultation with stakeholders and partners and via formulation of site specific Action plans	Live list of topics and status of implementation on website/ DNPW headquarters	Some financial	Medium	Mid 2021 as site specific Action plans completed	ADRVs, PE-R, PVO
2.2.2 Collaborate with Research Institutions and other partners/donors to implement priority research projects	Funded priority research projects MoU with research institutions	None	Medium	End 2023	ADRVs, PE-R

Theme: Law Enforcement

Strategic Objective

To ensure secured and increasing elephant populations through a reduction in illegal offtake and trade in elephant products.

Rationale

With the current involvement of well organised criminal syndicates operating across borders and the increase in illegal demand for ivory particularly in east Asia, Zambia needs to augment its efforts to protect and secure its elephant population as well as effectively safeguard its ivory stockpile to prevent it from entering into the illegal market.

It is critically important to prevent poaching incursions in all elephant range areas particularly against the well-organised and sophisticated armed gangs of poachers. This requires the use of force multipliers such as strategic and effective deployment of well trained staff, use of proactive law enforcement techniques, standard operational procedures for field surveillance, sufficient modern law enforcement equipment and appropriate firearms, and use of law enforcement monitoring tools augmented by monitoring of elephant populations and movements.

Effective elephant protection efforts should maximise the risk to poachers and ivory traffickers by maintaining systematic intelligence networks strengthened by the support of communities and the public, so that networks are capable of disrupting and intercepting trading and poaching networks and syndicates, thereby heightening successful arrests and convictions. Fundamental to disrupting criminal networks is cooperation with regional and international law enforcement agencies and strict monitoring of Zambia's entry/exit ports for elephant products. Investigations should be enhanced by expanding and strengthening informer networks, developing a database of criminal networks, providing effective surveillance equipment and analytical tools, and building capacity in crime scene management and wildlife forensic techniques.

Cooperation with conservation NGOs in terms of law enforcement and monitoring is critical in harnessing technical support and funding that may otherwise not be accessible to government and its agencies for purchase of firearms and patrol equipment, skills development, increased manpower through employment of Community Scouts, Wildlife Police Officers and involvement of Honorary Wildlife Police Officers, infrastructure development and improved strategic and adaptive management.

Stockpiled ivory consumes significant resources for its management and security. The DNPW has a modern strong room with a computerised ivory management system and a comprehensive auditing system, with ivory marked in accordance with Resolution Conf. 10.10 of CITES adopted at COP 10 in Harare in 1997. However, with the accumulation of ivory now > 50 tons and the inability to offload it by the way of commercial sale due to an ongoing ban on international trade, the cost of security has increased and there is a critical shortage of storage space. A national Action Plan for Zambia's ivory stockpile is needed to enhance ivory management and security and explore innovative legal options for its disposal, alternative uses and leveraging donor funding.

TABLE 3 - IMPLEMENTATION FRAMEWORK for LAW ENFORCEMENT

Key Activities/Actions	Outputs	Level of external support Required	Priority	Time Frame	Responsibility
Strategic Objective. To ensure secured and increasing elephant populations through a reduction in illegal offtake and trade in elephant products					
Law Enforcement					
Expected Outcome 1. Increased effectiveness of law enforcement efforts by 2025 through improved procedures, training and provision of adequate field equipment, technology, arms and manpower					
3.1.1 Conduct capacity needs assessment and increase numbers of adequately trained WPOs to meet IUCN staffing standards (Henson et al. 2016) for core elephant populations	New staff recruited and trained Annual specialist skills and refresher training for WPOs	Most financial Most technical & financial	High High	Assessment completed by End 2021	ADCM, Director NPW, Director Human Resource
3.1.2 Provide appropriate and sufficient field equipment and support facilities	Standard patrol gear procured and provided to every Wildlife Police Officer and Community Scout in elephant range areas	Most financial	High	Ongoing from 2022	ADCM, Director NPW, Snr Procurement Officer
3.1.3 Procure adequate firearms and ammunitions	Firearms and ammunition procured and distributed	Most financial	High	Ongoing from 2022	ADCM
3.1.4 Contribute to revision of the Zambia Wildlife Act No. 14 of 2015 in order to facilitate development of the Zambia Wildlife Police Standard Operating Procedures	Approved Standard Operation Procedure document	Some financial	High	2021 - 2022	ADCM, ADLA
3.1.5 Install SMART databases and train staff in its use in all elephant range areas	SMART (Spatial Monitoring & Reporting Tool) databases installed Effective Law Enforcement effort analysis	Most technical	High	Annually	ADCM, ADRVS

3.1.6 Establish strong linkages with local and regional law enforcement agencies and training institutions	Joint wildlife law enforcement operations/ meetings held	Some financial	High	Immediate and ongoing	Principal Warden, PIIO, ADCM, TFCA
	Transboundary law enforcement communication channels enhanced	Some financial	High		ADCM, TFCA, Director NPW
	Signed MOUs with cooperating partners	Some financial	High		Director, ADLA, ADCM, TFCA
3.1.7 Set deterrent measures at ports of entry/exit	Enhanced search procedure of elephant products	Some financial	High	Annually 2021 to 2025	Director, CITES
	K9 units operating at major entry/exit ports	Most technical	High		
	Warning signage at ports	Some financial	High		
Investigations and Intelligence Expected Outcome 2. Strengthened capacity of the Intelligence & Investigations Unit by 2025 for the detection, prevention and processing of elephant crimes					
3.2.1 Conduct IIU capacity needs assessment	Assessment report	Some technical & financial	High	By mid 2021 and ongoing	Principal IIO, HRM
3.2.2 Develop strategies in securing of a wildlife crime scene, collection of evidence and storage of exhibits	Strategy document for protection and management of crime scene	Most technical & financial	High	By end 2021	Principal IIO, PW-O, ADCM
	Guidelines document on handling and storage of exhibits	Some technical	High		
3.2.3 Develop an intelligence and investigations database	Database developed and operational	Most technical & financial	High	By end of 2022	Principal IIO, Senior Systems Analyst

3.2.4 Build and strengthen in-house forensic capacity	Trained and competent staff	Most technical	High	Immediate and ongoing	Principal IIO, PVO
	Infrastructure and equipment for forensic investigation	Most technical & financial	High		
	Wildlife DNA profiling database	Most technical	High		
3.2.5 Secure adequate funding for improved and effective intelligence networks	Funds available for use	Most financial	High	Ongoing	ADCM, Principal IIO
	Intelligence led operations	Most financial	High		
	Informer networks created and providing credible information	Most financial	High		
	Informer incentive scheme documented with corresponding departmental budget line	Most financial	High		
Ivory Management & Enforcement of CITES regulations					
Expected Outcome 3. Sound ivory management and improved CITES reporting by 2022 to enhance Zambia's image as a critical emerging elephant range state					
3.3.1 Develop National Ivory Action Plan	National Ivory Action Plan including activity budget & financing strategy	Most financial	High	Mid 2021	CITES
	Ivory stockpile leveraged for donor funding				

3.3.2 Enhance ivory management and security	Updated and enhanced Ivory database	None	High	Ongoing from 2021	Senior Warden CITES, ADCM
	Ivory storage facilities built and/or extended	Some technical & financial	High	Ongoing starting 2022	Director, ADCM
	Guidelines document for Ivory management	None	High	By end of 2021	Senior Warden, CITES, ADCM
	Additional screening of staff involved in elephant ivory management	None	High	Annually from 2022	ADCM, PIIO, Senior Wardens
3.3.3 Enhance Membership and participation in CITES elephant group meetings	Increased CITES meetings participation	Some financial	High	Before and During CITES CoP(s) & Ongoing	Director, CITES
3.3.4 Enhance and expand Monitoring of the Illegal Killing of Elephants (MIKE)	Timely reports submitted to CITES MIKE	Some financial	High	Ongoing from 2021	CITES, ADCM, ADRVs, Senior Wardens
	Additional MIKE sites	Some financial	High	Mid 2021	
	Elephant mortality database	Some financial	High	Mid 2022	
3.3.5 Enhance Reporting of Elephant Trade Information Systems (ETIS)	Timely submission of ETIS/Elephant products Seizure Reports to TRAFFIC	Some financial	High	Ongoing	CITES, ADCM, PIIO
	Database for ETIS	Some financial	High	1 st Qtr 2021	Snr Warden, CITES
3.3.6 Engage SADC members to explore a proposal for legal trade	Meetings	Most financial	High	1 st Qtr 2021	Director, CITES, ADRVs
3.3.7 Enhance Registration of private held ivory stock	Private ivory stocks database	Some financial	Medium	2022 and ongoing	Senior Warden, CITES, ADCM

3.3.8 Review and investigate viability of using stockpiled ivory for scientific, cultural and educational use	Review/research report	Most technical & financial	Low	End 2025	ADRVs, NEC
3.3.9 Establish and maintain strict elephant and elephant products internal trade control system	Feasibly assessment of domestic trade Database for legal domestic trade	Some financial Some financial	Low Low	End 2023	ADCM, Director

Theme: Elephant Population and Habitat Management

Strategic Objective:

To ensure viable elephant populations and effectively maintained habitats.

Rationale

As Zambia's elephant population increases it will be vital to develop proactive and ethical protocols to effectively manage elephant populations and their habitats. Increasing elephant populations if not checked can be destructive to the habitat and affect other species sharing the habitat with elephants. The management focus may therefore be to grow the elephant population in some areas, or humanely reduce population numbers in other areas to reduce the effects of expanding populations on habitats, people and other species.

In addition, as populations increase there may be a tendency for elephants to reclaim former habitats some of which may have been encroached upon by human settlements and accompanying anthropogenic activities, and this will exacerbate human-elephant conflicts. For this reason, good management practices are needed to maintain productive habitats and halt deforestation and encroachment in core elephant areas. Changes to plant-animal interactions may result if there are disturbances from outside caused by factors such as fire, climatic variations including drought, or anthropogenic activities such as blocking dispersal movement routes, which may eventually cause plant or animal mortality. The development, implementation and enforcement of Land Use plans and General Management plans in core elephant areas and their connecting landscapes, and increased coordination with land and agriculture ministries to influence planning and development decisions, will be important for managing habitat loss and providing for the dispersal and long range movements of elephants and other wildlife species.

TABLE 4 - IMPLEMENTATION FRAMEWORK for ELEPHANT POPULATION AND HABITAT MANAGEMENT

Key Activities/Actions	Outputs	Level of external support Required	Priority	Time Frame	Responsibility
Strategic Objective. To ensure viable elephant populations and effectively maintained habitats					
Expected Outcome 1. Elephant populations well managed and growing over 5 years without exceeding the carrying capacity of each populations' habitat					
4.1.1 Develop national protocols to manage both small isolated, and locally overabundant populations	Guidelines for ethical management options for small isolated, and locally overabundant populations	Some financial	Medium	End 2022	ADVRS, ADCM, NEC
4.1.2 Identify, study and secure isolated small populations and develop site specific action plans for their management	Assessment report identifying isolated small populations and their research and management needs Site specific Action Plans	Some financial	Medium	End 2023	PE-R, Ecologists, Senior Wardens, REWG
4.1.3 Develop site specific action plans to humanely manage locally overabundant populations (Balfour et al. 2007)	Assessment reports for carrying capacity Site specific Action Plans	Some financial	Medium	End 2023	PE-R, NEC, Senior Wardens, REWG
4.1.4 Establish management and monitoring protocols for captive facilities	Guidelines for ethical capture, management and welfare of captive elephants, incl. protocols for DNPW to monitor compliance	Some technical & financial	High	End 2022	ADRVRS, PVO, PW-C
4.1.5 Treat and rescue elephants that are injured from poaching and other human induced causes	90% of known injured elephants rescued and rehabilitated	Most financial	Medium	Ongoing	PVO
Expected Outcome 2. Existing habitats and landscapes are preserved and connected by 2025					
4.2.1 Ensure landscape connectivity (in country and transboundary)	Land Use/General Management Plans developed and	Most technical	High	End 2023	Local planning officer, CRBs,

	implemented for elephant movement corridors in GMAs and open areas. <i>(Corridor locations based on Status report of elephant habitats - section 2.1.3)</i>	& financial			Principal Planner
4.2.2 Maintain habitat viability	Implementation of Site specific Action plans and Land Use/General Management Plans (section 6.3.4) that include Habitat, Water & Fire Management Protocols incl. TPCs (section 2.1.3)	Some technical & financial	High	By mid 2023 and ongoing	REWG, NEC, Senior Wardens

Theme: Community Support

Strategic Objective:

To enhance community support and engagement in elephant conservation.

Rationale

Game Management and open areas are part of elephants' ranges in Zambia and are vitally important for allowing the movement of elephants within ecosystems between the refuges of the National Parks. The GMAs have the dual objectives of wildlife conservation and community development, as they are home to often impoverished communities who rely on subsistence agriculture for their main livelihoods. As a result, people and elephants must share the same land and inevitably compete for the same resources, which often results in conflict. It is therefore imperative that conflict is minimised and managed and other activities take place to ensure that support from these local communities for elephants is maximised, so they are tolerated as much as possible.

Human-elephant conflict takes a variety of forms and it has been identified as one of the key priority areas in the conservation of the African elephant. Field damage, or damage to stored crops is often the most obvious issue, but for many local communities living near conservation areas, it is the physical danger or actual inconvenience to daily activities caused by elephants

which is the greater reason for the degree of complaint than the actual crop damage. Indeed, death and injuries of community members from elephants occur every year somewhere in Zambia. However, the scale of the problem is poorly understood, as there is little or no systematic data collection. Currently DNPW collates records around their stations, but the accuracy of these records are somewhat dependent on the communities reporting them and the diligence of the local DNPW staff.

This Strategic Plan therefore takes a diverse approach in order to develop community support for elephant conservation by both reducing the costs of living with elephants, increasing the benefits, and working to improve understanding and tolerance. As at least some tolerance level towards elephants already exists in most communities, DNPW and their partners are already working with people and elephants in many areas to develop practical ways of increasing the capacity of local communities to reduce HEC, tailored to the local situation.

The priority actions are to develop a more detailed HEC management strategy and action plan, which outlines principles, the approach and more detailed actions to manage and monitor HEC. As the reality is that DNPW will never have the capacity or funds available to address HEC alone, affected people must make the effort to both use traditional methods, or adopt new approaches with the support of partners. If this succeeds, communities may see the resolution of elephant problems not as being solely the obligation of government but a shared responsibility where, if possible, they proactively ensure defences are applied. One aspect that is in community hands, is around ensuring that village level land use plans (VLUP) are both developed and implemented so that agricultural areas are not located in prime habitat, elephant movement pathways, or in isolated fields and that elephant-resistant crops are planted whenever possible on and inside the edge of hotspot areas.

Much can also be done to increase tolerance, through increasing understanding of elephants, their needs and behaviour at different levels of local communities. Whilst this is not enough alone to generate tolerance and proactivity, it is absolutely necessary in order to provide a sound building block for people to take positive action on their own and also keep themselves safe in everyday interactions.

TABLE 5 - IMPLEMENTATION FRAMEWORK for COMMUNITY SUPPORT

Key Activities/Actions	Outputs	Level of external support Required	Priority	Time Frame	Responsibility
Strategic Objective: To enhance Community Support and Engagement in Elephant Conservation					
Expected Outcome 1. National and local Human-Elephant Conflict management strategy developed in 2021 and implemented for core elephant populations by 2025					
5.1.1 Develop a national HEC management strategy a. Review best practice b. Convene experts to develop strategy and write up	HEC management strategy document	Most technical & financial	High	By end 2021	PNRMO, PW-C
5.1.2 Identify and map HEC hotspots, elephant movement routes and priority areas for action in each elephant range area	List and map of hotspots and priorities included in national HEC strategy	Some financial	High	By mid 2021	PNRMO, GIS unit, PE-R
5.1.3 Review existing HEC monitoring systems and implement standardised monitoring system across elephant range areas	Local and national databases developed & updated quarterly Standardised data collection sheets SOP for Monitoring system included in national HEC strategy with relevant data flow and associated roles and responsibilities described Data collection training for field staff	Some technical & financial Some technical & financial Some technical & financial	High	By end 2021	NEC, PNRMO, PW-C
5.1.4 Implement participatory HEC strategy according to local site prioritisation and needs and as finance allows	HEC Prevention and Mitigation interventions undertaken with local community involvement Educational material in local languages - 'Living with Elephants'	All financial	High	Ongoing from 2022 , expanding existing activities	PNRMO, PVO

5.1.5 Explore insurance schemes for HEC management based on regional experience and take appropriate action	Report on viability of schemes	Some technical & financial	Medium	2022 to 2025	NEC, PNRMO
Expected Outcome 2. Participatory Land use planning conducted by 2021 and implemented by 2022 in GMAs, corridors and open areas of elephant range					
5.2.1 Ensure maps of HEC hotspots and elephant movements as per the HEC strategic plan available locally and used for VLUP	Maps available for VLU Planning	None	High	Ongoing	NEC, PNRMO, GIS unit
5.2.2 Carry out participatory village level land use planning (PVLUP) in key areas	VLUPs produced for all villages in GMAs, corridors and open areas within the ranges of core elephant populations Existing PVLUP and GMPs for GMAs reviewed and enforced	Most financial	High	Ongoing from existing activities, but all areas completed by end 2022	Local planning officer, CRBs, Principal Planner
5.2.3 Support monitoring and enforcement of Land Use and General Management Plans working with customary leadership <i>(DNPW Protocols for Habitat, Water and Fire Management included in Land Use/General Management Plans)</i>	Training with headmen/indunas Land use in villages clearly demarcated Elephant movement corridors demarcated Encroachment in GMAs mapped	Some financial	High	Ongoing from 2022 , but in place in all areas by end 2024	Principal Planner, ADCM, PNRMO, CRBs
5.2.4 Train farmers in elephant compatible agriculture practices in key areas	Farmers training workshops	Most technical & financial	High	Ongoing from 2022, expanding existing activities	PNRMO, Local DNPW extension officers,
Expected Outcome 3. Elephant and conservation compatible livelihoods and economies in priority GMAs, corridors and open areas developed over 5 years					
5.3.1 Facilitate equitable and transparent distribution of revenues for elephant management and conservation a. Contribute to the revision of CBNRM policy and legislative instruments that improve revenue sharing with communities	Submission to revise relevant Legislation & Statutory Instruments Local consolation funds for HEC available in CRBs/VAGs	Some technical & financial	High	Ongoing from 2022	PNRMO, ADLA

b. Encourage CRBs to use funds to offset HEC for vulnerable households					
5.3.2 Develop elephant-compatible and HEC resistant livelihoods focussing on HEC hotspots including: a. Elephant-based tourism b. Sustainable utilisation opportunities c. Developing markets for elephant-compatible crops	Livelihood initiatives developed in priority areas Document with assessment of opportunities at national and local level	Most technical & financial	Medium	Ongoing from 2022, expanding existing activities	PNRMO
Expected Outcome 4. Community understanding and support for elephant conservation deepened by 2025					
5.4.1 Develop electronic and print materials for local use and in local languages	Brochures, posters	Most technical & financial	Medium/Low	Ongoing from 2022, expanding existing activities	PNRMO, PRO, Conservation Education Officer
5.4.2 Include information on elephants and their conservation in school curricula in elephant range areas by engaging with Ministry of Education and partner NGOs	Curriculum, textbooks and curricula resource materials	Some technical & financial	Medium	By end 2022	PNRMO, PRO, Conservation Education Officer
5.4.3 Include information on elephants and conservation in outreach and education programmes in elephant range areas	Resource materials	Most technical & financial	Medium	Ongoing from 2022, expanding existing activities	PNRMO, PRO, Conservation Education Officer
5.4.4. Lobby and improve understanding of elephant conservation issues with local government in elephant range areas	Meetings/activities involving local government	Most technical & financial	Medium	Ongoing from 2023	Director, ADCM, PNRMO

Theme: Enabling Environment

Strategic Objective

To create an enabling environment for elephant conservation in Zambia.

Rationale

An enabling environment for elephant conservation is a set of interrelated conditions that together provide and facilitate the smooth and continuous participation of all stakeholders in elephant conservation. It includes a set of established rules, regulations, procedures and conditions which should exist in order to achieve elephant conservation.

In this strategy, the following precursors have been identified as factors that are needed to provide an enabling environment for elephant conservation:

1. Policy and legislative framework
2. Communication and awareness
3. Coordination
4. Financial sustainability and support

Policy and Legislative Framework

Elephant poaching has increased dramatically during the last decade. This increase has been driven by high prices and demand for elephant products in east and south-east Asia. Illegal ivory traders are members of criminal syndicates that are well connected and often wealthy. In light of the profit incentive, current penalties for poaching and trade in elephant products do not act as a deterrent. The current Zambia Wildlife Act No 14 of 2015 does not provide for charging elephant crime as a predicate crime as per the UN convention Against Transnational Organised Crime, and this needs to be specified in the Act. There is also a need to take into consideration the quantity of elephant products involved. If the quantity exceeds a certain threshold which DNPW can determine, it should, in addition to the sentence include a fine which should be equal to the value of the highest price in the end market obtained at the time of sentencing.

All elephant offences should be charged as predicate crimes and consideration given to charge maximum sentences rather than minimum sentences. It is therefore important to engage the National Prosecution Authority (NPA) and members of the Judiciary through awareness programmes to promote understanding of the seriousness of elephant-related crimes and gain support for tougher sentencing. This will prevent Zambia from becoming a safe haven for elephant poaching and ivory smuggling syndicates in the region. To achieve the up scaling of elephant offences, section 127 of the Wildlife Act No. 14 of 2015 needs to be reviewed to accommodate changes described above in the new Act. Additionally, Statutory Instruments (SIs) for specific regulations for elephant conservation/management as provided for under section 146 of the Act may be required.

Key ecological systems and animal populations alike often extend beyond protected area boundaries and may also overlap international borders. Corridors and movement routes cut across different land tenure systems and international borders making law enforcement a difficult task. If collaboration between different land holders and other countries is constrained by policy discord and lack of effective communication, the goal targets of the plan may not be achieved. Promoting and effectively managing transboundary conservation initiatives will connect protected areas and animal populations of the sub region. Shared elephant populations in these areas will be more secure as policies and management on both sides of the borders are harmonized through collaborative effort in law enforcement, research and legislation, which can only be achieved if there is effective communication between parties. To achieve these goals, the Strategic Planning Framework for the Conservation and Management of Elephants in the Kavango Zambezi Transfrontier Conservation Area was developed and adopted by the KAZA Ministers Committee (KAZA TFCA 2019).

In support of the foregoing, regional and international declarations, resolutions, and recommendations of best elephant management practices should be adopted and domesticated to benefit and enhance elephant conservation efforts in Zambia. By using these legal instruments and working with other institutions and facilitating the exchange of information and intelligence while fostering cooperation through regional wildlife enforcement networks, criminal syndicates involved in the ivory trade will be rendered powerless.

Communication and Awareness

In Zambia, there is general lack of public support for elephant conservation. This is mainly due to inadequate awareness of the ecological and socio-economic importance and benefits of conserving the species. Negative attitudes persist because most print and electronic media articles promote negative sentiments against elephants. Only cases of conflict are covered while there is very little positive news on elephant human interactions. It is therefore important that a communication strategy is developed in order to effectively reach all stakeholders, in particular policy makers, private sector players and the general public to raise levels of understanding and help to transform and sustain positive attitudes towards elephant conservation.

Public awareness strategies should be focused on using new technology and social media platforms for education and awareness. The DNPW should also consider working with its partners and reach out to corporate organisations and companies and urge them to brand some of their products with elephant images, and those that are already using them be asked to make contributions towards elephant conservation as a way of amplifying their Corporate Social Responsibilities to support elephant conservation. Further, the DNPW should promote use of good science in research to generate new information that would be part of the body of knowledge accessible to the public.

While targeting the private sector is important there is also a gap in engagement of other government departments. There is a need to target policy makers and implementers at all levels of government. Particularly important are the lands, agriculture, forestry and finance ministries

and departments. Overcoming conflicts around development and planning, land tenure and land use to provide for the dispersal and long range movements of elephants, as well as ensuring sustainable funding from the government itself is cardinal for success in elephant conservation.

Coordination

Elephant management cuts across various disciplines. Effective coordination is therefore important and will determine success or failure in the implementation of this Strategic Plan. To increase chances of success, a focused and credible leadership will be required. This strategy therefore recommends the nomination of a National Elephant Coordinator (NEC) with a comprehensive set of Terms of Reference (Appendix III). This officer will be responsible for overall elephant management and be held responsible for the overall performance of most of the activities in this strategy which have expected and measurable targets. The NEC to be appointed should be an individual with relevant expertise, experience and credibility to assume visionary leadership, advisory, coordination and facilitation roles within and outside Zambia including COPs of CITES.

In addition to the NEC this strategy recommends the formation of a National Stakeholder Platform for Conservation, as well as Regional Elephant Working Groups (REWGs). The Stakeholder Platform should meet at least once annually to consider elephant conservation and management matters at a forum where all stakeholders share experiences and information. The REWGs should meet at least once every six months and formulate and implement site specific plans for elephant conservation and management, in keeping with the national Strategic Plan. See Appendix I for an overview of the Coordination Framework.

Financial Sustainability and Support

Elephant conservation is multifaceted. Addressing the species needs while ensuring that human needs are not negatively affected by elephants is an expensive undertaking which requires a stable source of finance. Therefore, sustainable and innovative financing is a key prerequisite to successful elephant management, especially for HEC management as well as population and habitat monitoring. The starting point for sustainable financing should be the formulation of a funding strategy. This strategy will be the basis for formulating a comprehensive and coherent funding approach that targets the government, NGOs and the corporate sector to source long term financing for elephant conservation.

Sustainable and innovative financing includes upscaling benefits to communities living adjacent to core elephant populations by unlocking the value of wildlife based economies. This can be done by facilitating public-private partnerships for the consumptive and non-consumptive use of wildlife. Further, interventions should include alternative livelihoods as well as upscaling of wildlife friendly practices such as conservation farming.

TABLE 6: IMPLEMENTATION FRAMEWORK FOR ENABLING ENVIRONMENT

Key Activities/Actions	Outputs	Level of external support Required	Priority	Time Frame	Responsibility
Strategic Objective. To create an enabling environment for elephant conservation in Zambia					
Policy and Legislative Framework					
Expected Outcome 1. Conducive policy and legislative environment in place by 2022 that reduces wildlife crime and enhances elephant conservation					
6.1.1 Contribute to the revision of the Zambia Wildlife Act No. 14 of 2015 in order to strengthen it and include: - elephant related offences as predicate offences, - elephant protection and security of ivory, - establishment of elephant corridors, - management of elephants on PWEs, - elephant rehabilitation & utilisation	Submitted Document	Some financial	High	By mid 2021-2022	Director, ADLA, ADCM
6.1.2 Review and resubmit draft SI on elephant management for: -elephant protection and security of privately held ivory stock, - management of elephants on PWEs, - elephant rehabilitation, utilization	Statutory Instrument draft	Some financial	High	2022 and ongoing	Director, ADLA, ADCM ADRVS
6.1.3 Facilitate capacity building and awareness programs on sentencing for members of the Judiciary	Training and familiarization tours of magistrates conducted	Most financial	High	1 st Qtr 2022 and ongoing	Director, ADLA
6.1.4 Contribute to the objectives of the Strategic Planning Framework for the Conservation and Management of Elephants in KAZA TFCA	Integrated transboundary projects / research / operations / legislation	Some technical & financial	High	1 st Qtr 2022 and ongoing	Director, ADCM, ADRVS, TFCA, NEC

Communication and Awareness Expected Outcome 2. Raised awareness over 5 years of decision-makers, the general public and other key groups such as illegal traders on the importance of elephant conservation					
6.2.1 Develop a Communication Strategy that outlines key messages, key audiences and methods to effect a reduced illegal ivory trade and improved support for elephant conservation	Communication strategy document	All technical & financial	High	Mid 2022	PRO, NEC
6.2.2 Engage directly with other government departments to incorporate elephant/wildlife friendly policies and practices into planning	Meetings with government officials as a follow up to Stakeholder Platforms Sectoral plans	None	High	Ongoing from 2022	NEC, Director, ADCM
6.2.3 Produce targeted social media campaigns on elephant conservation	Zambian elephant Facebook page Memes featuring Zambian elephants Viral Videos featuring Zambian elephants	Some technical Some financial	High	1 st Qtr 2022 and ongoing	PRO, NEC
6.2.4 Electronic and print media programmes on elephant conservation	Leaflets, posters, Radio and TV Programmes	All technical & financial	High	Annually from 1 st Qtr 2022	PRO, NEC
6.2.5 Create excitement and awareness around significant dates related to elephant conservation e.g. commemorate World Elephant Day (12 August) with special events like concerts, increased social media presence, special competitions	Awareness plan developed and action taken	All financial	Medium	Annually from 2022	PRO, NEC
6.2.6 Exhibit at national and international trade fairs to promote elephant conservation	Exhibitions	Some financial	Medium	Annually from 2023	PRO, NEC

Coordination Expected Outcome 3. Elephant conservation activities are developed, coordinated and implemented nationally and at range level over 5 years commencing 2021					
6.3.1 Appoint a National Elephant Coordinator (NEC)	NEC appointed TORs for the NEC	Some financial	High	2 nd Qtr 2021	Director, ADRVS
6.3.2 Establish National Stakeholder Platform for Conservation	Stakeholder platform established Launch/ Presentation of this 2021 -2025 Strategic Plan to Stakeholders Annual Meetings	Some financial Some financial	High	Mid 2021	NEC, Director, ADRVS, ADCM, PRO
6.3.3 Establishment of Area Elephant Working Groups (AEWG)s	Field based Working Groups formed ToRs for AEWG 6-monthly Meetings and activity reports	Some financial	High	Mid 2021	NEC, Senior Wardens
6.3.4 Coordinate the formation and implementation of Site Specific Action Plans <i>(Action plans to encompass Protocols for Habitat, Water and Fire Management, TPCs and HEC management strategy)</i>	Action plans	Most financial	High	3 rd Qtr 2021	Area Elephant Working Groups, NEC, Senior Wardens

Financial Sustainability and Support Expected Outcome 4. Adequate financial and technical support secured over 5 years for enhanced elephant conservation and adaptive management					
6.4.1 Develop a sustainable financing strategy for elephant conservation in Zambia	Sustainable financing strategy document Financial plan & Strategic budget	All technical & financial	High	End 2022	NEC
6.4.2 Identify potential donor funding sources for HEC management, population surveys and habitat monitoring, and develop proposals as per financing strategy	Funds secured to implement, monitor and evaluate this Strategic Plan 2021 -2025 Funds channeled from corporate, NGO and individual donors to government and partner NGOs for HEC, surveys and habitat management	All financial	High	Ongoing	NEC
6.4.3 Identify and implement strategies to scale up wildlife based economies that can contribute to elephant conservation as per financing strategy (e.g. PPPs, Conservation farming, capacity building for community entrepreneurship)	Public-Private Partnerships (PPPs) developed and implemented in the ranges of core elephant populations	All technical & financial	High	End 2022	Commercial Manager, PNRMO, NEC
6.4.4 Conduct economic analysis on Elephant contribution to GDP/wildlife based economies	Assessment report	All technical & financial	Medium	End 2023	NEC

6.0 MONITORING AND EVALUATION

Monitoring of the performance against targets, and the progress of implementation activities against recommended timeframes, will be reported monthly and annually to the ADCM by the National Elephant Coordinator. Evaluation of the success of this Strategic Plan will be undertaken using the Performance Indicators listed in the Log Frame (Appendix V). In addition, the National Elephant Coordinator must develop detailed Monitoring & Evaluation plans with standardised methods and full Key Performance Indicator reference sheets within the first year of this Strategic Plan. The National Elephant Coordinator will be responsible for organising any initial baseline data against which performance will be measured, and for conducting reviews of progress towards meeting individual targets.

The use of Performance Indicators for monitoring and evaluation will ensure:

- (i) That management determines the extent of progress made towards meeting the targets.
- (ii) That people responsible for completion of activities are relevant and doing their work. If not, reallocating responsibilities to those with capacity to meet set targets within the given time frames can be considered.
- (iii) That risky areas which may not have been noticed at the planning phase are addressed within the adaptive management system.
- (iv) That the Strategic Plan is improved on the basis of empirical evidence gathered during the process of implementation and which may not have been available at the planning phase.
- (v) That management determines whether or not the Strategic Plan continues to be relevant as implementers acquire more knowledge and more new challenges emerge.
- (vi) That at the end of the implementation period, management is able to determine whether the Strategic Plan has succeeded or failed and document reasons for such performance.

6.1 Plan Implementation Risks

Every strategic plan has risks both internal and external. Before defining the specific management **Targets** and **Objectives** for the plan, the constraints on management and any other major threats should be identified. Constraints may take different forms such as legal obligations, constraints of tenure, change of governments and policies including change in national priorities, sudden increase in poaching at global, regional and national levels, managerial constraints, new and emerging international obligations which may have certain constraints, and other policy considerations.

In light of the above, a set of constraints and potential risks to the implementation of the Strategic Plan are listed as follows:

- 1) **Leadership:** This can be a risk if there is inappropriate and ineffective leadership. Staff may lose morale which may negatively affect implementation of the plan, particularly boots on the ground.

- 2) **Funding:** If adequate funding is not secured, many activities would be abandoned or may not commence, and the targets would not be met as expected.
- 3) **Continued poaching:** Current poaching levels if not controlled may negatively affect the net growth of the elephant population.
- 4) **Policy and Legislation:** If relevant and supportive changes are not made to the main policy and legislation, successful implementation of this Strategic Plan may not be achieved.

6.2 Planning Assumptions

The success of this Strategic Elephant Conservation and Management Plan is dependent on the following factors being favourable:

- 1) A National Elephant Coordinator is appointed to implement the Strategic Plan.
- 2) Adequate funding is secured and made available for implementation activities.
- 3) Zambia continues to be politically and economically stable and government priorities and policies for the natural resources sector are harmonised and remain positive.
- 4) That there is continued national and international support for elephant conservation.
- 5) There is increased involvement and support from government ministries, local communities and the private sector in conservation.
- 6) Management capacity is at levels adequate to ensure continued survival of elephant populations in the wild.
- 7) Habitats remain intact and suitable for elephant conservation.
- 8) Regional bodies are willing to provide expertise and other assistance when requested.
- 9) That there will be stiff penalties for all elephant offences.
- 10) The impacts of global climatic changes on elephants and their habitats are manageable.
- 11) Increased support is secured from government, private sector and the international donor community.

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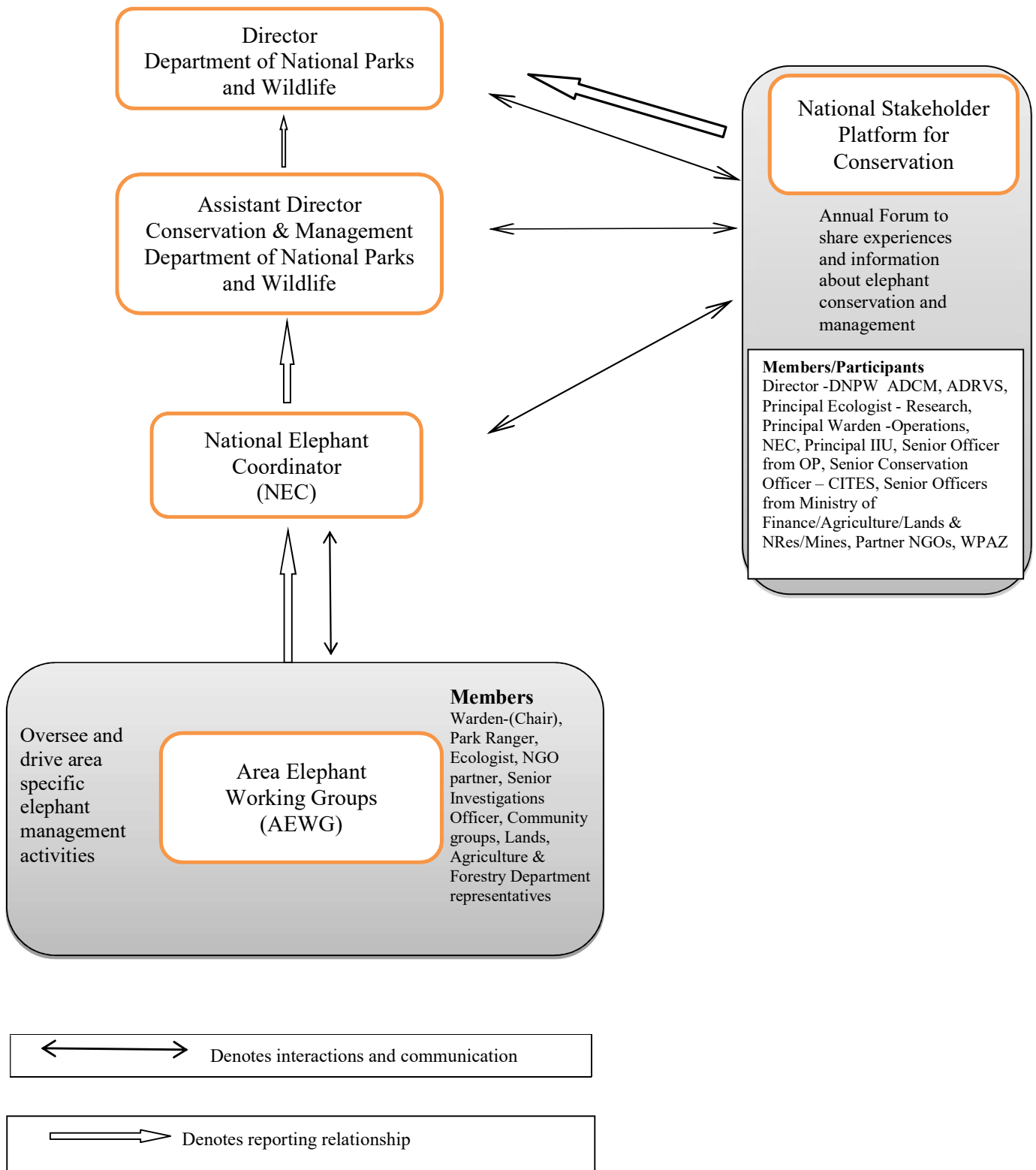
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APPENDIX I. Coordination Framework



APPENDIX II. National Stakeholder Platform for Conservation

Purpose

The National Stakeholder Platform (NSP) will be a setting where a core group of public and private stakeholders share information on conservation at least once annually, in order to more effectively institutionalize and mainstream it in all sectors. The platform is aimed at creating synergies, reducing replication of effort and increasing buy-in for conservation.

Stakeholders

The stakeholders included on the platform are key government departments such as mines, lands, forestry among others as well as NGOs involved in the wildlife sector. The National Elephant Coordinator will carry out a stakeholder identification process and adjust the list of stakeholders as needed.

APPENDIX III. Terms of Reference for National Elephant Coordinator (NEC)

Purpose

To coordinate the implementation of elephant conservation strategies and actions in order to ensure effective conservation of elephants in Zambia.

Nature of the position

- 1) The NEC will report to the Assistant Director-Conservation and Management (ADCM).
- 2) The NEC shall be an officer in DNPW with a rank of at least J or equivalent.

Key Result Areas	Principal Accountabilities
Biological and Ecological Monitoring and Research	Coordinate the timely provision of Ecological and Biological monitoring information to ensure effective management of elephant populations and their habitats
Law Enforcement	Effectively coordinate the implementation of Law Enforcement strategies to ensure the survival of elephants and the security of ivory stockpiles
Elephant Population and Habitat Management	Coordinate the development and implementation of guidelines and action plans for the effective management of elephants and their habitats
Community Support	Coordinate the development and implementation of elephant and conservation compatible activities in open areas and GMAs within elephant ranges to enhance community support for elephants

Enabling Environment	Raise awareness, develop action plans and increase financial support for elephant conservation.
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Skills and Attributes required

- 1) Knowledgeable and competent in elephant conservation and management.
- 2) Possess a scientific background with multi-disciplinary experience including a strong understanding of operations and communications, and excellent skills in organising information and report writing.
- 3) Ability to engage senior management within the ministry responsible for wildlife and other relevant institutions at national and regional levels.
- 4) Ability to interact with conservation partners and high level donors.

Responsibilities

- 1) Ensure effective implementation and monitoring of the Strategic Elephant Conservation and Management Plan 2021 -2025.
- 2) Facilitate formation of National Stakeholder platform and Regional Elephant Working Groups.
- 3) Develop the Implementation and Logical Frameworks into detailed Action and Monitoring & Evaluation plans with standardised methods, timeframes and full Key Performance Indicator reference sheets within the first year of the Strategic Plan.
- 4) Coordinate the formation and implementation of Site Specific Action Plans with the Regional Elephant Working Groups.
- 5) Liaise with Senior Wildlife Wardens to obtain activity reports from Regional Elephant Working Groups.
- 6) Coordinate Baseline assessments required by the Monitoring & Evaluation plan against which performance will be measured, and other assessment reports detailed in the Implementation Framework.
- 7) Coordinate the formulation of and approval of annual work plans and budgets for all elephant activities.
- 8) Ensure development and implementation of the Human Elephant Conflict Management Strategy, the Communication Strategy and the Sustainable Financing Strategy.
- 9) Act as Liaison officer between and among stakeholders on elephant conservation matters.
- 10) Together with other officers, represent Zambia on the IUCN/SSC African Elephant Specialist Group, attend all meetings (AfESG, SADC, CITES, etc), prepare and submit standardised national reports, and facilitate the domestication of approved outcomes of international elephant meetings.
- 11) Prepare proposals for soliciting funding for elephant management activities under the Sustainable Financing Strategy for Elephant Conservation.
- 12) Facilitate funding and planning of elephant surveys with respective stakeholders as appropriate.

- 13) Facilitate capacity building programmes for elephant conservation field staff.
- 14) Prepare and submit annual country status reports to ADCM.

APPENDIX IV. Terms of Reference for Areal Elephant Working Groups

Nature of the Working Group

- 1) The Area Elephant Working Groups shall be responsible for area specific elephant management activities.
- 2) The Chairperson of each Working Group will be the Senior Wildlife Warden or Area Warden.
- 3) The Secretary of each Working Group will be the most Conservation Officer or Ecologist in the area, or other senior DNPW officer, who will submit reports to the Senior Wildlife Warden.

Responsibilities

- 1) Advise the National Elephant Coordinator on all information gaps directed at improved elephant management.
- 2) Implement specific activities given in the Strategic Elephant Conservation and Management Plan 2021 -2025.
- 3) Meet Biannually.
- 4) Develop and implement Site-specific Elephant Action plans in keeping with the national Strategic Elephant Conservation and Management Plan.
- 5) Carry out management activities based on habitat and fire management protocols developed under the Strategic Elephant Conservation and Management Plan.
- 6) Ensure the successful implementation of all site-specific actions.
- 7) Prepare annual work plans and budgets for review by DNPW via the Senior Wildlife Warden.
- 8) Assist the NEC in sourcing funds for site-specific interventions.
- 9) Advise DNPW through the Warden on various issues relating to elephant conservation, including population and habitat management and human-elephant conflict, etc.
- 10) Liaise with the National Elephant Coordinator to appropriately represent local concerns and issues to the national authorities.

APPENDIX V. Logical Framework for the Strategic Elephant Conservation and Management Plan

	Indicators	Sources of Verification	Risks / Assumptions
BIOLOGICAL AND ECOLOGICAL MONITORING AND RESEARCH			
Strategic Objective			
To conduct effective biological and ecological monitoring and research that provides information for adaptive management of elephant populations and their habitats	Increased number of scientific reports and decision documents on elephants produced annually	Scientific reports, SOPs, Guideline documents, Management plans, Baseline assessments	
Expected Outcomes			
Standardised population and habitat monitoring methods that are effective in detecting change and informing decision-making are established in 2021 and in use by 2021	Increased quality/sensitivity of population trend/change analyses	Aerial population survey reports SOP documents for population surveys & monitoring	Availability of external technical and financial support
	Increased number of Action plans, Land use plans and General management plans that include Protocols for habitat, water and fire management & Thresholds of Potential Concern (TPC)	Baseline status/threat assessment of elephant habitats & connectivity Site-specific elephant action plans, Land use/General management plans	Timely appointment of NEC and establishment of Regional Elephant Working Groups
Priority elephant research projects are identified, funded and implemented by 2022	% of high priority research projects implemented	Proposals and DNPW records/approvals for research	Availability of external funders or participants

	Indicators	Sources of Verification	Risks / Assumptions
LAW ENFORCEMENT			
Strategic Objective			
To ensure secured and increasing elephant populations through a reduction in illegal offtake and trade in elephant products	% reduction in Proportion of Illegally Killed Elephants (PIKE)	PIKE report	Additional MIKE sites adopted in key areas
Expected Outcomes			
Increased effectiveness of law enforcement efforts by 2025 through improved procedures, training and provision of adequate field equipment, technology, arms and manpower	Protected Area Management Effectiveness score of 80%	METPAZ survey Report	Availability of adequate funds to execute law enforcement
Strengthened capacity of the Intelligence & Investigations Unit by 2025 for the detection, prevention and processing of elephant crimes	% increase in elephant crime detection	DNPW IIU annual reports	
	% increase in elephant crime prosecution rate	NPA Reports	NPA gets specialised wildlife prosecutors
Sound ivory management and improved CITES reporting by 2021 to enhance Zambia's image as a critical emerging elephant range state	% increase in CITES reports submitted to CITES before due date & %CITES elephant group meetings attended	CITES unit annual reviews MIKE and ETIS reports	
	% activities in the National Ivory Action Plan executed	CITES unit annual reviews National Ivory Action Plan	

	Indicators	Sources of verification	Risks / Assumptions
ELEPHANT POPULATION AND HABITAT MANAGEMENT			
Strategic Objective			
To ensure viable elephant populations and effectively maintained habitats	% increase in population growth rates disaggregated by elephant populations	Aerial Survey reports	Negative environmental factors do not occur
	% increase in elephant habitats and corridors with management/action plans implemented	Site-specific elephant action plans, Land use/General management plans	
Expected Outcomes			
Elephant populations well managed and growing over 5 years without exceeding the carrying capacity of each populations' habitat	Sustainable ratio of population size/carrying capacity per elephant population	Aerial Survey reports Assessment reports for carrying capacity	
Existing habitats and landscapes are preserved and connected by 2025	Increased number of hectares of land secured as elephant corridors each year	DNPW reports GIS reports Land use/General Management Plans Government Gazette	

	Indicators	Sources of Verification	Risks / Assumptions
COMMUNITY SUPPORT			
Strategic Objective			
To enhance community support and engagement in elephant conservation	% increase in number of community members in elephant range areas with positive attitudes towards elephant conservation	Knowledge, attitude and practices (KAP) survey	
Expected Outcomes			
National and local Human-Elephant Conflict management	% change in incidences of human-elephant conflicts	National HEC report	Acceptance and cooperation

strategy developed in 2021 and implemented for core elephant populations by 2025	% increase in number of VAGs with active mitigation schemes. (disaggregated by chiefdom/GMA)	Site/National HEC databases	from the community
Participatory Land use planning conducted by 2021 and implemented by 2022 in GMAs, corridors and open areas of elephant range	% increase in number of villages in key areas with village land use plans (VLUP) ratified by CRBs, customary leadership and government	VLUPs and GMA GMPs registered with CRB	
Elephant and conservation compatible livelihoods and economies in priority GMAs, corridors and open areas developed over 5 years	% increase in number of households practicing conservation compatible livelihoods	Socio-economic survey report	Availability of external technical and financial support
Community understanding and support for elephant conservation deepened by 2025	% increase in number of Grade 7 school children in elephant range areas with knowledge and positive attitudes towards elephant conservation	Schools survey	

	Indicators	Sources of Verification	Risks / Assumptions
ENABLING ENVIRONMENT			
Strategic Objective			
To create an enabling environment for elephant conservation in Zambia	Increase in number of stakeholder groups in Zambia actively and positively engaged in elephant conservation (i.e. Government, NGO, Private sector)	Reports from National Elephant Coordinator	
Expected Outcomes			
Conducive policy and legislative environment in place by 2022 that reduces wildlife crime	Increase in number of elephant-specific subsidiary legislation gazetted	Revised Wildlife Act. Gazette notice. Statutory Instruments.	

and enhances elephant conservation			
Raised awareness over 5 years of decision-makers, the general public and other key groups such as illegal traders on the importance of elephant conservation	Increase in knowledge, attitude and involvement of general public in elephant conservation	Knowledge, attitude and practices (KAP) survey of sample of target group	
Elephant conservation activities are developed, coordinated and implemented nationally and at range level over 5 years commencing 2021	% of high priority activities in this Strategic plan (2021 - 2025) executed	Reports from National Elephant Coordinator (NEC)	Timely appointment of NEC and establishment of Regional Elephant Working Groups
	Increase in the number of key elephant range areas with Site specific Action Plans implemented		
Adequate financial and technical support secured over 5 years for enhanced elephant conservation and adaptive management	Increase in total Government of Zambia funding allocated to elephant conservation per year	GRZ Budgets and funds transferred	Increased support from partners, third party donors, private sector
	% of high priority activities in the Sustainable Financing Strategy for Elephant Conservation executed	DNPW and partner reports, budgets	

APPENDIX VI. List of Workshop Participants

National Technical Multi-Stakeholder Workshop at Chisamba, Lusaka 3rd-5th May 2017

No	NAME	INSTITUTION	DESIGNATION	EMAIL
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National Technical Multi-Stakeholder Workshop at Chisamba 3rd-5th May 2017



Review Validation Workshop at Chisamba, Lusaka 15th-16th August 2018

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