



GOVERNMENT OF MALAWI



National Elephant Action Plan

2015 - 2025



DEPARTMENT OF NATIONAL PARKS AND WILDLIFE

LILONGWE

FOREWORD

Elephants are not only an attractive species of animals that contribute to the economy of the country but also play profound role in the habitats where they occur. Improved protection of elephants also protects other species ensuring continuity in ecosystems services that support life largely beneficial to human kind. Malawi's remnant elephant populations occur in the protected areas which comprise National Parks, Wildlife Reserves and Forest Reserves which are like islands in sea of human habitation.

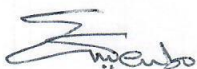
Malawi's elephants have been in a state of decline in the past decade largely due to poaching. In recent times, killing of elephants for ivory and the subsequent trafficking of ivory is on the sharp increase in the region and in most African range states, Malawi inclusive. The demand in Asia is said to be the drive behind this recent wave in the killings and illegal trafficking. In this country, the Malawi elephant population could become extinct not in the distant future if appropriate measures are not put in place.

Thus far, local, regional and global conservation partners have ganged up to support efforts to reverse these killings and trafficking and Malawi is already benefiting from such efforts.

Aligned to the African Elephant Action Plan, the National Elephant Action Plan (NEAP) for Malawi is simply a consolidation of strategies and actions being or to be undertaken and the desired outcome at the end in terms of reducing poaching and trafficking. The actions range from those that deal with factors that lead to illegal killing of elephants to those that deal with illegal trade in elephant products.

The document is a product of a consultative process and as such owned by all the stakeholders and only domiciled in the Department of National Parks and Wildlife. Collaborative effort is desired to ensure that it is implemented and that regular reviews are made to assess progress.

Let me, therefore, thank most sincerely our cooperating partners both local and international for their financial and technical support towards the production of this NEAP.



Ms. Elsie M. Tembo

PRINCIPAL SECRETARY FOR TOURISM AND CULTURE

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Acronyms

AEAP	African Elephant Action Plan
AED	African Elephant Database
CA	Community Association
CBO	Community Based Organisation
CCA	Community Conservation Area
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Defra	Department for Environment, Food & Rural Affairs
DFID	Department for International Development
DF	Department of Forestry
DNPW	Department of National Parks and Wildlife
EPI	Elephant Protection Initiative
FR	Forest Reserve
HEC	Human – Elephant Conflict
IACCWC	Inter-agency Committee on Combating Wildlife Crime
IFAW	International Fund for Animal Welfare
IWTR	Illegal Wildlife Trade Review
IUCN	International Union for the Conservation of Nature
LWT	Lilongwe Wildlife Trust
MRA	Malawi Revenue Authority
MIKE	Monitoring the Illegal Killing of Elephants
MUWA	Multiple Use Wildlife Area
NEAP	National Elephant Action Plan
NPWA	National Parks and Wildlife Act
PPP	Private, Public Partnership
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SADC	Southern African Development Community
TFCA	Trans Frontier Conservation Areas
UNCAC	United Nations Convention against Corruption
UNTOC	United Nations Convention against Transnational Organized Crime
WAG	Wildlife Action Group
WCS	Wildlife Conservation Society
WMA	Wildlife Management Authority
WP	Wildlife Policy of Malawi

Executive Summary

In Malawi, out of the 9, but possibly 11 protected areas that contain elephants, it is only in Liwonde National Park, Majete Wildlife Reserve, and possibly Thuma Forest Reserve where elephant populations have been increasing in recent times. Each of the remaining elephant populations has gradually reduced in size and range, with the result that the national population currently numbers close to 1,800 elephants. Conservation efforts in Malawi are met by a number of challenges that include on-going poaching for ivory and land pressure, compounded by high human population densities and an agro-based economy, resulting in an ever increasing demand for land coupled with human-elephant conflict. Malawi is also facing major challenges in combating the trade in illegal ivory, transiting by land as well as by air, whereby it is both a source and a transit country for ivory originating from various countries in the region. It is also being used as a major transit hub for illegal wildlife products, where traffickers and traders in ivory as well as illegal hunters are taking advantage of porous borders, corrupt practices, weak legislation, lack of specialized prosecutors, low penalties for offenders, and above all an acute lack of resources to remedy these shortcomings. Not all is lost, and reversing the trend may be hard but not impossible. DNPW fully recognizes the problem, and has already made some steps in the right direction. An excellent start was the establishment of the 'Inter-agency Committee on Combating Wildlife Crime' (IACCWC) in 2014. IACCWC comprises representatives from all relevant enforcement, judicial and prosecution agencies, and was established as an inter-agency platform to facilitate communication and collaboration.

The first general threat to Malawi's elephant population is ineffective law enforcement at the site level. Law enforcement is at the basis of efforts to reduce illegal killing of elephants, primarily through ranger-based patrols, but also through intelligence and investigations, roadblocks and other means. In some conservation areas field staff has been effective in curbing elephant poaching, but in others operations have neither been effective nor efficient, not least because key ingredients such as equipment, sufficient numbers of well-trained and motivated personnel and investigations and informer networks were not in place. Thus, a comprehensive suite of actions is proposed to build capacity at the site level. The second, third, and fourth general threats to Malawi's elephants relate to poor governance and inadequate stakeholder collaboration resulting in ineffective law enforcement at the central level. Both national and international effective cooperation between enforcement agencies is hindered by the absence of clear channels of communication. The establishment of a regional intelligence taskforce will boost the effective capacity to investigate and prosecute transnational crimes. On a national level, poor communication and collaboration between enforcement agencies, such as DNPW, MRA, police, judiciary and DPP has resulted in lenient sentences for ivory poachers, thereby facilitating the killing of elephants. Therefore, it is necessary to establish an overt central investigations unit within DNPW, alongside joint covert and reactive investigations taskforce comprised of DNPW, police, DPP, MRA and immigration, exchanging information and communicating on a regular basis, and carrying out joint operations. The fifth and sixth general threats to Malawi's elephants are basically the result of poor land management, communities not involved with and not receiving tangible benefits from wildlife conservation, resulting in poor relations between DNPW and the fringe communities. Poor land-use management around protected areas has facilitated human-

Elephant conflict. These conflicts range from crop damages, property losses and human fatalities or injuries. Crop-raiding by elephants is a severe problem, with farmers frequently losing an entire year's crop overnight, while not only risking their lives in defence of their crops, but their entire livelihood as well. Human fatalities are simply not acceptable but not completely avoidable. One of the contributing factors to poaching is the inadequate involvement of communities situated in the vicinity of protected areas to participate in conservation and reap tangible benefits at the household level which has exacerbated conflict between communities and government. A suit of actions is proposed to mitigate the current conflict situation.

The site-specific threats vary from one protected area to the other, but all relate to one of the above described general threats to Malawi's elephants. With African Parks taking over management of both Liwonde National Park and Nkhotakota Wildlife Reserve, DNPW can focus on its northern TFCA and its elephant populations in Kasungu National Park, Vwaza Marsh Wildlife Reserve and Nyika National Park. Moreover, to safeguard its last free-ranging elephant populations in the forest reserves that come under the jurisdiction of DF, DNPW needs to go into a management agreement with DF.

Background

At the 14th meeting of the Conference of the Parties to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), the Parties adopted Decisions 14.75 to 14.79 regarding the African elephant (*Loxodonta africana*). These Decisions were developed following extensive dialogue and in recognition of the fact that many of Africa's elephant populations are under threat and require co-ordinated and immediate action to turn the tide and to provide effective long-term protection.

Decisions 14.75 to 14.79 mandated the African elephant Range States to, among other things, develop an African Elephant Action Plan (AEAP) and to set up an African Elephant Fund. Pursuant to the AEAP is the development of National Elephant Action Plans (NEAPs) to address country specific issues, by identifying and prioritizing objectives and actions required to protect national elephant populations. The Draft NEAP for Malawi was produced by the Department of National Parks and Wildlife (DNPW) in July 2015, with financial support from, and technical input from stakeholders, which include African Parks, Lilongwe Wildlife Trust, RSPCA and Stop Ivory.

Wildlife conservation in Malawi is governed by the National Parks and Wildlife Act (2004) as principal legislation. DNPW is mandated to protect and conserve wildlife in protected areas such as National Parks and Wildlife Reserves in collaboration with other stakeholders, especially border zone communities. The Department of Forestry (DF) is mandated to conserve national forestry resources to uplift the quality of life for the benefit of the nation. The sector strives to empower communities through community-based forest management programmes that focus on the augmentation, management and protection of forests on customary land.

In Malawi, human population densities increased from about 40/km² in the early 1960s to roughly 180/km² in 2015, an increase by factor 4.5 in a little over half a century. This rapid population increase resulted in a fundamental change in land use patterns and life styles, where the 9 or possibly 11 protected areas that still contain elephants have become mostly isolated islands of wilderness, surrounded by a sea of cultivation and settlements. Although

Malawi never had a large elephant population to begin with, such as in some of its neighbouring countries, due to a combination of agricultural expansion and habitat loss

outside its protected area system, and ivory poaching, elephant numbers have nevertheless gradually declined over the past few decades.

Out of the 9, but possibly 11 protected areas that contain elephants, it is only in Liwonde National Park, Majete Wildlife Reserve, and possibly Thuma Forest Reserve where elephant populations have been increasing in recent times. Each of the remaining elephant populations has gradually reduced in size and range, with the result that the national population currently numbers between 1,441 and 1,999 elephants (African Elephant Database; IUCN – The International Union for the Conservation of Nature), while actual numbers are probably close to 1,800 elephants (this report). Throughout the elephant range, human – elephant conflict is common, especially near Liwonde National Park, which has high elephant densities and is surrounded by farmland.

Thus, conservation efforts in Malawi are met by a number of challenges that include on-going poaching for ivory and land pressure, compounded by high human population densities and an agro-based economy, resulting in an ever increasing demand for land coupled with human-elephant conflict.

Malawi is also facing major challenges in combating the trade in illegal ivory, transiting by land as well as by air, whereby Malawi is both a source country and a transit country for ivory originating from various countries in the region. As documented by the Illegal Wildlife

Trade Review (IWTR), information collected clearly revealed that Malawi is being used as a major transit hub for illegal wildlife products (Waterland *et al.*, 2015). Traffickers and traders in ivory as well as illegal hunters are taking advantage of porous borders, corrupt officials, weak legislation, lack of specialized prosecutors, low penalties for offenders, and above all an acute lack of resources to remedy these shortcomings.

Not all is lost, and reversing the trend may be hard but not impossible. DNPW fully recognizes the problem, and has already made some steps in the right direction. An excellent start was the establishment of the 'Inter-agency Committee on Combating Wildlife Crime' (IACCWC) in 2014. IACCWC comprises representatives from all relevant enforcement, judicial and prosecution agencies, and was established as an inter-agency platform to facilitate communication and collaboration.

Other recent developments that are worth mentioning include the signing of the Trans Frontier Conservation Area (TFCA) Agreements between Zambia and Malawi, the promotion of Private, Public Partnerships (PPPs) to help manage wildlife in Malawi, while the DNPW has embarked on the review of the National Parks and Wildlife Act (NPWA) with the aim of strengthening the Act to ensure that it is fully compliant with CITES, more protective of endangered species and ensures that penalty provisions are stiffened and enforceable. Moreover, the Government of Malawi introduced a moratorium on domestic ivory trade since September 2013 when it signed up to the Clinton Global Initiative, while it has been active in supporting other international interventions aimed to protect wildlife, including elephants). Additionally, Malawi joined the Elephant Protection Initiative (EPI) in March 2015 at the Kasane Illegal Wildlife Trade Conference, and thereby committing to (a) closing domestic ivory markets (b) observe a moratorium on any consideration of future international trade for a minimum of 10 years and thereafter until African elephant populations are no longer threatened; and agree to put all stockpiles beyond economic use and (c) to implement the African Elephant Action Plan.

Figure 1. Location of Malawi within South-central Africa



1 Status Review



1.1 Elephant Status

Historically, the elephant is considered to have occurred over a large part of present-day Malawi. Today, elephant populations are small and fragmented, being confined almost entirely to 9 or possibly 11 parks and reserves. The Department of National Parks and Wildlife (DNPW) is the State Agency responsible for management of wildlife in and outside national parks and wildlife reserves while the Department of Forestry (DF) is responsible for management of forest reserves. From north to south, protected areas containing elephants are as follows: Nyika National Park, Vwaza Marsh Wildlife Reserve, Kasungu National Park, Nkhotakota Wildlife Reserve, Thuma Forest Reserve (between Lilongwe and Salima), Dedza-Salima Forest Reserve (south of Thuma), Phirilongwe Forest Reserve (West of Mangochi near Lake Malawi), Liwonde National Park, and Majete Wildlife Reserve (Fig. 1).

Mangochi Forest Reserve (DF) is located north of Liwonde National Park, and forms a corridor to Namizimu Forest Reserve (DF) which is located between Lake Malawi and the border with Mozambique. Elephants move from Liwonde NP through Mangochi FR to Namizimu FR, while others move in from Mozambique. However, it is not known whether these two forest reserves contain small resident populations, but at least they should be considered transient populations.

The actual size of Malawi's elephant population in 2015 still needs to be determined. In 2013 a 'definite' total of 1,223 animals was obtained (African Elephant Database; AED); in addition to this, there were 'probable', 'possible' and 'speculative' totals of 218, 461 and 97 animals, respectively (AED). Population estimates entered into the AED greatly differ in quality and

therefore reliability. To solve this problem without losing information, estimates are rated according to survey types and reliability (A to E) and then categorized into groups, each associated with a different level of uncertainty. Without going into technical details, we may state that in 2013 there were a minimum of 1,441 elephants in Malawi (definite + probable), and possibly as many as 1,999 (+ possible + speculative). In 1995 there were a minimum of 1,651 elephants in Malawi, and possibly as many as 2,337 (AED). Because the number of input areas has remained more or less the same over the past 20 years, we may compare the AED totals for 1995 with those for 2013. Thus, over a period of 20 years, Malawi's elephant population may have declined by 12.7 to 14.5% or between 0.6 and 0.7% per year. The most recent population estimates are summarized in Table 1, and add up to a total population for Malawi of 1,798 elephants. Some populations have been increasing in recent times, such as those in Liwonde National Park and in Majete Wildlife Reserve (managed by African Parks), and most likely the population managed by the Wildlife Action Group (WAG) occupying the Thuma and Dedza-Salima Forest Reserves, while others have remained stable or declined, but not always due to poaching. In 2009, DNPW made a decision to relocate one of the country's last free-ranging elephant populations from the forest reserve at Phirilongwe to Majete Wildlife Reserve in the south of the country. The human-elephant conflict situation had been deteriorating for years, with numerous human casualties and many wounded elephants. A total of 83 elephants were moved to Majete, leaving only few elephants in the Phirilongwe Forest Reserve.

A summary of the current status of the 9 or 11 populations is detailed below and was obtained from key partners, DNPW staff, or when recent information was not available, from the AED (Table 1).

Table 1. Summary of protected areas and elephant population estimates.

Protected Area	Size km ²	Population Size	Source	Year
Nyika National Park	3,134	102	DNPW	2014
Vwaza Marsh Wildlife Reserve	986	310	D. Macpherson (p.c.)	2013
Kasungu National Park	2,316	67	DNPW	2014
Nkhotakota Wildlife Reserve	1,802	92	AED	2013
Thuma Forest Reserve	158	145	WAG	2014
Dedza-Salima Forest Reserve	310	(145) ¹	WAG	2014
Phirilongwe Forest Reserve	264	5	DNPW	2015
Liwonde National Park	538	777	D. Macpherson (p.c.)	2014
Majete Wildlife Reserve	700	300	D. Macpherson (p.c.)	2015
Mangochi Forest Reserve	409	?	J. Vaughan (p.c.)	
Namizimu Forest Reserve	890	?	J. Vaughan (p.c.)	
Total	11,507	1798		

¹Elephant population uses both Thuma and Dedza-Salima Forest Reserves

Figure 2. Parks, reserves, main roads and towns in Malawi



1.2 General Threats

In this section we will discuss the threats that pertain to the Malawi elephant population in general – that is developments that may seriously jeopardize the survival of elephants in Malawi in the short to medium term if these are not remedied. The next section will deal with each protected area separately, in terms of a brief site description, status and trends in elephant numbers, and area-specific threats.

1.2.1 Ineffective law enforcement at the site level

DNPW operates on a lean budget, making it difficult to carry out most of its operations. This also implies that frontline staffs are poorly equipped and poorly incentivised, except where donor funded projects exist. Consequently, law enforcement is not carried out to the level that would significantly reduce elephant poaching and the illegal wildlife trade.

Law enforcement in protected areas is carried out by rangers (Parks and Wildlife Assistants) and scouts through patrols and by other means. However, due to financial constraints, patrol staff density (# patrol staff/km²) in some of the protected areas is too low to curb elephant poaching, much less reverse the situation. Moreover, even with an adequate patrol staff density, the level of protection may be low, due to inadequate patrol frequencies, lack of resources due to low operational budgets, and a lack of quality and motivation of site-level leadership, or any combination of these. In parks and reserves where poaching is severe, a patrol staff density of 1staff/30km² is required (Jachmann, 1998). To raise patrol frequency to adequate levels, each staff should do a minimum of 15 effective patrol days per month, whereby an effective patrol day is defined as 6 – 8 hours of patrolling (Monitoring the Illegal Killing of Elephants; MIKE guidelines).

Moreover, there is need for DNPW to put in place clear staff policies and procedures so that the Department is seen to be actively preventing corruption among some of its field staff (Waterland *et al.*, 2015). Furthermore, patrol staff should be trained, motivated and disciplined, and provided with sound equipment. The leadership qualities and motivation of site-level management should be impeccable.

The majority of protected areas in Malawi do not use patrol-based monitoring systems for adaptive management. Adaptive management should be applied to all protected areas using modern range based data collection such as SMART or if there are financial constraints, lack of electricity or any other reasons that would limit the use of computerized systems, a manual system such as MOMS (management oriented monitoring systems) be used (Jachmann, 1998). Patrol data should be analysed on a monthly basis and the results should be used as feedback for management to adjust management actions and operational procedures (negative feedback cycle).

Most of the parks and reserves do not have a local intelligence unit or an informer network, which are vital for effective law enforcement. For each site, several staff require training in investigative techniques, followed by the establishment of an intelligence unit that is linked to a centralized unit. Existing informer systems need to be revived and improved.

1. Develop an Anti-Corruption Work Plan for DNPW
2. Establish an Integrity Committee to oversee implementation of the Work Plan and report on progress made to the autonomous Anti-Corruption Bureau
3. Review leadership qualities of managers and motivation of DNPW Rangers
4. Introduce adaptive management and start using ranger patrol-based monitoring systems in each site
5. Conduct an extensive staff review and where necessary take disciplinary action conducted promptly to prevent escalation
6. Increase the patrol staff density to 1 staff/30km² in those parks and reserves that experience heavy illegal off take of elephants
7. Enforce the minimum requirement of 15 effective patrol days per ranger per month
8. Training and capacity building of law-enforcement staff
9. Supply patrol staff with adequate equipment
10. Set up an intelligence network at each park and reserve containing elephants

1.2.2 Poor stakeholder collaboration

Stakeholder collaboration is vital to sound conservation and management of elephants in Malawi. On bilateral level, on the 7th July 2015, a treaty was signed between Zambia and Malawi concerning cross-border management of elephants in the Northern Trans Frontier Conservation Area, which includes Kasungu and Nyika National Parks and Vwaza Marsh Wildlife Reserve in Malawi, and Mitenge and Lundazi Forest Reserves, and the small Zambian section of the Nyika plateau in Zambia.

However, on an international level, existing collaboration between wildlife authorities has not yet delivered effective trans-border management in terms of surveys and anti-poaching, while international cooperation between enforcement agencies is hindered by the absence of clear channels of communication. The establishment of a regional intelligence taskforce would boost the effective capacity to investigate and prosecute transnational crimes. On a national level, weak legislation, poor collaboration between enforcement agencies, such as DNPW, the Malawi Revenue Authority (MRA), police, judiciary and the Directorate of Public Prosecutions (DPP) continues to result in lenient sentences for ivory poachers, thereby facilitating the killing of elephants. Moreover, effective prosecution requires prosecutors specialized in and sensitized about wildlife crime, and operating from special offices within DPP.

For sound elephant conservation it is crucial for key stakeholders, especially in the enforcement community, to consult one another and build partnerships to combat wildlife offences. A great start was made with the establishment of the IACCWC. However, the next step should be the establishment of an overt reactive central investigations unit within DNPW, connected to all parks and reserves through a central data-base (DNPW database), supported by a joint covert reactive investigations taskforce comprised of DNPW, Police, DPP, MRA and immigration outside DNPW. The taskforce should have access to a central data-base (Taskforce data-base) that needs to be established, using information from the DNPW data-base and a covert intelligence database, both feeding into the taskforce data-base. The taskforce should consist of well-trained and disciplined officers of each of the enforcement agencies, with ample resources and quick to respond to incoming information.

1. Upgrade wildlife legislation, whereby among others, wildlife crime is considered a 'serious offence', and penalties are raised to levels that deter wildlife offenders, by taking forward recommendations made by the IWT Review into the revised Act
2. Establish an overt central investigations unit within DNPW
3. Set up a data-base at DNPW connecting all parks and reserves with HQ, if possible, using the one developed by the Uganda Wildlife Authority with financial assistance from the Wildlife Conservation Society (WCS)
4. Establish a central joint covert reactive investigations taskforce comprised of officers from all relevant enforcement authorities
5. Set up a second investigations data-base for the central joint taskforce, connected to both the covert intelligence network and the DNPW data-base
6. Support a central intelligence network
7. Set up a prosecution office with staff specialized in wildlife crime in DPP
8. Provide training in investigative techniques for DNPW staff, police, DPP, MRA and immigration
9. Provide ample resources to set up data-bases, training and operations of the unit at DNPW, the central covert reactive taskforce and central intelligence
10. Improve communication with wildlife authorities in neighbouring countries
11. Improve communication with enforcement agencies in neighbouring countries

12. Establish a joint intelligence taskforce with neighbouring countries

1.2.3 Ineffective law enforcement at the central level

Malawi is positioned in the centre of a regional wildlife poaching hotspot. Malawi borders on Tanzania, Mozambique and Zambia, and the three large conservation areas closest to Malawi within these three respective countries are the Selous Game Reserve, Niassa Reserve and the Luangwa Valley ecosystem. These areas used to have high elephant densities, but over the past 6 years have been focal points for elephant poaching (Wasser *et al.*, 2015). The Selous-Niassa reserves have been the confirmed origin for a number of recent major illicit ivory seizures: 4 tonnes in Taiwan in 2006, 2.6 tonnes in Hong Kong in 2006, 5 tonnes in the Philippines in 2009, 1.5 tonnes in Sri Lanka in 2012, 2.6 tonnes in Malawi in 2013, 1.9 tonnes in Uganda in 2013 and 1 tonne in Singapore in 2014. Some of Malawi's own elephant populations have also been heavily poached. The Selous ecosystem had 109,419 elephants in 1976 but in 2013 the population was down to 13,084. Almost 25,000 elephants, ca. 66% of the park's population was lost between 2009 and 2013. Zambia, like Malawi, has very low levels of human development and income in rural areas, and these populations are susceptible to ivory's rapidly increasing price. Zambian poaching gangs are now seen with increasing frequency within Malawi and poaching levels are again reaching a crisis point. Movements of ivory between Zambia and Malawi are on the increase (Waterland *et al.*, 2015).

The geographical position of Malawi ensures it is a common transport route for freight that is in regional overland transit. Malawi's low export status means that there is also a high need for significant import volumes from international overland supply routes, all of which have to pass through surrounding countries. It is therefore not surprising that wildlife criminals use these existing Malawian transit routes to help conduit their contraband across the wider region and onto the Asian markets. For example, there are several high-profile cases in which Malawi has been used for the collection, storage, packing/sorting and further distribution (to the high risk sea ports of Dar-es-Salaam and Durban) of large quantities of illicit elephant ivory poached from both within Malawi and its neighbouring countries (Waterland *et al.*, 2015).

The risk-reward ratio for ivory traffickers in Malawi is extremely low. Wildlife crime is very profitable in a country where there is generally very little wealth and very few formal employment opportunities. Furthermore, when caught, the penalties faced by wildlife offenders are meagre. Malawi is also listed as the 110th most corrupt nation out of 175 in the corruptions perceptions index, and corruption is worsening e.g. the recent cash gate scandal. This means it is easier for criminals to evade justice. The World Bank recently ranked Malawi as one of the world's 10 poorest countries. Overcoming poverty related issues such as health and education has taken political precedence, and it is, to some degree, understandable why wildlife crime has been a lesser concern. Government authorities and decision makers have development priorities that out rank wildlife matters and wildlife criminals have taken advantage of limited restrictions. The international wildlife community has also not paid as much attention to wildlife crime in Malawi as perhaps they should, probably because Malawi's own wildlife populations are small in comparison to surrounding countries (Waterland *et al.*, 2015). Times are changing and the laws will be strengthened, but at present Malawi is unfortunately an ideal place in terms of geography, logistics, political climate, corruption and lack of international profile and legal deterrence for illicit ivory criminals to concentrate. This makes Malawi a safe hub for organized wildlife crime syndicates to source, collect, store then transit ivory to the eastern sea ports and international airports.

In addition to the actions required that were briefly discussed in section 1.2.2, under poor stakeholder participation, the IWT Review (Waterland *et al.*, 2015) proposed a number of actions to assist authorities in data collection, management and analysis, including:

- A series of measures to ensure proper identification of criminals,
- The development of performance indicators for recording wildlife crime statistics,
- Protocols for distribution of data both within and between relevant agencies,
- Implementation of a sensitization campaign to make the general public and law-enforcement officers fully aware of the seriousness of wildlife crime.

1.2.4 Poor governance

Wildlife conservation takes place in a socio-political as well as in a cultural context. The main legislation for wildlife management, the NPWA (National Parks and Wildlife Act, 2004), makes provision for recruitment of officers to implement the Act. The Act also recognises the role of officers from other agencies, such as police, fisheries and forestry, among others, but these officers are generally poorly equipped and incentivised. As a result, a number of officers from other agencies are caught up in corruption. This poses a major threat to elephant conservation, because the most lucrative wildlife trade in Malawi involves ivory. The absence of clear internal controls, incentive systems and effective disciplinary measures contributes to perpetuation of ivory poaching and the illicit trade therein. The introduction of a joint taskforce, whether on intelligence or other levels of collaboration, would introduce inter-agency controls, thereby mitigating this problem.

Moreover, DNPW needs to ensure that their employees adhere to Codes of Conduct. It is unacceptable that DNPW employees are involved in the illegal killing or trade in wildlife in Malawi (IWT Review; Waterland *et al.*, 2015). In addition, 79.7% of community members stated that better law enforcement is required to stop poaching. At present the DNPW scouts are perceived as part of the problem by communities and not the solution (Waterland *et al.*, 2015). This perception needs to change. It can only change by doing their best with the resources they are provided with. As an absolute minimum this means adhering to the DNPW codes of conduct at all times, and therefore reducing the potential for conflicts with communities and minimizing, as best possible, the opportunities for poaching. The codes of conduct need to be finalized and then all DNPW park managers must provide copies to all field staff and ensure that all staff adheres to them. Any DNPW employee found in serious breach of these codes must be subject to effective disciplinary action and considered for dismissal. DNPW field staff must set an exemplary example with regards to conveying a commitment to conserving Malawi's wildlife. If they are not committed to conserving wildlife, why should anyone else (Waterland *et al.*, 2015).

Rapid human population growth did not only lead to expanding agriculture, but also to encroachment of protected areas. Encroachment is frequently triggered or facilitated by local politicians and traditional leaders who encourage or support such activities by citing land shortages. In some cases, they use past forceful evictions from protected areas without compensation as valid reasons for encroachment. Encroachment further reduces the availability of elephant habitat and increases regular access to parks and reserves by local communities. Lack of appreciation of wildlife in general by the wider political leaders such as Members of Parliament and by traditional leaders has aggravated this problem.

Land conflicts often result in encroachment of protected areas, such as the gazetted buffer zone of Kasungu National Park, where most of the land has been sold in small parcels, and the Nkhotakota Wildlife Reserve south eastern boundary.

The emergence of mining as a means to diversify sources of government revenue has created new problems, mainly due to potential conflict between two government policies and legislation, whereby the Wildlife Act explicitly does not allow mining in protected areas, whereas the Mines Act says otherwise. This area requires harmonisation of legislation. Mining, as an extractive undertaking, poses a threat to conservation if not properly executed. Fortunately, this conflict in legislation is currently under review.

Actions required are listed under 1.2.1 and 1.2.2. Additional actions required are provided below:

1. Finalize Code of Conduct and distribute among DNPW staff
2. Raise awareness amongst traditional leaders and politicians on the importance of elephant conservation and maintaining habitat integrity
3. Harmonize the Wildlife Act and Mining legislation

1.2.5 Poor land-use management and community relations

High and increasing human densities that led to expanding agriculture around protected areas have turned these into ecological islands, compressing elephants into ever-smaller areas and cutting off their traditional migration routes. Humans and elephants therefore compete directly for land and other resources that are becoming scarce, with a rapidly deteriorating human-elephant conflict situation as a result. In addition to losing their habitat, elephants are wounded and killed by villagers defending their crops, with mortality further raised through crop control measures to mitigate the conflict. As an example, as a result of problem animal control, from 2010 to 2014, 15 elephants were killed legally around Liwonde National Park, while only 7 were killed illegally during this period.

Land-use management around protected areas has largely been left in the hands of the farmers and local leaders, whose traditional methods may have inadvertently created good feeding grounds for elephants, thus increasing the potential for more conflict. These conflicts range from crop damages, property losses and human fatalities. Crop-raiding by elephants is a severe problem, with farmers frequently losing an entire year's crop overnight risking their lives in defence of their crops. These conflicts vary in magnitude from one protected area to another, largely dependent on human density outside and elephant density inside the protected area, and the use and maintenance of fencing. Human death and injury are common, especially around Liwonde National Park, with the highest elephant density in Malawi, where on average 7.3 people were killed by elephants annually between 2009 and 2014. During the same period, 6 people were injured, 135 houses were destroyed, and 6,584 crop raiding incidents were reported.

Human fatalities, injuries and losing one's livelihood in an overnight crop raid are simply not acceptable, but most unfortunately the only solid long-term solution is proper fencing and regular maintenance, which is way beyond the budget of DNPW. However, this budget should come forward from the international community. As a result of these conflicts of interest, coupled with low penalties for wildlife offenders and poverty in general, community members do not abide by the law and also frequently engage in poaching activities.

1. Sensitize fringe communities about the seriousness of wildlife crime and forthcoming changes in the penalty structure
2. Improve land management by limiting further build up of human densities and agricultural practices in the immediate proximity of protected areas, while promoting non-target crops
3. Limit human fatalities and crop damage through fencing, cultivation of non-target crops, bee-hives, and other recent technology

1.2.6 Inadequate community involvement in conservation

Due to the exclusion of communities situated in the vicinity of protected areas to participate in conservation and reap tangible benefits at the household level, poaching continues unabated, while it exacerbates conflict between communities and government. Inadequate collaboration between DNPW and communities facilitates the illegal killing of elephants, first because communities accommodate poachers, second, they refuse to provide information to the authorities on illegal hunting, and third, they frequently take part in these illicit activities.

Recently government is beginning to recognize that the ecological integrity of protected areas cannot be perpetuated without the active collaboration of the communities. As a result, various initiatives sprang to life, such as The Nyika TFCA GEF Project, Liwonde National Park Conservation Program, in close collaboration with the International Fund for Animal Welfare (IFAW), and a program developed by Mark Hiley (Operation Safe Haven), funded by UK private foundations. These initiatives were given full government support hoping for a drastic mitigation of the human-wildlife conflict and less stress on the natural resources of the park.

Moreover, the Wildlife Policy of Malawi (2000) and the NPWA present significant opportunity for community involvement and participation in the management of Malawi's wildlife, especially on customary land and open areas like wetlands (Waterland *et al.*, 2015). This stronger orientation to the involvement of people, user groups, in the natural resources management policies sets the stage for the creation of Community Conservation Areas (CCAs) and Wildlife Management Authorities (WMAs). This is also in line with the Malawi National Environment Policy which calls for the involvement of the private sector, NGO and community based organizations in the protection, conservation, management and sustainable utilization of Malawi's natural resources and for the promotion of a community based management and revenue sharing system. The WP, which is currently under review, outlines the extent to which DNPW aims to collaborate with relevant communities (Waterland *et al.*, 2015). The WP states that 'communities shall manage wildlife resources on communal land. They will be encouraged to form Multiple Use Wildlife Areas (MUWAs). Local knowledge is expected to be essential in sustainably utilising wildlife resources and in improving problem animal control approaches. Furthermore, communities will support the management of national parks, wildlife and forest reserves in their areas. In this, communities shall be involved at all stages in the planning and implementation.

Thus, aspirations and policies are being met, but in practice communities are not adequately empowered. Similar problems occur with the community institutions set up to facilitate communication with DNPW and the sharing of benefits, primarily those from park entry fees and ecotourism. The institutional set up is too complex and too bureaucratic, while the benefits are meagre and do not reach the household level, which may well lead to 'the tragedy of the commons'.

From the IWT Review (Waterland *et al.*, 2015): Community Associations (CAs) have several governance layers in their attempt to provide community representation. The lowest level

governance layer is that of the village resident. Above them each village is represented by a Village Natural Resource Committee (VNRC). Each VNRC is formed from four persons elected from a village, including: a Chairperson, Treasurer, Secretary and one other. As there are usually several hundred villages surrounding each protected area, the VNRCs then nominate a smaller number representatives to become members of the Group Village Natural Resource Committee (GVNRC), which represent several of the VNRCs, again with a Chairperson, Treasurer, Secretary and one other. Each GVNRC has voting rights to elect nominated members from across several GVNRCs to become members of the overall CA Board, again with nominated Chairperson, Treasurer, Secretary and, in this case, several others. The most senior chiefs and the DNPW park manager also usually sit on this board. Each CA board is an umbrella body for the communities living around that specific protected area and, in theory, each CA represent all the villagers that live within the border zone of that protected area when they, local leaders and DNPW all meet to discuss pertinent wildlife conservation issues.

Although the CCAs, WMAs and the MUWAs are provided for in the extant legislation and policy which would have been a good start for community involvement in wildlife utilization and the establishment of alternative livelihood schemes such as community ecotourism sites with tangible benefits reaching the household level, these are currently not there. What obtains are community structures around protected areas which have formed associations. The institutional set up of the CAs is top down with too many layers, rather complex and without regular audits, which facilitates fraud and results in revenues remaining stuck at the top layers. The CAs need to be overhauled, simplified and strengthened, or a new system needs to be set up with a single representative from a cluster of communities attending protected-area management board meetings twice a year. This requires establishing protected-area management boards, a simple multi-stakeholder forum for discussing conservation and management of wildlife on one hand, and conflicts that emerge from these on the other hand.

Concomitantly, the system of revenue distribution through the CA structure needs to be reviewed and overhauled, with an alternative system whereby benefits accrue to individual households.

1. Establish protected-area management boards, involving relevant stakeholders, including representatives of the fringe communities
2. Alternatively, overhaul and simplify the existing set up of community institutions and strengthen what remains
3. Raise awareness among the communities
4. Establish alternative livelihood programs in the vicinity of parks and reserves, such as community-based ecotourism sites, possibly using CCAs, WMAs and MUWAs, but with a focus on initiatives that result in tangible benefits at the household level
5. Support ecotourism initiatives that promote greater employment opportunities and value chain development for local communities (IWT Review)
6. Ensure that community conservation and income generation schemes directly address both the key humanitarian issues and the most significant wildlife threats (IWT Review)

1.3 Protected Areas; Status, Trends and Area-Specific Threats

In this section we will deal with each protected area separately, in terms of status, trend and threats with regard to the resident elephant population. Parks and reserves for which DNPW is the management authority are shown in Fig. 3.

Figure 3. Parks and reserves under the jurisdiction of DNPW.



1.3.1 Nyika National Park

This is Malawi's largest and oldest national park, located in the northern region, 507km from Lilongwe, covering a total area of 3,134km². Most of the plateau is above 2,000m, with the Nganda Peak being the highest point at 2,607m. With part of the Nyika Plateau and several forest reserves on the Zambian side, it is one of the Trans Frontier Conservation Areas (TFCA) between Malawi and Zambia. Nyika consists of rolling hills with grassland and valleys with evergreen forest, with *Brachystegia* and *Julbernadia* woodland (miombo) in the low-lying areas. Up to some years back, the small population of elephants used to keep to the lower grounds on the northern edge of the park, but due to poaching pressure, they have moved to the plateau and the low-lying areas in the south of the park (D. Macpherson, personal communication).

Population status:

Since 1992, only 4 elephant counts were done in Nyika, a dung count in 1992 that covered 375km² and returned an estimate of 172 ± 68 elephants (95% CL), an aerial sample survey in 1997 that covered 3,134km² and returned 339 ± 239 elephants (AED), an aerial total count of the plateau area in 2013 that covered 1,679km² and returned 47 elephants (AED), and a total ground count of the plateau and southern part of the park in 2014 that resulted in 103 elephants (DNPW). Due to the significant difference in the areas surveyed, it is not possible to compare these counts. Because the Nyika elephants move throughout the TFCA, passing through Mitenge and Lundazi Forest Reserves in Zambia to reach Vwaza Marsh in Malawi, while these two Zambian reserves are connected with the Musalango Game Management

Area, it is not possible to evaluate any of these counts. We may only conclude that Nyika still contains at least 102 elephants. In future, to enable trend analysis, elephant counts need to cover the entire TFCA.

Management authority:

The DNPW is responsible for managing Nyika on the Malawian side, and the Zambian Wildlife Authority (now Department of National Parks and Wildlife) for the small Zambian part of the Nyika Plateau.

Figure 4. Map of Nyika National Park.



Threats:

In Nyika, patrol staff density is 1 staff/69.6km², which is below the standard of 1 staff /50 km², is sufficient for most of the plateau, but not for the low-lying parts on the northern and southern edges of the park, where elephants are concentrated. Patrol staff densities need to be increased. Number of patrols and thus effective patrol days should be drastically increased for the fringe areas, while concomitantly treating elephants as a key species, which has so far not been the case in Nyika (DNPW). Moreover, to increase patrol frequency, each patrol staff should do a minimum of 15 effective patrol days per month, whereby an effective patrol day is defined as 6 – 8 hours of patrolling.

One fairly unique threat in Nyika as well as Vwaza Marsh is the tribal differences up north compared to south and central, i.e. the deep set resentment towards government for preventing them living and hunting in conservation areas (J. Vaughan, pers. comm.). For example, in some specific protected areas, a cultural tribal tradition of wildlife hunting presents a significant challenge to wildlife conservation e.g. the Phoka tribe, who are concentrated around Nyika National Park and Vwaza Marsh Wildlife Reserve, have historically always been a tribe of shifting cultivators and male hunters. Feedback from community surveys in Vwaza Marsh indicated anger to the government from these community members for trying to repress their traditions and prohibiting access and hunting in the two protected areas. This is something which many of the Phoka people will apparently never accept, and therefore a driver for poaching and conflicts in these specific areas (IWT Review; Waterland *et al.*, 2015). Thus, due to tribal issues and low protection levels, ivory poaching from within Malawi has continued unabated.

Figure 5. Map of Vwaza Marsh Wildlife Reserve



1.3.2 Vwaza Marsh Wildlife Reserve

Vwaza Marsh is 986km² and is situated in a low-lying area immediately to the south-west of Nyika National Park in the Northern Region. It is part of the TFCA, being only 60km away from South Luangwa National Park. The reserve has ample open water, floodplains, ‘*mopane*’ woodland in the lower parts and ‘*miombo*’ woodland in the hills of the eastern part of the reserve.

Population status:

Since 1984, only 3 elephant counts have been done in Vwaza Marsh, each covering the size of the reserve. In 1984, a dung count returned an estimate of 236 ± 55 elephants (95% CL), (McShane, 1985). In 1992, an aerial survey returned an estimate of 371 ± 296 elephants (AED), while an aerial total count in 2013 returned 310 elephants (AED; D. Macpherson, pers. comm.). From these 3 estimates we could conclude that over the past 30 years the elephant population in Vwaza Marsh has been relatively stable, but as discussed above, due to regular movements between the various conservation areas that are part of the TFCA, none of the populations may be viewed in isolation. As discussed above, future elephant counts need to cover the entire area that comprises the TFCA.

Management authority:

The DNPW is responsible for managing the reserve.

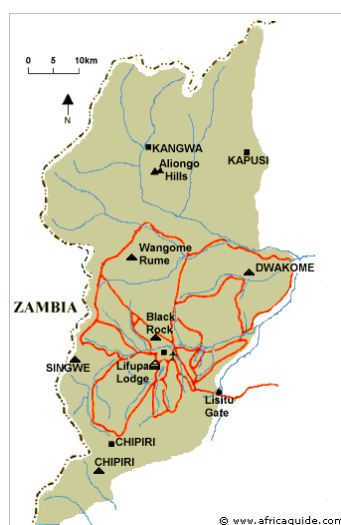
Threats:

Due to tribal issues (see previous section), ivory poaching is mainly done by Malawian nationals. From 2013 to 2014, 11 elephants were killed illegally. The patrol staff density in the reserve is relatively high at 1 staff/41.1km², but evidently not high enough to curb elephant poaching, while leadership qualities of current site management should be reviewed. Human – elephant conflict is of low to moderate severity.

1.3.3 Kasungu National Park

The Kasungu National Park comprises an area of 2,316km² and is situated in Western Central Malawi, adjacent to the border with Zambia in the west. The vegetation of the park is typical of the Central African Plateau with its basement geology and poor sandy soils, supporting closed canopy *Brachystegia/Julbernardia* ('miombo') woodland. The park has a gently undulating landscape with seasonally flooded grasslands that form the 'dambo' drainage system. The history of the park dates back to 1923, when it was declared a Forest Reserve on account of sleeping sickness. After people moved out of the area that now comprises the park, the first elephants arrived from the Luangwa Valley in Zambia (Jachmann, 1984a; Bell *et al.*, 1993). Although Lukusuzi National Park in Zambia is only roughly 30km away, in Zambia, close to the border, a busy road with many settlements forms a barrier between the two parks.

Figure 6. Map of Kasungu National Park.



Population status:

With the first elephants arriving from the Luangwa Valley in the early 1920s, the Kasungu population was established. The first aerial surveys carried out in 1970 returned an estimate of 769 elephants (Bell *et al.*, 1993). The elephant population increased to 1,296 in 1973 (Bell *et al.*, 1993), then declined to 1189 in 1978 (Jachmann & Bell, 1984), and then due to the wave of commercialized illegal hunting that swept the continent from the late 1970s, the population declined to 738 in 1981 (Bell *et al.*, 1993). No confidence Limits were available for these estimates. From the early 1980s the population has been gradually declining to 672 in 1992 (AED), 391 in 1995 (AED), to 58 in 2005 (AED). Recently, 67 elephants were counted, which should be considered the minimum number of elephants in the park (DNPW; Alphius Lypia, Divisional Manager KNP).

Management authority:

DNPW is responsible for managing the park.

Threats:

Throughout the years, poaching has continued unabated, by illegal hunters coming from Zambia as well as by Malawians from communities situated in the proximity of the park on its

eastern boundary. Patrol staff density is 1 staff/52.6km², which should have been sufficient under normal circumstances, but should be raised to 1/30km². Although the lack of effectiveness of the law-enforcement program at Kasungu may be partly due to financial constraints with DNPW, leading to low operational budgets and thus resources, leadership qualities of current site management should be reviewed. As detailed above, the land comprising the buffer zone of Kasungu National Park, which had the purpose to cushion wild animal activity between the park and human settlements, has since been sold by local chiefs after the Kasungu Flue Cured Tobacco Association became defunct. The result is that people who bought buffer zone land have mostly been interested in cutting the trees for sale of firewood, making room for further agricultural expansion. Encroachment of the park is a serious problem. The human – elephant conflict situation has been mitigated through the gradual decline of population numbers, with on average only 9.5 crop raiding incidences reported annually between 2009 and 2014.

1.3.4 Nkhotakota Wildlife Reserve

Nkhotakota is Malawi's largest wildlife reserve with 1,802km², and is situated 115km from Lilongwe, in the Central Region, near Lake Malawi. It was established as a wildlife reserve in 1954. Situated along the escarpment of the Rift Valley, it covers a vast wilderness of steep valleys with riparian forest along the rivers and predominantly 'miombo' woodland in the hills.

Population status:

Since 1981, 4 elephant counts were done in the reserve. In 1981, a dung count on tracks returned an estimate of 408 ± 91 elephants (Jachmann, 1984b), in 1992, an aerial survey gave an estimate of 71 ± 206 elephants, in 1995, an aerial survey returned an estimate of $1,037 \pm 1,511$ elephants, whereas a ground survey in 2013 resulted in an estimate of 92 elephants (AED). The estimate obtained from the ground survey did not have Confidence Limits, while the survey covered less than half of the reserve. Due to the difficult terrain of the reserve, with its steep valleys, it is next to impossible to use aerial techniques to count elephants, which is evident when we inspect the aerial estimates above (low precision and implicating that the population increased by 1360% over 3 years). From these counts we may only conclude that there currently are elephants in the reserve, and possibly more than 92.

Management authority:

Although DNPW is currently responsible for managing the reserve, African Parks has been given the mandate to manage the reserve for an initial duration of 20 years starting from August 2015. African Parks plans to fence the reserve and manage it as an elephant sanctuary (DNPW).

Figure 7. Map of Nkhotakota Wildlife Reserve.



Threats:

Because the reserve has become an island in a sea of cultivation and settlements, main threats are encroachment due to on-going land conflicts, poaching and human-elephant conflict. The patrol staff density in the reserve is 1/51.5km², which should be sufficient. Low operational budgets, lack of resources and leadership problems may be the underlying reasons for the apparent population decline.

1.3.5 Liwonde National Park

Liwonde National Park is 538km² and is located in the Southern Region, on the left bank of the Shire River between Lake Malombe and Liwonde town. The park supports a range of habitats, with roughly three-quarters of the park covered by 'mopane' woodland, with reed swamp and marshland along the Shire River and southeast shore of Lake Malombe, floodplain grassland in the south, mixed woodland on the hills, tall grass tree savannah along the narrow floodplains of seasonal streams, small pockets of dry deciduous thicket, and semi-deciduous riverine forest.

A brief history of the area shows that in order to protect the rapidly disappearing wildlife, a controlled hunting area was proclaimed in 1962, upgraded in 1969 to game reserve and finally gazetted as a national park in 1973.

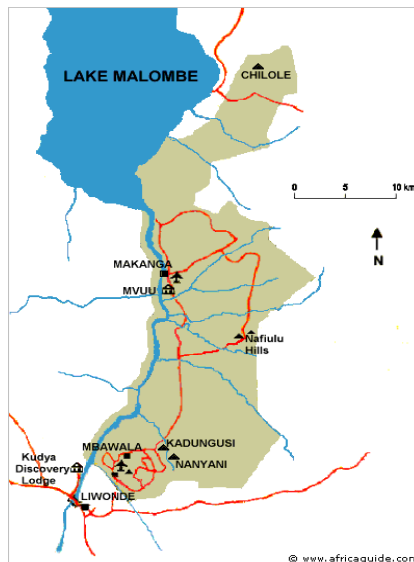
Population status:

When the park was gazetted in 1973, elephant numbers were estimated at roughly 200 (DNPW). A series of aerial total counts returned 365 elephants in 1992 (AED), 414 in 1995 (AED), 678 in 2012 (AED), and 777 in 2014 (D. Macpherson, pers. comm.), implying that the population has been increasing at about 6.1% per year.

Management authority:

Although DNPW is currently responsible for managing the reserve, African Parks has been given the mandate to manage the reserve for a period of 20 years from August 2015.

Figure 8. Map of Liwonde National Park



Threats:

Liwonde National Park has one of the highest patrol staff densities in Malawi, with 1 staff/13.0km². For many years the park has been a hotspot for human-wildlife conflicts, with considerable loss of human life, crops and livelihood on one hand, and unsustainable exploitation of the resources of the park on the other hand. For example, on average, more than 1,000 crop raiding incidents have been reported annually, with 44 human deaths, 6 injuries and 135 houses destroyed between 2009 and 2014. Due to the exclusion of nearby communities to participate in conservation and reap some of its benefits, conflict between communities and government ensued. Because government recognized the fact that the ecological integrity of protected areas cannot be perpetuated without the active collaboration of the communities, DNPW mobilised communities to form an association to administer a revenue sharing scheme. Central Wilderness Safaris Trust runs a Project called "Children in the Wilderness" which has supported communities in various Projects. Recently, the Liwonde National Conservation Program and other NGOs run a project in the fringes of the park, all with full support of Government.

1.3.6 Majete Wildlife Reserve

Majete Wildlife Reserve, proclaimed in 1955, is situated in the Lower Shire Valley, a section of Africa's Great Rift Valley, covering an area of about 700km². Vegetation is diverse, ranging from moist 'miombo' woodland in the western hills, to dry savannah in the east with prominent thickets along the riverbanks.

Population status:

When African Parks assumed responsibility of Majete Wildlife Reserve in 2003, it was almost completely devoid of any animal life. As part of the undertaking to rehabilitate the reserve to create a functioning ecosystem, an extensive restocking programme was initiated. The reintroduction of all species was based on historic records of their occurrence in the area. Up to date, more than 2,550 animals of 12 different species have been reintroduced to Majete.

These include most notably elephant (*Loxodonta africana*) and black rhino (*Diceros bicornis*). The last elephants in Majete were killed in 1992, and it was not until the re-introduction by African Parks that elephants returned to Majete. In 2006, the reserve had a population of 70 elephants (AED), increasing to about 163 in 2012 (AED), with possibly as many as 300 elephants today.

Management authority:

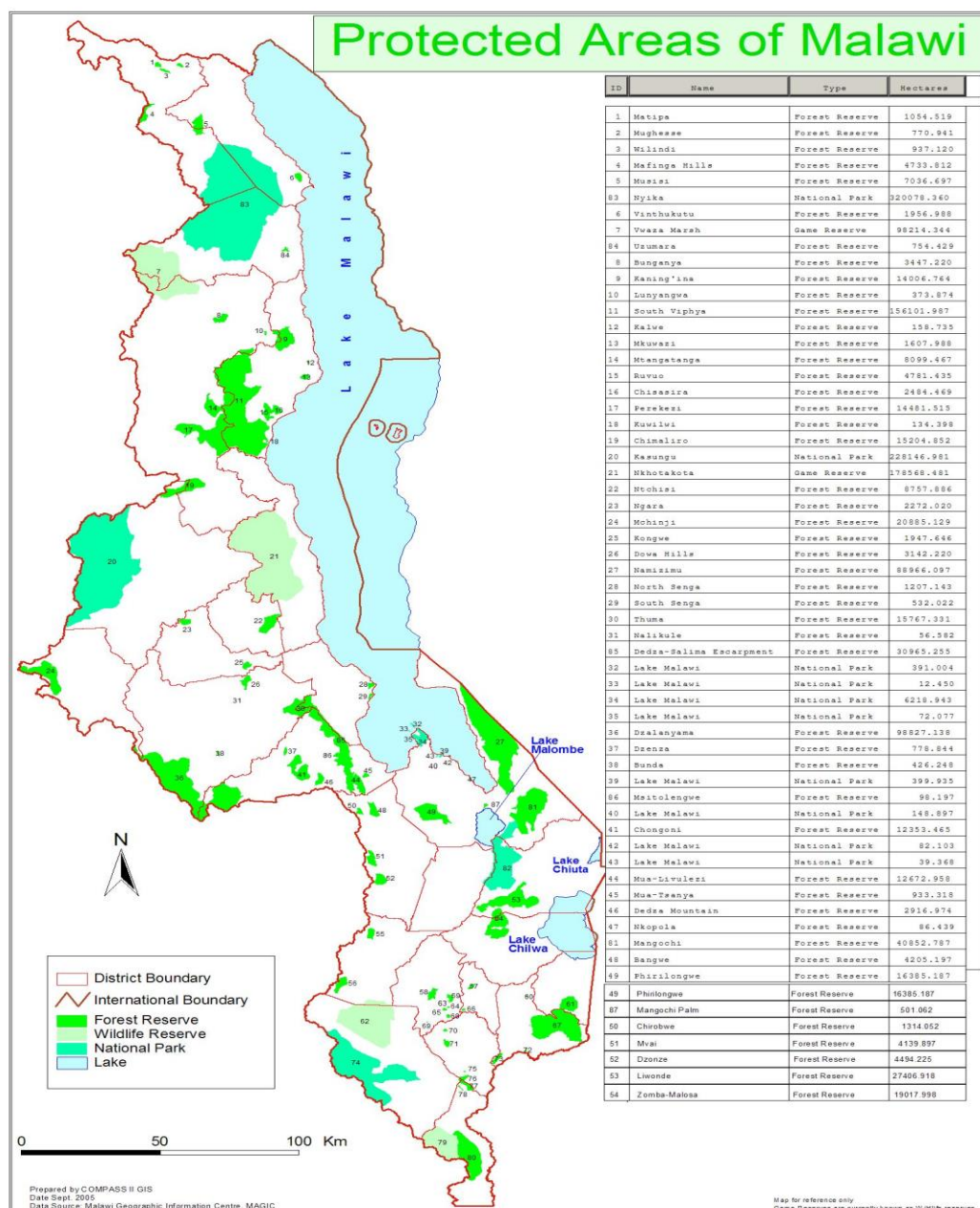
Since 2003, Majete Wildlife Reserve is managed by African Parks - a partnership between African Parks and DNPW.

Threats:

Being managed by African Parks, Majete has no financial constraints to optimize law enforcement and management in general, but with high wildlife densities and approximately 140,000 people living around the reserve, human-wildlife conflict may seriously undermine good relations between park management and its neighbouring communities. African Parks has been tackling this potential problem as follows (http://www.african-parks.org/Park_1_15_Community+Involvement.html).

It is vital that the local community derives real and tangible benefits from the park in order to ensure its long term survival. Sustainable resource harvesting is permitted within the park, whilst micro-enterprises such as bee-keeping, egg production, mushroom farming, pottery and furniture making, have been initiated in conjunction with community members. Majete works with 19 community-based organisations (CBOs) in 85 villages which were established to act as conduits for information exchange, education and economic empowerment activities. Majete has a well-established Extension and Education Unit which provides wildlife extension and education services to the surrounding communities, schools and the general public. Majete has a scholarship program which is currently supporting 80 students in secondary schools and two in university with school fees. Over 4000 students from over 50 schools are reached with conservation messaging in their schools every year. On average 40 school groups undertake Environmental Education visits to Majete supported by the park every year. Learning support materials such as newsletters, student workbooks and posters are also produced to accompany education programs. Sustainable resource harvesting of thatch grass, bamboo and reeds is permitted within the reserve. In the months of June and July communities are given an opportunity to harvest these resources in the reserve. Every year 17,000 people collect thatch grass with an estimated value of \$7500. A community-managed campsite near the entrance gate provides a direct source of income for the community from camping fees and tuck-shop sales. The revenue generated which is in excess of \$8000 is channelled towards community micro projects such as purchasing school uniforms and writing materials for needy children, food for the elderly and nursery schools.

Figure 9. Forest reserves under the jurisdiction of the Department of Forestry (DF).



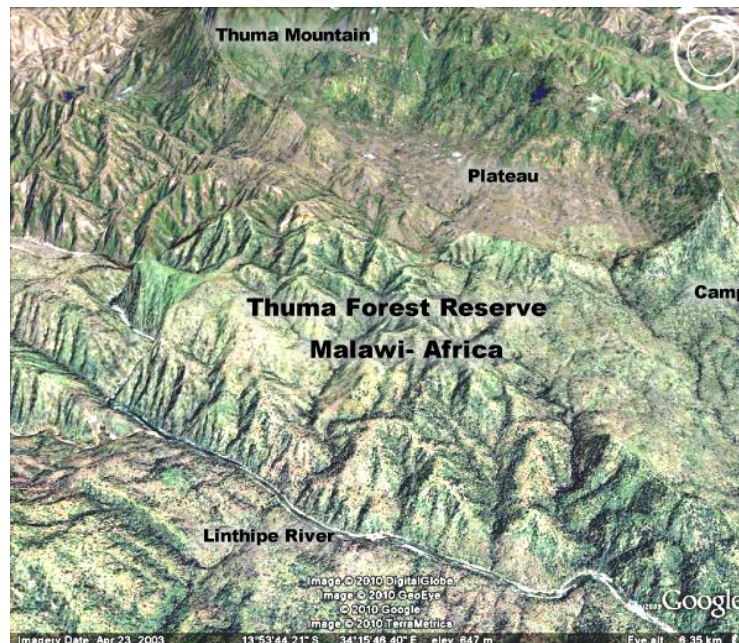
The forest reserves in Malawi fall under the jurisdiction of the DF. Protected areas in Malawi, including the forest reserves and their respective sizes are shown in Fig. 9.

1.3.7 Thuma and Dedza-Salima Forest Reserves

Thuma Forest Reserve was gazetted in 1926 and covers an area of 158km² in the Great Rift Valley Escarpment near Lake Malawi, in the Central Region, approximately 80km from Lilongwe (Figs. 9 (# 30) and 10). The reserve is adjacent to the Dedza-Salima Forest Reserve, which together with the Thuma Reserve cover an area of 468km² of escarpment wilderness running parallel to Lake Malawi. Vegetation is dominated by riparian forest along the rivers in the steep valleys and predominantly 'miombo' woodland in the hills. Thuma and

Dedza-Salima are two of the few forest reserves in Malawi that are still home to elephants, mainly as a result of the work done by the Wildlife Action Group (WAG) through its Thuma Project (www.wag-malawi.org). The objective of the Thuma Project is to protect its flora and fauna and to restore its ecological balance in co-operation with the communities living around the reserve. Thuma and Dedza-Salima Forest Reserves are now, without doubt, two of the best protected forest reserves in Malawi.

Figure10. Location of Thuma Forest Reserve



Population status:

The WAG became active in Thuma Forest Reserve in 1996, when elephants were no longer resident. Around the year 2000 the first small herds of elephants started to return to the reserve for short periods of time from the adjacent Dedza-Salima Forest Reserve, and possibly even from the Phirilongwe Forest Reserve, situated further south along Lake Malawi.

However, due to the nature of the terrain, counting elephants in areas along the Great Rift Valley Escarpment is extremely difficult. Aerial surveys are too dangerous, while the terrain is too steep for most ground survey techniques. As a result there exists no history of sound estimates of the elephants occupying the Thuma, Dedza-Salima and Phirilongwe Forest Reserves, but merely educated guesses. In 1995, the population for the 3 reserves was estimated at 250 (AED), which was probably relatively accurate, given that in 2009, 83 elephants were moved from Phirilongwe to Majete, with 5 elephants remaining in Phirilongwe (WAG), while in 2013 the population in Thuma and Dedza-Salima was estimated at 145 (Fixed-width strip survey; DNPW).

Management authority:

Although the authority for managing the forest reserves lies with the DF, all of the day-to-day management is done by the WAG.

In 2005, WAG only employed 4 scouts. Nowadays there are 40. This brings the density to 11.4km²/scout, which is the highest patrol-staff density in Malawi. As a result, there has been

a significant reduction in poaching and an increase of wildlife numbers, with signs of elephants throughout the reserve (www.wag-malawi.org).

Threats:

The main threats, in order of severity or seriousness, are charcoal burning causing deforestation of extensive areas, further deforestation through logging, and elephant poaching. The main concern expressed by communities is the problem of crop-raiding elephants. Despite the fact that other animals like bush pigs, birds and insects, cause more damage to crops than elephants, the actual damage to crops plus the emotional impact of crop-raiding elephants to individual farmers can be huge. WAG tried several elephant deterrent measures in the past and are still keen to try and implement any other possible solution but reality learns that it is very difficult to stop elephants from going into farm fields.

WAG has set up an elephant fence along part of its border where they experienced major human-elephant conflicts, but otherwise believes that the only other effective long-term measure is to stimulate people living near reserves with elephants, to grow crops that are unpalatable to elephants (tobacco, chilli, and cotton). The profits then can be used to buy their food instead of trying to grow it themselves.

1.3.8 Phirilongwe Forest Reserve

Phirilongwe Forest Reserve is also situated in the Great Rift Valley Escarpment near Lake Malawi, approximately 20km from Mangochi, and covers 164km² of escarpment wilderness (Fig. 9, # 49). Vegetation is dominated by riparian forest along the rivers in the steep valleys and predominantly 'miombo' woodland in the hills. Due to the human-elephant conflict situation, with numerous human casualties, in 2009, 83 elephants were moved from Phirilongwe to Majete Game Reserve in the Lower Shire Valley, with 5 elephants remaining in Phirilongwe (WAG). Because the reserve is degraded, with high human densities in its surroundings, maintaining high elephant densities would require costly long-term developments.

1.3.9 Mangochi and Namizimu Forest Reserves

Mangochi Forest Reserve is located just north of Liwonde National Park and covers 409km² of similar habitat as the park (Fig. 9, # 51). Elephants use the reserve to move from the park to Namizimu, but it is not known whether it contains a small resident population. Namizimu Forest Reserve is located between Lake Malawi and the border with Mozambique (Fig. 9, # 27), and covers 890km² of escarpment wilderness, with riparian forest along the rivers in the steep valleys, and 'miombo' woodland in the higher parts. Elephants are known to cross the border into the reserve, but it is not known whether there is a small resident population (DNPW).

1.3.10 Summary of site-based threats to Malawi's elephant populations

The overall scope and severity of threats to Malawi's elephant populations are provided in Table 2, where threats were rated from 1 (low) to 5 (severe) by a team of 5 DNPW managers. Poaching for ivory is currently the most immediate threat for at least 6 out of 8 populations, while charcoal burning and agricultural expansion have not only gradually eroded part of some of the protected areas, thereby reducing the available elephant habitat, but poses a threat to nearly all of Malawi's populations, while it has removed much of the internal connectivity. Although law enforcement needs improvement in the majority of protected areas,

deforestation due to charcoal burning, agricultural expansion, encroachment and the resulting human – elephant conflict situations need to be resolved through lobbying, raising awareness, community participation and benefit sharing, but most of all through land-use planning.

Some of the actions required are provided below:

1. Improve site-based law enforcement
2. Introduce adaptive management using patrol-based monitoring systems
3. Finalize Code of Conduct and distribute among DNPW staff
4. Train site-level staff in investigative techniques
5. Set up investigative units at each site
6. Establish or strengthen existing informer networks
7. Involve communities in wildlife conservation through protected-area management community organisations, involving all stakeholders
8. Stop encroachment
9. Lobby for sound land-use planning
10. Establish alternative livelihood programs, such as community-based ecotourism sites near parks and reserves
11. Raise awareness
12. Lobby local leaders and politicians

Table 2. Threats and their severity for the elephant populations of Malawi, rated from 1 (low) to 5 (severe).

Protected Area	Illegal Killing	Legal Killing	Agricultural Expansion	Encroachment HEC	Other
Nyika	3	1	1	1	
Vwaza Marsh	4	2	2	2	
Kasungu	5	1	5	5	Land Conflicts
Nkhotakota	5	1	4	5	Land Conflicts
Thuma	3	1	1	5	Deforestation due to charcoal burning
Phirilongwe	1	1	5	5	Deforestation due to charcoal burning
Liwonde	3	2	4	3	
Majete	1	1	4	1	
Namizimu	?	?	?	?	

1.4 Human Elephant Conflict

Although human – elephant conflict has been briefly discussed in previous sections on general threats (2) and area-specific threats (3), this short section summarizes the human- elephant conflict situation in Malawi.

Communities surrounding the parks and reserves of Malawi engage in small-scale subsistence and cash-crop farming. Farms closest to the boundaries are vulnerable to elephant crop damage, which is most intense during the food-crop harvesting season. Elephants jeopardize the food security and livelihoods of the communities, whose attitudes towards elephants are consequently negative. Resolving the conflict is critical to improvement of livelihoods as well as elephant conservation.

Human - elephant conflict can be categorised into direct or indirect conflicts. Direct conflicts include crop damage, human death/injuries, damage to food stores and other property such as fences. Indirect conflicts include fear of running into elephants that will restrict people in their movements, guarding of crops may lead to loss of sleep and energy, and increased exposure to malaria and psychological stress. In Malawi, the most widespread form of direct conflict however is crop damage, whereby the amount of damage or the intensity of the conflict is determined by the proximity and density of farms outside, and the food availability for and the density of elephants inside the protected area.

Throughout the elephant range in Malawi – that is in communities situated near parks and reserves that contain elephants, human – elephant conflict is common, but at different levels of intensity. Mitigation of conflict situations has been through fencing (Kasungu, Thuma, Vwaza Marsh and Liwonde), community involvement in wildlife conservation (among others Liwonde), alternative livelihoods programs (Liwonde and Majete), creating awareness, and various low-tech community-based problem animal control methods, usually traditional techniques that have been in use for a long time.

Protected areas in Malawi have a total of 144km effective elephant fence (Kasungu 52km, Thuma 12km, Liwonde 30km, and Vwaza Marsh 50km). Challenges faced with reducing conflict through fencing include vandalism of fences and lack of maintenance of fences due to financial constraints, which all resulted in elephants leaving the protected areas and causing havoc. Inadequate awareness on elephant conservation and management across all levels of society, lack of interest by local communities due to the inadequate direct benefits derived from the existence of elephants and lack of involvement of communities as stakeholders in wildlife conservation are all contributing to human - elephant conflict. However, most of these approaches do not tackle the fundamental causes of conflict. In addition to providing local communities with tangible benefits at the household level from bottom-up wildlife conservation schemes and participatory management set ups through multi-stakeholder platforms, only two solutions exist to mitigating human – elephant conflict; using a hard or soft boundary. Soft boundary: conflicts must be solved through land management, whereby land-use planning is the single most important tool to mitigate conflict. Hard-boundary solutions require ample financial support to erect elephant-proof fences and to maintain them regularly for extended periods.

Actions required have been briefly discussed in section 1.2.1 on poor land-use planning and community relations, and section 1.2.4 on inadequate community involvement in conservation.

1.5 Legislation and Policies in Relation to Elephant Conservation

The section on legislation and policies in relation to elephant conservation was produced by the LWT, and relies heavily on the IWT Review (Waterland et al., 2015).

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

Malawi has been a Party to CITES since 1982. CITES is the principal international instrument to control and regulate international trade in protected species. It is the single most important international instrument dealing with illegal trade in wild fauna and flora because it is the only treaty that requires Parties to penalize some aspects of illegal trade in protected species. It also enables countries to confiscate illegally sourced wild fauna and flora. CITES is, in fact, the only international treaty that sets out specific violations relating to illegal activities in the

wildlife sectors. The populations of African Elephant (*Loxodonta africana*) in Malawi are listed on Appendix I of CITES (although in 1989 Malawi took out a Reservation on the listing which is still in place).

According to Article VIII (1) of the Convention, national legislation must include provisions to penalize trade in, or possession of, specimen that violates CITES. Like many Parties to CITES, although Malawi has ratified the treaty it has not enacted specific legislation to implement the Convention. Instead, Malawi relies on the National Parks and Wildlife Act as amended in 2004 (NPWA) to control trade in CITES-listed species in Malawi. Having adequate domestic legislation that meets the basic requirements of the Convention is crucial to the effectiveness of CITES. Resolution 8.4 (Rev. CoP15), *National Laws for Implementation of the Convention*, provides that domestic legislation must, at a minimum: designate at least one Management Authority and one Scientific Authority; prohibit trade in specimens in violation of the Convention; penalize such trade; and, provide authority to confiscate specimens illegally traded or possessed. If national legislation does not comply with the basic CITES system, it becomes difficult to prevent criminal groups from engaging in illegal wildlife trade and to punish the perpetrators. CITES can be effective only to the extent that Parties enact (and enforce) CITES provisions. In Malawi, and with regards to African Elephants, this has been achieved through the NPWA.

Other International Treaties and Agreements

There are several other International Conventions, Protocols and Agreements which have been ratified by Malawi and are of relevance to the protection of African elephants in Malawi. These include:

- United Nations Convention against Transnational Organized Crime (UNTOC);
- United Nations Convention against Corruption (UNCAC) ;
- African Convention on the Conservation of Nature and Natural Resources;
- The Convention on Biological Diversity;
- Southern African Development Community (SADC) Legal Protocol on Mutual Legal Assistance in Criminal Matters;
- SADC Legal Protocol on Corruption;
- SADC Legal Protocol on Extradition;
- SADC Legal Protocol on Wildlife Conservation and Law Enforcement.

Malawi has also signed the *London Declaration on Illegal Wildlife Trade*, the *Arusha Declaration on Wildlife Crime* and is part of the *Clinton Global Initiative*. In January 2015, Malawi also joined the *Elephant Protection Initiative* and agreed to implement the NEAP amongst other commitments, including: enforcing a moratorium on domestic ivory sales; stiffening penalties for wildlife crimes; and, putting ivory stockpiles out of economic use. Malawi is also an observer on the *Lusaka Agreement Task Force*, a member of the *Wildlife Enforcement Network for Southern Africa* and is part of the *SADC Trans-Frontier Conservation Area initiative*.

Domestic Legislation: National Park and Wildlife Act of Malawi

The principal legislation dealing with the protection of wildlife resources in Malawi, including African elephants is the National Parks and Wildlife Act, as amended (NPWA). The NPWA provides for wildlife species that require full protection. It also has provisions in section 28 to declare any area of land or water within Malawi as a national park or wildlife reserve. The

African elephant is listed as a “protected species” within the Act and, as such, is therefore provided protection from certain offences related to its illegal killing, possession, import/export, trade and manufacture. In many ways, the NPWA is a thorough statute offering potentially extensive protection to a number of species, including African elephant, and broad authority to the Director of National Parks and Wildlife. That said, an overhaul of the legislation is necessary in order to fully comply with the mandates of CITES, and fully protect Malawi’s elephant populations.

Currently, the CITES Secretariat categorizes Malawi’s domestic legislation as Category 2, which means that the Secretariat considers it “generally not to meet all of the requirements.” A recent review of NPWA suggests that for the dual purposes of effectively combating wildlife crime, such as illicit ivory trade, and adequately implementing CITES, a number of revisions to the Act are necessary. The most important revisions being:

- (1) Definitional issues related to the scope of the NPWA must be clarified to ensure that the Act is protective of species.
- (2) The penalties provisions of the Act must be amended to ensure that wildlife crime may be treated as a “serious crime” and to clarify contradictions that make the provisions unenforceable, such as the conflict between the maximum penalty and the value of the seized item(s) requirement penalty. The penalty provisions need be revised to act more sufficiently as deterrents. As it stands currently, even when the provisions are enforceable, they may not be high enough because the value of certain specimens of wildlife on the black market is so high.

Other Domestic Legislation

There are several other Malawian Laws that are of relevance to the protection of elephants. These include:

- *The Malawi Penal Code* – with particular reference to matters of compensation, theft, with particular reference to the theft of animal parts, killing animals with intent to steal or killing and injuring animals, receiving stolen property, corruption, neglect of office, assembling for the purpose of smuggling and conspiracy.
- *Malawi Firearms Act of 1967* (as amended) – with particular reference to matters of unlawful possession of a firearm and unlawful possession of ammunition.
- *Malawi Customs and Excise Act of 1969* – with particular reference to imports and exports, the liability of agents and the various offences associated with illicit: goods, documentation, contraband concealment and unlawful behaviour of customs officials in addition to the powers of forfeiture, seizure, embargo and abandonment afforded to the Malawi Revenue Authority.

- *Malawi Immigration Act of 1964* – with particular reference to prohibited immigrants and their removal, deportation, forgery of documents, aiding and abetting unlawful entry and the prescribed offences under Schedule 3, including those related to firearms, bribery, stealing, embezzlement and fraud.
- *Corrupt Practices Act of 1995* – with particular reference to corrupt practices, corrupt use of power and the Anti-Corruption's powers of seizures etc. (Amended in 2004).
- *Money Laundering and Proceeds of Serious Crime and Terrorist Financing Act of 2006* – with particular reference to money laundering offences, the making of false or misleading statements and the powers of currency seizure and additional sanction and confiscation upon conviction of a serious crime.
- *Extradition Act of 1974* – although wildlife offences are not expressly included in the Act, the theft of a dead body of a wild animal or its constituent parts (e.g. ivory) could qualify as an extraditable offence as could the killing or maiming an animal if it equates to 'malicious or wilful damage to [State] property'.
- *Malawi Forestry Act of 1997* – with particular reference to the prohibition of possession or use of weapons, traps, explosives, poisons or hunting animals and other forest related offences, particularly those related to: wildlife, trafficking of forest produce, obstruction of officers, false documentation and the import and export of forest produce.
- *Environmental Management Act 1996* - with particular reference to environmental impact assessments, environmental protection areas and conservation of biological diversity.
- *Protection of Animal Act of 1970* – with particular reference to the prohibition of animal cruelty, including the unnecessary suffering of wild animals once captured e.g. in snares or traps or during transport.

Policy Framework: The National Wildlife Policy (2000)

The policy was adopted in 2000 is currently under review but is still in use until the reviewed one has gone through the necessary prescribed processes. The 2000 Policy had a goal of ensuring proper conservation and management of wildlife resources, including elephants. It aimed to provide for sustainable utilization and equitable access to the resources and fair sharing of the benefits from the resources for both present and future generations of Malawi. To achieve this goal the policy aimed to:

- Adequately protect representative ecosystems and their biological diversity through adopting sustainable land management practices;
- Raise public awareness and appreciation of the importance of wildlife conservation and management;
- Provide enabling legal framework to control poaching;
- Encourage wildlife-based enterprises; and

- Develop a cost-effective legal, administrative and institutional framework for managing wildlife resources.

The policy is currently under review and a new revision is expected in 2015.

Other National Policies, Plans and Strategies

There are several other National Policies that are of relevance to the protection of elephants in Malawi. These include:

- *National Environmental Action Plan (1994)* – which was adopted to set out management activities and projects aimed to protect the natural environment.
- *National Forestry Policy (1997)* – which was adopted to all citizens to have regulated and monitored access to some forest products and establish incentives that will promote community-based conservation and sustainable use of forest resources as a means of poverty reduction.
- *National Land Resources Management Policy and Strategy (2000)* – adopted to promote the efficient, diversified and sustainable use of land-based resources both for agriculture and other uses. In addition, the policy tries preventing sectoral land use conflicts and enhancing sustainable socio-economic growth for the conservation of biodiversity and the management, conservation and utilization of natural resources in order to ensure sustainable land and ecosystem productivity.
- *National Environmental Policy (2004)* – which was adopted to promote sustainable social and economic development through sound management of the environment. It promotes the conservation of biological diversity and seeks to manage, conserve and utilize biological diversity for the preservation of national heritage. It also deals specifically with wildlife and contains several strategies on the conservation of wildlife inside and outside of Protected Areas.
- *National Biodiversity Strategy and Action Plan (2006)* – was adopted in response to the NEAP which identified biodiversity loss as a major environmental concern and outlined Malawi's commitment to protecting conserve, maintain and restore biodiversity, including habitats and species.

2 The National Elephant Action Plan for Malawi: Vision, Goal, Objectives, Targets and Actions

2.1 Vision

The elephant population and its habitats are secure throughout its current range and co-existing with local communities, thereby remaining a keystone species contributing to the economy by attracting tourists, while being conserved for future generations.

2.2 Goal

Elephant poaching and the illegal trade in ivory products will be reduced to acceptable levels and key populations increased to carrying capacity within 10 years.

2.3 Strategic Objectives

These goals will be achieved through the realisation of 8 strategic objectives:

Objective 1a will address elephant poaching in Malawi's parks and reserves that are most vulnerable to illegal off take.

Objective 1b will address the illegal trade and trafficking in ivory, mainly coordinated by DNPW HQ in Lilongwe.

Objective 2 will address habitat loss through encroachment and agricultural expansion and the severance of corridors connecting different elephant populations, including those populations occupying areas along the international borders.

Objective 3 will address the problem of human – elephant conflict, by land-use planning, fencing, non-target crops, sharing of benefits with local communities and participatory approaches to elephant conservation to mitigate conflict.

Objective 4 will address improved cooperation and collaboration on elephant conservation between the wildlife authorities and the communities, by involving communities in the process of wildlife management through the establishment of multi-stakeholder management boards.

Objective 5 will address the lack of awareness on elephant conservation and management among key stakeholders, including policy makers, traditional leaders, communities, and other enforcement agencies such as the police and judiciary.

Objective 6 will address adaptive management of elephants through improved knowledge of population numbers, trends and habitat use, as well as monitoring law enforcement in compliance with internationally accepted systems, such as SMART.

Objective 7 will address strengthened collaboration between national and international stakeholders active for and relevant to elephant conservation, such as wildlife authorities of neighbouring countries, and local and international enforcement agencies.

Finally, objective 8 will address the implementation of the NEAP for Malawi by appointing a coordinator and by setting up a steering committee.

Objective 1a: To reduce illegal killing of elephants to acceptable levels by 2020

Target 1a: By 2020 elephant numbers killed illegally to be reduced to less than 1% of the population annually (currently about 17 elephants are killed illegally each year)

Law enforcement is at the basis of efforts to reduce illegal killing of elephants, primarily through ranger-based patrols, but also through intelligence and investigations, roadblocks and other means. In some Malawian conservation areas field staff has been effective in curbing elephant poaching, but in others operations have neither been effective or efficient, not least because key ingredients such as equipment, sufficient numbers of well-trained and motivated personnel and investigations and informer networks were not place. Thus, a comprehensive suite of actions is required to build capacity at the site level.

Actions required

1a.1 Build capacity, efficiency and effectiveness of field staff

In Ghana, leadership qualities and motivation had a highly significant impact on the outcome of site-level law-enforcement programs (Jachmann, 2008). Without strong and motivated leadership, law enforcement will be ineffective, while patrol staff need to be in sufficient numbers, well trained, disciplined and eager to do the job. Actions required are provided below:

- 1.1 Carry out a staff evaluation at each protected area, and from the available effective patrol/ field staff, select high calibre leadership, well-motivated, to be placed in key positions in parks and reserves where elephant poaching poses a problem for the short to medium term survival of the population. Prior to placement, these candidates require leadership training.
- 1.2 Regularly appraise and reshuffle patrol staff and place suspected and less motivated staff in positions where they have no effect on elephant survival.
- 1.3 Develop an Anti-Corruption Work Plan and establish an Integrity Committee to oversee implementation of the Work Plan and report on progress made to the Anti-Corruption Bureau.
- 1.4 Finalize the Code of Conduct and distribute among DNPW staff.
- 1.5 Develop and implement recruitment procedures for patrol staff, selecting key performance attributes, but recruiting staff from rural settings with adequate schooling.
- 1.6 Carry out a capacity gap analysis and provide capacity training for patrol staff.

- 1.7 Increase patrol staff density in problem areas, those parks and reserves where elephant poaching is high. Initially aim for a patrol staff density of 1 staff/30km². When the dust has settled and elephant numbers are increasing, patrol staff densities may be lowered to 1 staff/60km² (Jachmann, 1998).
- 1.8 Increase the number of effective patrol days per staff per month (evidently the number of patrols per unit time will also have to increase). Aim for a minimum of 15 effective patrol days per staff per month, whereby an effective patrol day is 6 – 8 hours of patrolling.
- 1.9 Provide all law-enforcement staff with proper equipment to carry out their duties (Transportation, uniforms, boots, arms, etc.).
- 1.10 Establish site-level investigations and informer systems, or strengthen where present.
- 1.11 Establish a centrally located rapid reaction security force to respond to security situations that cannot be handled by site-level enforcement alone, or take place outside the protected-area system.

Objective 1b: To reduce ivory trafficking and the illegal trade of ivory within Malawi to zero by 2025

Target 1b: Malawi experiences zero ivory seizures through trafficking at entry or exit points by 2025

Because of Malawi's geographical position, being surrounded by three countries that have been elephant poaching hotspots over the past 6 years, it has been a key trade hub for ivory, which will be difficult to stop. Moreover, the same geographical position makes it a common transport route for freight that is in regional overland transit. Malawi's low export status means that there is also a high need for significant import volumes from international overland supply routes, all of which have to pass through surrounding countries. It is therefore not surprising that criminals use these existing Malawian transit routes to help conduit their contraband across the wider region. Malawi is unfortunately an ideal place in terms of geography, logistics, political climate, corruption and lack of legal deterrence for the illicit ivory trade. Therefore, several strategies must be adopted to intercept ivory being trafficked, while drastically increasing the deterrent measures for involvement with the trade.

A good start was made with the Defra/DFID program 2015-2017 – a program jointly executed by DNPW and RSPCA (Developing law-enforcement capability in Malawi to combat wildlife crime). The program aims to develop a legislation handbook, provide training courses to enforcement agencies, secondment of Malawian law-enforcement officials to UK agencies, develop a community awareness program, and the establishment of a central database for DNPW, capturing information from seizure to sentence.

Moreover, there is an urgent need to revise the NPWA, among others to upgrade the penalty structure to increase deterrence. As part of the IWT Review (Waterland et al., 2015), the first stage of this upgrade has been done and further recommendations made as how to best continue.

Actions required

- 1.12 Upgrade wildlife legislation, whereby among others, wildlife crime is considered a 'serious offence', and penalties are raised to levels that deter wildlife offenders, by taking forward recommendations made by the IWT Review into the revised Act.

- 1.13 Establish an overt central investigations unit within DNPW and Support a central intelligence network, and a central joint covert reactive investigations taskforce comprising officers from all relevant enforcement authorities
- 1.14 Train selected DNPW, police, DPP, MRA, ACB and immigration staff in investigative techniques.
- 1.15 Set up a second investigations data-base for the central joint taskforce, connected to both the covert intelligence network and the DNPW data-base.
- 1.16 Set up a data-base at DNPW connecting all parks and reserves with HQ, if possible, using the one developed by the Uganda Wildlife Authority with financial assistance from the Wildlife Conservation Society (WCS).
- 1.17 Set up a prosecution office with staff specialized in wildlife crime in DPP.
- 1.18 Raise awareness on elephant conservation, poaching and the trade in ivory with police, DPP, judiciary, Anti-corruption Bureau, Financial Investigators Unit, MRA and the general public
- 1.19 Main entry and exit points of Malawi (border crossings and airports) should have one DNPW staff specialized in detecting ivory, identification skills, experience with and knowledge about trafficking methods and prosecution methods
- 1.20 Train MRA and MPS security staff at entry and exit points in wildlife product identification, detection of ivory, and chain of custody for evidence and case file compilation, and if feasible, provide main border crossings with X-ray equipment, repair current broken ones.
- 1.21 Harmonize the Wildlife Act, Mining legislation and the Environmental Management Act
- 1.22 Improve communication with enforcement agencies in neighbouring countries, bilaterally, and through membership of networks; e.g. Southern Africa Enforcement Network.
- 1.23 Develop a series of measures to ensure proper identification of criminals
- 1.24 Develop performance indicators for recording wildlife crime statistics.
- 1.25 Develop protocols for distribution of data both within and between relevant agencies
- 1.26 Improve ivory stockpile management through Stop Ivory's on-going support.

Objective 2: To maintain current elephant habitat range and improve connectivity by 2025.

Target 2a: No measurable loss in the size of the elephant range by 2025

Target 2b: Connectivity improved for at least 2 populations by 2025

Habitat loss, fragmentation and the severance of corridors connecting different elephant populations, whether internal or cross-border, have all contributed to the decline of elephants in Malawi. Although Malawi's elephant populations are all confined to protected areas with strict boundaries, encroachment due to deforestation as a result of charcoal burning, expanding agriculture and settlements, land conflicts and unlawful decisions by traditional leaders and local politicians have nibbled away the available habitat for elephants. Examples are the buffer zone of Kasungu National Park and the land conflicts pertaining to Nkhotakota Wildlife Reserve. Because expansion of agriculture and settlements is much more pronounced in open areas, connectivity between local populations is almost entirely lost. Recently, a treaty was signed between Zambia and Malawi on cross-border management of the northern part of the Malawian elephant range, i.e. Kasungu, Vwaza, and Nyika with their respective conservation areas in Zambia, namely Lukusuzi National Park, several forest reserves and

other areas within the Luangwa ecosystem. This provides hope that cross-border management of elephants and connectivity will improve. Within Malawi, however, there are also several options for restoring connectivity. The series of forest reserves running from North to South along the escarpment and parallel to Lake Malawi (Thuma, Dedza-Salima Escarpment, Mua-Livulezi, and Bangwe) form a more or less continuous tract of escarpment wilderness of 640km² that is unsuitable for agriculture or most other land uses.

The involvement of the private sector /NGOs in wildlife conservation and management is bearing positive results, for example the elephant population in Majete Wildlife Reserve being managed by African Parks Network is increasing. The Wildlife Action Group (WAG) is also managing the elephant population occupying the Thuma and Dedza-Salima Forest Reserves. It is important to ensure that WAG continues to manage this elephant population, and source funding to secure the area and to mitigate human-elephant conflict and deforestation through charcoal burning. To safeguard the future of the Thuma elephants and to improve connectivity, there is an urgent need for a management agreement between DNPW and DF, while leaving WAG in control of local management.

The second option to internally improve connectivity is to create a corridor between Liwonde National Park, where elephant densities may become unmanageable in future, and the forest reserve that borders on the park (Mangochi Forest Reserve) and runs almost all the way to Namizimu Forest Reserve between Lake Malawi and the border with Mozambique, creating an elephant migration zone of 2,000km² and 100km long. However, to improve connectivity within Malawi, there will be a need for full DNPW and DF partnership.

Actions required

- 2.1 Start regular communication and collaboration between local law-enforcement units in the Luangwa ecosystem and those in Kasungu, Vwaza and Nyika in Malawi.
- 2.2 Carry out joint border patrols.
- 2.3 Initiate collaboration with Mozambique on Trans-boundary elephant management of the Liwonde, Mangochi/ Namizimu ecosystem
- 2.4 Establish and sign an inter-departmental agreement between DNPW and DF on improving connectivity within Malawi, i.e. the escarpment series of FRs (Thuma and Dedza-Salima) and the Liwonde, Mangochi, Namizimu corridor.
- 2.5 Carry out a feasibility study to restore connectivity between Liwonde National Park and Namizimu Forest Reserve.
- 2.6 Promote/involve the private sector /NGOs in elephant management and conservation
- 2.7 Use participatory approaches for land-use planning to create corridors by providing incentives to communities (on customary land) to give up some areas for dispersal.
- 2.8 Assess and monitor elephant habitat change and fragmentation
- 2.9 Raise awareness amongst the fringe communities, traditional leaders and local politicians on elephant conservation and management and maintaining habitat integrity

Objective 3: To reduce Human- Elephant conflicts to acceptable levels by 2025

Target 3: 75% reduction in human – elephant conflicts incidents by 2025

Poor land-use management around protected areas has facilitated human-elephant conflict. These conflicts range from crop damages, property losses and human fatalities or injuries. Crop-raiding by elephants is a severe problem, with farmers frequently losing an entire year's crop overnight, while not only risking their lives in defence of their crops, but their entire livelihood as well. Human fatalities are simply not acceptable. Because this action plan, its

objectives and targets primarily relate to DNPW, key populations in Target 3 refer to those parks and reserves that fall under the jurisdiction of DNPW.

Actions required

- 2.4 Facilitate land-use plan for all PAs and surrounding communal land using participatory approaches.
- 2.5 Intensify awareness on elephant conservation, natural heritage, economic advantage and integrity of elephant habitat among fringe communities.
- 2.6 Strengthen the concept of community wildlife utilisation (CCAs, WMAs) and apply around PAs, to create alternative buffer zones when combined with establishment of ecotourism sites or other alternative livelihood schemes.
- 2.7 Construct elephant barriers especially electric fences
- 2.8 Engage environmental and wildlife oriented organisations to work and improve collaboration in elephant problem areas.
- 2.9 Sensitise communities on Elephants behaviour and train them on local methods on how to scare and avoid them.
- 2.10 Limit human fatalities and crop damage through fencing, cultivating non-target crops e.g. Chilli around PAs boundaries, beehives, and other recent technologies.

Objective 4: To promote co-existence between local communities and elephants by 2025.

Target 4a: The incidence of snaring and poaching of elephants by surrounding communities reduced by 50% by 2025

Due to the exclusion of fringe communities to actively participate in conservation and reap some of its benefits at the household level, subsistence and commercial poaching continue unabated. Although snaring is a highly destructive practice, because it kills many non-target species, the incidence of snaring is a good indicator of community cooperation.

As discussed under general threats, the Wildlife Policy (WP) of Malawi (2000) and the NPWA present significant opportunity for community involvement and participation in the management of Malawi's wildlife (Waterland *et al.*, 2015). The WP, which is currently under review, caters for the establishment of CCAs, WMAs, and MUWAs, concepts that may be used to create alternative buffer zones around PAs, especially when they are combined with alternative livelihood schemes that provide tangible benefits at the household level, such as ecotourism sites.

Because the institutional set up of the CAs is too complex and facilitates fraud, they need to be completely overhauled, simplified and strengthened, or a new system needs to be set up with a single representative from a cluster of communities attending protected-area management board meetings twice a year. This requires establishing protected-area management boards, a simple multi-stakeholder forum for discussing conservation and management of wildlife on one hand, and conflicts that emerge from these on the other hand.

Concomitantly, the system of revenue distribution through the CA structure needs to be reviewed and overhauled, with an alternative system whereby benefits accrue to individual households.

Actions required

- 4.1 Sensitize fringe communities about seriousness of wildlife crime, penalty structure and elephant conservation and management

- 4.2 Establish monitoring system and a rapid response protocol for problem elephants and drive them back to PAs promptly through a rapid response team.
- 4.3 Promote alternative livelihood programs in the vicinity of parks and reserves that directly address both the key humanitarian issues and the most significant wildlife threats (IWT review).
- 4.4 Ensure that community conservation and income generation schemes directly address both key humanitarian issues and the most significant wildlife threats (IWT review)
- 4.5 Invite NGOs and regulate them on Elephant problems In Malawi' {check 2.10}
- 4.6 Raise awareness on elephant conservation and management among the fringe communities

Objective 5: To raise awareness to policy makers, communities, police, judiciary on elephant conservation and management by 2020.

Target 5a: Deterrence of wildlife offences through (1) increased imposition of custodial sentences on convicted offenders (2) increased number of community groups that are aware about the serious nature of wildlife crime (3) increased collaboration with communities in providing intelligence on perpetrators of wildlife crime by 2020.

Target 5b: The number of wildlife offenders apprehended, prosecuted and sentenced and receiving maximum penalty is doubled by 2020.

Community members, traditional leaders, politicians, and officers of the Malawian enforcement agencies are usually not aware of the seriousness of the situation – on one hand the declining elephant numbers, the economic importance of elephants for the country, the loss of integrity of the habitat, and the increase in trafficking and trade in illicit ivory, but on the other hand the upcoming changes in the penalty structure, raising the deterrence level for wildlife crimes. A country-wide sensitization program is required, targeting each of these main stakeholders, but not excluding the general public. The Defra/DFID program 2015-2017, carried out by DNPW and RSPCA, addresses some of these issues for the enforcement community and fringe communities around parks and reserves.

Actions required

- 5.1 Sensitise members of the Judiciary, Police, Customs and other law enforcement agencies on the seriousness of wildlife crime
- 5.2 Produce handbook on wildlife legislation for use by law enforcement officials including Judiciary
- 5.3 Organise visits to Protected Areas for law enforcement officials from all affected agencies
- 5.4 Conduct country-wide sensitisation campaign to make the general public throughout the country aware of the seriousness of wildlife crime.

Objective 6: To enhance adaptive elephant management and monitoring by 2020

Target 6a: Six out of 8 elephant populations surveyed every 3 years by 2020

Target 6b: All parks and reserves that contain elephants use SMART (or its equivalent) by 2020

Sound management of elephant populations requires monitoring and evaluation, which includes performance management. Monitoring of elephant population numbers, trends, distribution and mortality is required as feedback for management to inform them whether they are on the right track, but also monitoring and evaluation of staff performance and patrol coverage serves as feedback for management to steer the proper course towards goals set a priori. This is known as adaptive management. The majority of protected areas in Malawi do not use patrol-based monitoring systems for adaptive management.

Adaptive management should be applied to all protected areas, using SMART, or if there are financial constraints, lack of electricity or any other reasons that would limit the use of computerized systems, a manual system should be used (Jachmann, 1998). Patrol data should be analysed on a monthly basis and the results should be used as feedback for

management to adjust management actions and operational procedures (negative feedback cycle). Moreover, Research and Management Plans should be finalized for all PAs, while DNPW needs to secure the services of a fully resourced wildlife vet unit to help protect elephants once injured.

Actions required

- 6.1 Source for funding to carry out aerial counts every 3 years of the elephant populations in protected areas using the CITES MIKE Programme Aerial Survey Standards to ensure repeatability and comparability.
- 6.2 Train staff in the use of SMART and other ecological monitoring tools
- 6.3 Train site management in the use of patrol-based information as feedback for the adaptive management system
- 6.4 Source funding for computers, GPSs and other equipment for monitoring of elephant populations and distributions
- 6.5 Develop and maintain elephant database for adaptive management purposes
- 6.6 Ensure completion of Research and Management Plans for all PAs.
- 6.7 Secure the services of a fully resourced wildlife veterinary unit to help protect elephants once injured

Objective 7: To promote and strengthen communication and collaboration between national and international agencies.

Target 7a: Enforcement Task Force established for national –level agencies by 2017

Target 7b: Enforcement Task Force established for regional and International agencies by 2020.

Both national and international cooperation between enforcement agencies is hindered by the absence of clear channels of communication. The establishment of a regional intelligence taskforce will boost the effective capacity to investigate and prosecute transnational crimes. On a national level, poor communication and collaboration between enforcement agencies, such as DNPW, MRA, police, judiciary and the Directorate of Public Prosecutions continues to result in lenient sentences for ivory poachers, thereby facilitating the killing of elephants. Although the establishment of the IACCWC is a huge step in the right direction, the next step should be the establishment of an overt central investigations unit within DNPW, followed by a joint covert and reactive investigations taskforce comprised of DNPW, police, DPP, MRA and

immigration, exchanging information and communicating on a regular basis, and carrying out joint operations. Part of this was discussed and actions listed under objective 1b, because of their urgency, some of these are repeated under this objective. Some of the activities listed below will be addressed by the joint operations of DNPW and RSPCA through the Defra/DFID program.

Actions required

- 7.1 Establish and operationalise a national level covert and reactive investigations task force involving officers from other law enforcement agencies.
- 7.2 Establish an inclusive crime data base on wildlife crime together with performance indicators for recording wildlife crime statistics.
- 7.3 Establish a joint intelligence taskforce and network with neighbouring countries
- 7.4 Train DNPW, Police and other law enforcement agencies (Task Force officials) in investigative techniques;
- 7.5 Improve communication and collaboration with wildlife authorities in neighbouring countries and the region
- 7.6 Participate in bilateral, regional and international wildlife law enforcement networks
- 7.7 Improve communication and collaboration with wildlife authorities, NGOs and other relevant stakeholders globally,
- 7.8 Upgrade wildlife legislation, whereby among others, wildlife crime is considered a 'serious offence', and penalties are raised to levels that deter wildlife offenders.
- 7.9 Develop protocols for dissemination/ sharing of data both within and between relevant agencies

Objective 8: To effectively implement the National elephant action plan

Target 8a: Coordinator and Steering committee members appointed by early 2016

Target 8b: NEAP implementation starts by early 2016

Actions required

- 8.1 Appoint Coordinator.
- 8.2 Appoint members of Steering Committee.

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Annex 1: Summary of the Actions Required

Objective	Target		Action
To reduce illegal killing of elephants to acceptable levels by 2020	By 2020 elephant numbers killed illegally to be reduced to less than 1% of the population annually (currently about 17 elephants are killed illegally each year)		<i>1a.1 Build capacity, efficiency and effectiveness of field staff</i>
		1.1	Carry out a staff evaluation at each protected area, and from the available effective patrol/ field staff, select high calibre leadership, well-motivated, to be placed in key positions in parks and reserves where elephant poaching poses a problem for the short to medium term survival of the population. Prior to placement, these candidates require leadership training.
		1.2	Regularly appraise and reshuffle patrol staff and place suspected and less motivated staff in positions where they have no effect on elephant survival
		1.3	Develop an Anti-Corruption Work Plan and establish an Integrity Committee to oversee implementation of the Work Plan and report on progress made to the Anti-Corruption Bureau
		1.4	Finalize the Code of Conduct and distribute among DNPW staff
		1.5	Develop and implement recruitment procedures for patrol staff, selecting key performance attributes, but recruiting staff from rural settings with adequate schooling
		1.6	Carry out a capacity gap analysis and provide capacity training for patrol staff.
		1.7	Increase patrol staff density in problem areas, those parks and reserves where elephant poaching is high. Initially aim for a patrol staff density of 1 staff/30km ² . When the dust has settled and elephant numbers are increasing, patrol staff densities may be lowered to 1 staff/60km ² (Jachmann, 1998).
		1.8	Increase the number of effective patrol days per staff per month (evidently the number of patrols per unit time will also have to increase). Aim for a minimum of 15 effective patrol days per staff per month, whereby an effective patrol day is 6 – 8 hours of patrolling
		1.9	Provide all law-enforcement staff with proper equipment to carry out their duties (Transportation, uniforms, boots, arms, etc.).
		1.10	Establish site-level investigations and informer systems, or strengthen where present

		1.11	Establish a centrally located rapid reaction security force to respond to security situations that cannot be handled by site-level enforcement alone, or take place outside the protected-area system
Objective 1b: To reduce ivory trafficking and the illegal trade of ivory within Malawi to zero by 2025	Target 1b: Malawi experiences zero ivory seizures through trafficking at entry or exit points by 2025	1.12	Upgrade wildlife legislation, whereby among others, wildlife crime is considered a 'serious offence', and penalties are raised to levels that deter wildlife offenders, by taking forward recommendations made by the IWT Review into the revised Act.
		1.13	Establish an overt central investigations unit within DNPW and Support a central intelligence network, and a central joint covert reactive investigations taskforce comprising officers from all relevant enforcement authorities
		1.14	Train selected DNPW, police, DPP, MRA, ACB and immigration staff in investigative techniques
		1.15	Set up a second investigations data-base for the central joint taskforce, connected to both the covert intelligence network and the DNPW data-base
		1.16	Set up a data-base at DNPW connecting all parks and reserves with HQ, if possible, using the one developed by the Uganda Wildlife Authority with financial assistance from the Wildlife Conservation Society (WCS).
		1.17	Set up a prosecution office with staff specialized in wildlife crime in DPP.
		1.18	Raise awareness on elephant conservation, poaching and the trade in ivory with police, DPP, judiciary, Anti-corruption Bureau, Financial Investigators Unit, MRA and the general public
		1.19	Main entry and exit points of Malawi (border crossings and airports) should have one DNPW staff specialized in detecting ivory, identification skills, experience with and knowledge about trafficking methods and prosecution methods
		1.20	Train MRA and MPS security staff at entry and exit points in wildlife product identification, detection of ivory, and chain of custody for evidence and case file compilation, and if feasible, provide main border crossings with X-ray equipment, repair current broken ones.
		1.21	Harmonize the Wildlife Act, Mining legislation and the Environmental Management Act
		1.22	Improve communication with enforcement agencies in neighbouring countries, bilaterally, and through membership of networks; e.g. Southern Africa Enforcement Network
		1.23	Develop a series of measures to ensure proper identification of criminals
		1.24	Develop performance indicators for recording wildlife crime statistics.

		1.25	Develop protocols for distribution of data both within and between relevant agencies
		1.26	Improve ivory stockpile management through Stop Ivory's on-going support.
Objective 2: To maintain current elephant habitat range and improve connectivity by 2025.	Target 2a: No measurable loss in the size of the elephant range by 2025 Target 2b: Connectivity improved for at least 2 populations by 2025	2.1	Start regular communication and collaboration between local law-enforcement units in the Luangwa ecosystem and those in Kasungu, Vwaza and Nyika in Malawi.
		2.2	Carry out joint border patrols
		2.3	Initiate collaboration with Mozambique on Transboundary elephant management of the Liwonde, Mangochi/ Namizimu ecosystem
		2.4	Establish and sign an inter-departmental agreement between DNPW and DF on improving connectivity within Malawi, i.e. the escarpment series of FRs (Thuma and Dedza-Salima) and the Liwonde, Mangochi, Namizimu corridor.
		2.5	Carry out a feasibility study to restore connectivity between Liwonde National Park and Namizimu Forest Reserve.
		2.6	Promote/involve the private sector /NGOs in elephant management and conservation
		2.7	Use participatory approaches for land-use planning to create corridors by providing incentives to communities (on customary land) to give up some areas for dispersal.
		2.8	Assess and monitor elephant habitat change and fragmentation
		2.9	Raise awareness amongst the fringe communities, traditional leaders and local politicians on elephant conservation and management and maintaining habitat integrity
		3.1	Facilitate land-use plan for all PAs and surrounding communal land using participatory approaches.
Objective 3: To reduce Human- Elephant conflicts to acceptable levels by 2025	Target 3: 75% reduction in human – elephant conflicts incidents by 2025	3.2	Intensify awareness on elephant conservation, natural heritage, economic advantage and integrity of elephant habitat among fringe communities
		3.3	Strengthen the concept of community wildlife utilisation (CCAs, WMAs) and apply around PAs, to create alternative buffer zones when combined with establishment of ecotourism sites or other alternative livelihood schemes
		3.4	Construct elephant barriers especially electric fences
		3.5	Engage environmental and wildlife oriented organisations to work and improve collaboration in elephant problem areas

		3.6	Sensitise communities on Elephants behaviour and train them on local methods on how to scare and avoid them.
		3.7	Limit human fatalities and crop damage through fencing, cultivating non-target crops e.g. Chilli around PAs boundaries, beehives, and other recent technologies
Objective 4: To promote co-existence between local communities and elephants by 2025.	Target 4: The incidence of snaring and poaching of elephants by surrounding communities reduced by 50% by 2025	4.1	4.1 Sensitize fringe communities about seriousness of wildlife crime, penalty structure and elephant conservation and management
		4.2	Establish monitoring system and a rapid response protocol for problem elephants and drive them back to PAs promptly through a rapid response team
		4.3	Promote alternative livelihood programs in the vicinity of parks and reserves that directly address both the key humanitarian issues and the most significant wildlife threats (IWT review).
		4.4	Ensure that community conservation and income generation schemes directly address both key humanitarian issues and the most significant wildlife threats (IWT review)
		4.5	Invite NGOs and regulate them on Elephant problems In Malawi' {check 2.10}
		4.6	Raise awareness on elephant conservation and management among the fringe communities
Objective 5: To raise awareness to policy makers, communities, police, judiciary on elephant conservation and management by 2020	Target 5a: Deterrence of wildlife offences through (1) increased imposition of custodial sentences on convicted offenders (2) increased awareness on serious nature of wildlife crime (3) corroboration with communities in providing intelligence on perpetrators of wildlife crime by 2020. The number of wildlife offenders apprehended, prosecuted and sentenced and receiving maximum penalty is doubled by 2020. Target 5b: The number of	5.1	Sensitise members of the Judiciary, Police, Customs and other law enforcement agencies on the seriousness of wildlife crime
		5.2	Produce handbook on wildlife legislation for use by law enforcement officials including Judiciary
		5.3	Organise visits to Protected Areas for law enforcement officials from all affected agencies
		5.4	Conduct country-wide sensitisation campaign to make the general public throughout the country aware of the seriousness of wildlife crime

	wildlife offenders apprehended, prosecuted and sentenced and receiving maximum penalty is doubled by 2020.		
Objective 6: To enhance adaptive elephant management and monitoring by 2020	Target 6a: Six out of 8 elephant populations surveyed every 3 years by 2020 Target 6b: All parks and reserves that contain elephants use SMART (or its equivalent) by 2020	6.1	Source for funding to carry out aerial counts every 3 years of the elephant populations in protected areas using the CITES MIKE Programme Aerial Survey Standards to ensure repeatability and comparability.
		6.2	Train staff in the use of SMART and other ecological monitoring tools
		6.3	Train site management in the use of patrol-based information as feedback for the adaptive management system
		6.4	Source funding for computers, GPSs and other equipment for monitoring of elephant populations and distributions
		6.5	Develop and maintain elephant database for adaptive management purposes
		6.6	Ensure completion of Research and Management Plans for all PAs.
		6.7	Secure the services of a fully resourced wildlife veterinary unit to help protect elephants once injured
Objective 7: To promote and strengthen communication and collaboration between national and international agencies	Target 7a: Enforcement Task Force established for national –level agencies by 2017 Target 7b: Enforcement Task Force established for regional and International agencies by 2020	7.1	Establish and operationalise a national level covert and reactive investigations task force involving officers from other law enforcement agencies.
		7.2	Establish an inclusive crime data base on wildlife crime together with performance indicators for recording wildlife crime statistics
		7.3	Establish a joint intelligence taskforce and network with neighbouring countries
		7.4	Train DNPW, Police and other law enforcement agencies (Task Force officials) in investigative techniques;
		7.5	Improve communication and collaboration with wildlife authorities in neighbouring countries and the region
		7.6	Participate in bilateral, regional and international wildlife law enforcement networks
		7.7	Improve communication and collaboration with wildlife authorities, NGOs and other relevant stakeholders globally,
		7.8	Upgrade wildlife legislation, whereby among others, wildlife crime is considered a 'serious offence', and penalties are raised to levels that deter wildlife offenders.

		7.9	Develop protocols for dissemination/ sharing of data both within and between relevant agencies
Objective 8: To effectively implement the National elephant action plan	Target 8a: Coordinator and Steering committee members appointed by early 2016	8.1	Appoint Coordinator.
	Target 8b: NEAP implementation starts by early 2016	8.2	Appoint members of Steering Committee.