

Queen Elizabeth National Park
Kyambura Wildlife Reserve
Kigezi Wildlife Reserve

**Community-Based Wildlife Crime Prevention
Action Plan
(2017-2023)**



Uganda Wildlife Authority

April 2017

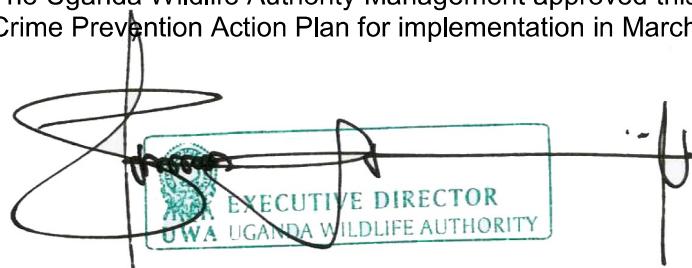
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Approval

The Uganda Wildlife Authority Management approved this Community-Based Wildlife Crime Prevention Action Plan for implementation in March 2017.



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Acronyms

AOP	Annual Operations Plan
AWCC	Assistant Warden Community Conservation
CAM	Conservation Area Manager
CBO	Community Based Organisation
DFO	District Fisheries Officer
EAGLE	Eco Activists for Governance & Law Enforcement
GMP	General Management Plan
HWC	Human Wildlife Conflict(s)
IIED	International Institute for Environment and Development
IWTCF	Illegal Wildlife Trade Challenge Fund
LEM	Law Enforcement Monitoring
LEW	Law Enforcement Warden
MoU	Memorandum of Understanding
NGO	Non Governmental Organisation
NRCN	Natural Resources Conservation Network
PA	Protected Area
QENP	Queen Elizabeth National Park
QEPA	Queen Elizabeth Protected Area
SMART	Spatial Monitoring and Reporting Tool
UCF	Uganda Conservation Foundation
UWA	Uganda Wildlife Authority
WCPAP	Wildlife Crime Prevention Action Plan
WCC	Warden Community Conservation
WCS	Wildlife Conservation Society

Foreword

Wildlife crime is a major conservation challenge with increasing threat levels throughout the region that is slowly driving our wildlife species to extinction if concerted efforts are not made to combat and contain this crime. Wildlife crime and particularly wildlife trafficking has been classified by the United Nations as a serious crime. It is highly organized with strong criminal networks and syndicates requiring sophisticated means and strong intelligence to deal with.

Uganda Wildlife Authority (UWA) has had an excellent track record at tackling wildlife crime, particularly elephant poaching with elephant numbers increasing in the national parks but this is by no means a matter of celebration as the threats are real and cannot allow us to rest on our laurels lest all the gains achieved will come to nothing in a very short time.

Traditional efforts to combat wildlife crime have focussed on law enforcement but Uganda realised long time ago that law enforcement alone was not enough to stop wildlife crime. As such Uganda was one of the first countries to recognise the vital role that community conservation can play in tackling the underlying drivers of wildlife crime. It is against this background that this plan recognizes the vital role communities living around the wildlife protected areas play in combating wildlife crime.

This Wildlife Crime Prevention Action Plan for the Queen Elizabeth Protected Area is a result of a three year collaborative research project titled "Building capacity for *Pro-Poor Responses to Wildlife Crime in Uganda*" implemented by Uganda Wildlife Authority, International Institute of Environment (IIED), University of Oxford and Wildlife Conservation Society (WCS), funded by the UK government's Illegal Wildlife Trade Challenge Fund. It sets out an implementation plan for the next five years for activities to combat wildlife crime in and around MFPA, with an emphasis on integrating law enforcement and community conservation interventions into a single unified approach.

I wish to appeal to all staff in UWA particularly those working in and around MFPA to work with all stakeholders including the local communities to ensure full implementation of this Action Plan.

Conserving for Generations



Dr. Andrew G Seguya
Executive Director

Executive Summary

Background

Wildlife Crime, the illegal use of wild living resources, represents a significant threat to Uganda's wildlife. In Queen Elizabeth Protected Area (QEPA), the most common wildlife offence is illegal hunting of wild animals for their meat for both subsistence and commercial purposes. In villages adjacent to the boundaries of QEPA, over 40% of households are estimated to have hunted for commercial purposes at least once in 2015. Although the latest aerial surveys show that large mammals populations in QEPA are mostly continuing to recover from lows in the 1970s and 1980s, such a high prevalence of hunting poses a threat to the long-term health of wildlife populations and wildlife-based tourism.

It is important to recognise that there are multiple underlying factors that push people towards becoming engaged in wildlife crime, ranging from basic subsistence needs to financial benefit, retaliation against perceived injustices or traditional cultural uses of wildlife. Hence, not all individuals involved in wildlife crime are motivated by the same set of reasons. This has important implications for the design of interventions aimed at combatting wildlife crime, as it suggests that different interventions or combinations of interventions may be required to target individuals with different sets of motivations. Efforts to combat wildlife crime must therefore seek to address the underlying drivers of wildlife offences as well as tackling crimes more directly.

Aim

The aim of the Community Based Wildlife Crime Prevention Action Plan is to provide a strategic vision to address wildlife crime within the boundaries of Queen Elizabeth Protected Area and surrounding communities. Such a strategic approach has been taken to set out clear priorities over the five year period of 2017-2023 with respect to different wildlife offences, key target groups engaged in wildlife crime and intervention options, as part of longer term efforts by the Uganda Wildlife Authority (UWA) and partners to address wildlife crime.

Several of the activities detailed within the action plan are already being implemented by UWA and other supporting organisations at multiple sites around QEPA. However, by considering all of the activities that are being conducted, opportunities for synergies between activities can be maximised and conflicts minimised. This approach will not only strengthen UWA's ability to combat wildlife crime directly through improved law enforcement but focuses efforts on tackling the underlying drivers of wildlife crime. The action plan has been designed to complement the General Management Plan (GMP) and Annual Operational Plans (AOPs) that follow from the GMP, which encompass broader goals than the reduction of wildlife crime.

Financial Support for Action Plan Activities

The activities contained in the action plan are primarily expected to be financed by internally generated revenues and budgets approved by top management. For each of the activities detailed we provide a summary table that includes a cost estimate – based on the GMP and AoP for 2016/17 – and a time frame for implementation. However, additional activities have been identified with the aim of increasing the impact of those to be financed internally. The identification of these additional activities is expected to assist UWA in securing supplementary funds from external

sources, such as donor support or through strategic partnerships with NGOs, private sector companies, local authorities or national government agencies.

Priority Setting

Three priority offences are identified within the action plan:

1. Illegal hunting and trade of high-value wildlife species
2. Commercial hunting and trade of bushmeat species
3. Subsistence hunting for bushmeat.

Priority areas in which to focus interventions are also identified, as it is recommended that resources are not spread too thinly, but targeted towards communities where the need is greatest, and the most difference can be made using this approach (particularly areas where wildlife crime is at high levels, and there is a will to engage).

For each priority offence, a range of interventions has been identified to be supported by UWA and partner organisations (Table 1). While some of these activities are already being implemented, the action plans seek to increase the effectiveness of UWA's efforts to reduce wildlife crime by identifying:

- actions to improve the effectiveness of existing interventions
- interventions that require greater investment to be effective
- new interventions that are not currently being implemented
- interventions that require greater coordination to maximise synergies and avoid conflicts.

Table 1: Key interventions identified to combat the three priority offences described in the action plan.

Key interventions	Armed hunting	Commercial bushmeat hunting	Subsistence bushmeat hunting
Ranger patrols	x	x	x
Intelligence gathering	x	x	
Working with the judiciary	x		
Human wildlife conflict mitigation		x	x
Wildlife friendly enterprises		x	x
Community outreach			x
Animal husbandry and wildlife ranching			x

Coordination and Implementation

In addition to setting out a range of interventions for combatting priority wildlife offences at QEPA, the action plan highlights a series of linkages between these interventions and identified potential implementation barriers that need to be addressed to ensure successful outcomes are achieved. These include:

- ensuring a balanced allocation of funding between law enforcement and community conservation activities
- institutional commitment to engaging with communities
- addressing capacity gaps and staff training
- avoiding perverse incentives.

Monitoring and Evaluation

For each intervention identified within the action plan, a series of simple indicators is identified to allow progress towards intervention outcomes to be monitored without placing a significant burden on implementing staff.

1. Introduction

1.1. Aim of the Wildlife Crime Prevention Action Plan

The aim of the Wildlife Crime Prevention Action Plan (WCPAP) is to provide a strategic vision to address wildlife crime within the boundaries of Queen Elizabeth Protected Area (QEPA) and surrounding communities. Such a strategic approach has been taken to set out clear priorities over the next five years with respect to different wildlife offences, key target groups engaged in wildlife crime and intervention options, as part of the longer term efforts by the Uganda Wildlife Authority (UWA) and partners to address wildlife crime.

Many of the activities detailed in the WCPAP are already being implemented by UWA and other supporting organisations at multiple sites around QEPA. However, by considering all of the activities that are being implemented, opportunities for synergies between activities can be maximised and conflicts minimised. This approach not only strengthens UWA's ability to combat wildlife crime directly through improved law enforcement but focuses efforts on tackling the underlying drivers of wildlife crime also.

1.2. Relevant Laws, Policies and Guidelines

The WCPAP for QEPA provides an implementation strategy for the responsibilities and objectives set out by a series of laws and policies, the most relevant of which are summarised below.

1.2.1. East African Community Protocol on Environment and Natural Resources

As a signatory of this protocol, Uganda is obliged to sustainably conserve wildlife resources in partnership with the local communities. This is reflected in the Mission of the Uganda Wildlife Authority "*to conserve, economically develop and sustainably manage the wildlife and protected areas of Uganda in partnership with the neighbouring communities and other stakeholders for the benefit of the people of Uganda and the global community*".

1.2.2. The Uganda Wildlife Act Cap 200 of the Laws of Uganda 2000

The legislative mandate for the actions identified in the WCPAP for QEPA is enshrined in the Uganda Wildlife Act of 2000, which delegates UWA with the responsibility to ensure the sustainable management of wildlife conservation areas, to establish policies and procedures for the sustainable utilisation of wildlife by and for the benefit of the communities living in proximity to wildlife, to monitor and control problem animals and to control internal and external trade in wildlife specimens.

1.2.3. The Uganda Wildlife Policy (2014)

The Uganda Wildlife Policy sets out the policy vision for the wildlife sector in Uganda. Included in the guiding principles of this vision is the promotion of the interests of local communities around conservation areas and the need for research guided decision-making. Policy objectives include the effective mitigation of human wildlife conflict (HWC) and combatting of wildlife crime.

1.2.4. The Uganda Wildlife Authority Community Conservation Policy (2004)

The Community Conservation Policy harmonises UWA's policies and guidelines for its interactions with local communities, recognising the need to do more than policing.

It sets the main policy goal “*to strengthen conservation of wildlife resources through sustainable and equitable distribution of conservation benefits and/or costs among all stakeholders*”.

1.2.5. *The Uganda Wildlife Authority Strategic Plan (2013 – 2018)*

The Strategic Plan sets out the policy vision for the five-year period between 2013 and 2018, with the management of HWC identified as one of four critical issues to be addressed within the plan. The strategic objectives for the Resource Conservation and Management Strategic Programme include the objective to contain illegal activities in all wildlife areas. Objectives under the Community Conservation Strategic Programme include the objectives to enhance benefits and opportunities arising from wildlife conservation, minimise HWC and enhance the understanding and appreciation of wildlife.

1.2.6. *The Queen Elizabeth Protected Area General Management Plan (2011 – 2021)*

The General Management Plan (GMP) sets out the management priorities for Queen Elizabeth Protected Area over a ten-year period from 2011 to 2021 through the identification of priority activities and the allocation of resources. The Wildlife Crime Action Plan is intended to complement the GMP and Annual Operational Plans (AOPs) that follow from the GMP, which encompass broader goals than the reduction of wildlife crime, and will be included in the mid-term evaluation of the GMP in January 2017.

1.2.7. *The Uganda Wildlife Authority Guidelines for Revenue Sharing Between Wildlife Protected Areas and Adjacent Local Governments and Communities (2012)*

The Revenue Sharing guidelines outline the procedures through which local government and communities should benefit from the tourist gate revenues from protected areas, as prescribed in the Wildlife Act Cap 200. The guidelines describe the stated objectives of revenue sharing as establishing good relations with local stakeholders, demonstrating the economic value of local communities and strengthening the support and acceptance for protected areas and conservation activities from communities living adjacent to these areas.

1.3. *The Action Planning Process*

The WCPAP for QEPA was developed following the process agreed at a workshop held on 25th and 26th May 2016 at the Africana Hotel in Kampala as part of the collaborative Illegal Wildlife Trade Challenge Fund (IWTCF) supported project “*Building capacity for pro-poor responses to wildlife crime in Uganda*” implemented by the International Institute for Environment and Development (IIED), the Wildlife Conservation Society (WCS) Uganda Program, the University of Oxford and UWA.

The Planning Team consisted of the Conservation Area Manager, Law Enforcement Warden, Community Conservation Warden, representatives of WCS and the Uganda Wildlife Foundation (UCF) and members of the IWT Challenge Fund project team. The strategy to combat wildlife crime presented in the Wildlife Crime Action Plan was formulated by the Planning Team. Additional material was provided by the research findings of the IWT Challenge Fund project.

1.4. Financing mechanisms for the Wildlife Crime Prevention Action Plan

The activities contained in the WCPAP are largely expected to be financed by internally generated revenues and budgets approved by top management. For each of the activities detailed (described in Sections 6, 7 and 8) we provide a summary table that includes a cost estimate – based on the GMP and AoP for 2016/17 – and a time frame for implementation (shaded cells in the boxes indicate when activities should be implemented).

However, where appropriate, activities that are not currently supported by UWA or that require greater levels of support than they currently receive have been identified with the aim of increasing the impact of those to be financed internally. The implementation of these additional activities will be subject to supplementary funds being secured from external sources, such as donor support or through strategic partnerships with NGOs, private sector companies, local authorities or national government agencies.

It is particularly important for the success of community-based activities that they are continued over the long term in order to build trust. These types of approaches are not quick fixes, and mutual learning in the early stages about how they work best in a particular context will mean that patience is required on both sides. Funding needs to be continued while this process plays out. For this reason one recommendation from the action plans is that resources not be spread too thinly, but targeted towards communities where the need for this approach is greatest, and the most difference can be made using this approach (particularly areas where wildlife crime is at high levels, and there is a will to engage).

1.5. Intervention design and project development

Where activities have been identified for expansion beyond their current level of implementation or that are not currently implemented, it will be necessary to develop implementation plans at a more detailed level than contained in this strategic document once funding has been secured. This is particularly the case for activities in which members of local communities are expected to participate, as it is important that the beneficiaries of such activities are given the opportunity for meaningful participation in all stages of intervention design, development and implementation.

2. Guiding Principles

The results of the research component of the IWT Challenge Fund project show that a significant number of households living in villages adjacent to QEPA are involved in some form of wildlife crime, with 42% of households estimated to have hunted for commercial purposes in 2015. It is clear from this result that efforts to tackle wildlife crime must focus on delivering long-term behaviour change. The following section details the guiding principles to delivering that behaviour change on which the WCPAP has been developed (Figure 2.1).

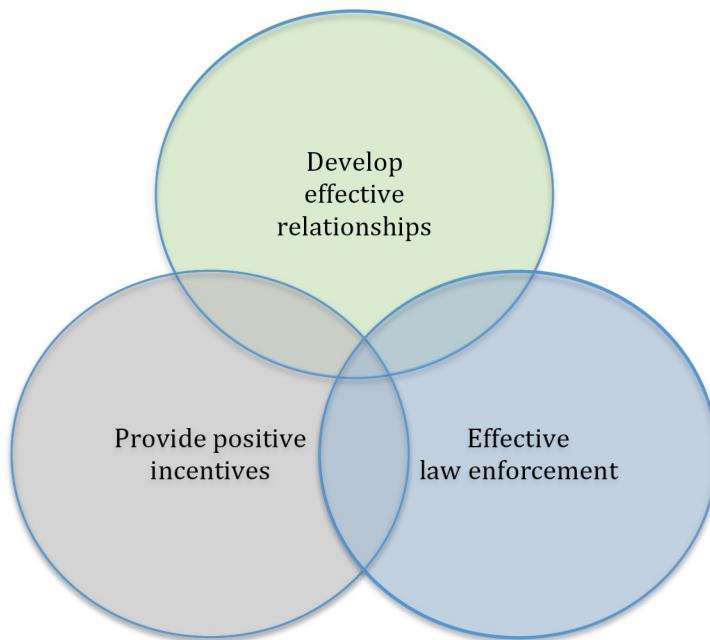


Figure 2.1: The three guiding principles on which the WCPAP has been based

2.1 Develop Effective, Long-term Relationships with Communities

A common lesson from successful conservation programmes that aim to effect sustainable behaviour change is the need to develop long-term working relationships with communities. In this way, it is possible to develop mutual trust and an understanding of shared goals, as well as resolve conflicts when they arise. Failure to commit to working long-term with target villages can result in ill feeling towards wildlife and conservation activities, which has been shown to drive further wildlife crime (see Section 3.3).

Resolving conflicts as part of maintaining and developing relationships with communities is a critical part of the WCPAP. Conflicts can arise when communities feel that they are not benefiting from the park or from activities implemented by UWA or conservation partners, when they experience costs through HWC, when individuals are sanctioned for wildlife crime or for failure to comply with the responsibilities associated with certain conservation activities in a way that is perceived as unfair or disproportionate, or when community members are killed or go missing in the park. Such conflicts can have a damaging impact on people-park relationships and where possible should be addressed as and when they arise.

The need to develop working relationships between communities and PA staff refers equally to law enforcement and community conservation wardens and rangers.

2.2 Provision of Positive Incentives

The reasons why people commit wildlife crimes are varied (see Section 3) but many individuals involved in wildlife crime justify their involvement because they are driven by necessity through a lack of viable or realistic alternatives or because they do not recognise the legitimacy of conservation and the associated restrictions on resource access. For others, committing wildlife crimes remains the easiest means of earning money.

As discussed below, law enforcement has a vital role to play in deterring potential offenders but the risks that law enforcement engenders are often insufficient to change people's decision making, particularly those driven to crime through necessity. The provision of positive incentives to encourage people to change their behaviour is therefore a crucial part of the WCPAP. Such incentives work best when they are directly linked to wildlife conservation (e.g. revenue sharing) and/or tied to compliance with pro-conservation agreements (e.g. MoUs linked to resource access). The benefits that people derive through the provision of such incentives may take different forms (e.g. resource access rights, performance payments, livelihood training, etc.) but should be set at a level that people collectively feel is appropriate and should be distributed equitably. If the benefits from such incentives are widely accepted, a gradual shift in social norms is expected, particularly when the provision of positive incentives is made collectively conditional on changed behaviour.

2.3 Effective and Fair Law Enforcement

Effective law enforcement underpins all efforts to tackle wildlife crime. Although behavioural and attitudinal change can be promoted through the provision of positive incentives, certain individuals may be unwilling to stop their involvement in wildlife crime. For these individuals, effective enforcement of the law may be the only means to alter behaviour. Ineffective law enforcement can have important knock-on effects on the behaviour of others, as it is difficult to promote behaviour change if rule breakers are consistently seen to go undetected or unpunished.

3. Underlying Drivers of Wildlife Crime

There are multiple underlying factors that push people towards becoming engaged in wildlife crime, ranging from basic subsistence needs to financial benefit, retaliation against perceived injustices or traditional cultural uses of wildlife (Figure 3.1). Hence, not all individuals involved in wildlife crime are motivated by the same set of reasons. This has important implications for the design of interventions aimed at combatting wildlife crime, as it suggests that different interventions or combinations of interventions may be required to target individuals with different sets of motivations.

The following section presents the main underlying drivers of wildlife crime in QEPA and the motivations of individuals engaged in wildlife crime in QEPA, in order to inform the activities set out in Sections 6, 7 and 8 to combat each of the priority offences identified in Section 4. Harrison et al. (2015) provide a detailed review of the evidence about the drivers and impacts of wildlife crime in Uganda, if more information is required; this is an output of the IWT Challenge Fund project.

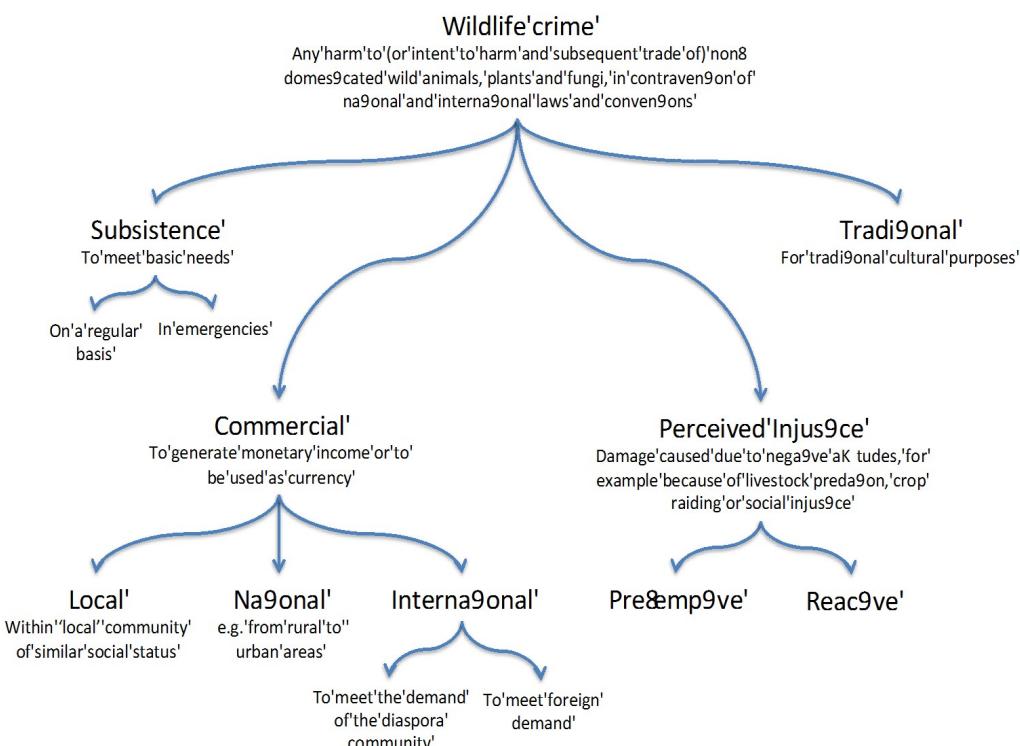


Figure 3.1: Primary drivers of wildlife crime in Ugandan protected areas (adapted from Harrison et al., 2015)

3.1 Subsistence

One of the commonly identified drivers of wildlife crime is the need to meet basic household subsistence requirements either as a means of providing the desired resource (e.g. bushmeat) or as a substitute for unavailable or expensive goods (e.g. grass thatch as a substitute for zinc roof sheets or medicinal plants as a substitute for medical care; Harrison et al., 2015). Some households may be dependent on the use of wildlife products as a means of meeting their subsistence needs throughout the

year, whereas for others the use of wildlife may be a coping strategy applied at times of seasonal need or crisis.

However, the extent to which wildlife offences are driven by subsistence needs varies between resources. For example, although firewood is illegally harvested for commercial charcoal production, it is most commonly collected for domestic subsistence use. Conversely, illegal hunting is predominantly carried out in QEPA by people wanting to earn money and any meat that is consumed in the home is largely regarded as a secondary benefit.

Where wildlife offences are driven by subsistence needs, activities to reduce wildlife crime will be most effective if implemented in conjunction with efforts to increase the supply of legal substitutes for consumed wildlife products. In the absence of legal alternatives, households engaged in wildlife crime are likely to feel that they have no alternative but to offend or fail to meet their basic needs.

3.2 Commercial

The opportunity to earn money is the most common motivation for people to become involved in wildlife crime in QEPA, yet the reasons behind this range from the need to earn money in order to meet basic needs, such as school fees, medical bills and agricultural inputs, through to the desire to enjoy a particular life style or make significant financial gain. This variation is reflected in the rate at which individuals offend and the impact that they have on wildlife, with those driven by basic needs likely to offend less frequently at times of need and have a lower off-take than those individuals motivated by the desire for financial gain.

The availability of alternative sources of income, at the times when needs are greatest can therefore have a significant effect on offence rates. The evidence from the IWT Challenge Fund project suggests that periods of increased wildlife crime incidence correspond with periods of fewer income earning opportunities. Where households are driven by the need to earn sufficient income to be able to afford basic goods or services, failure to increase the supply or improve the profitability of alternative income generating opportunities is likely to hinder efforts to reduce wildlife crime and, in conjunction with increased law enforcement, could have a disproportionate impact on poorer households.

However, the IWT Challenge Fund project has also shown that better off households are more likely to hunt than poorer households, with the evidence suggesting that this is likely to be due to hunting households becoming better off through their involvement in commercial hunting. Earnings from hunting were reported to be up to 1.5 million shillings per month, which is significantly higher than average earnings in rural areas (UBOS, 2014). This suggests that, unlike those that hunt at times of greatest need, households that hunt more regularly have been able to use hunting as a route out of poverty. It is unlikely that alternative sources of income can be identified to rival the earnings of hunters belonging to the highest earning tier.

3.3 Perceived Injustice

People's attitudes towards QEPA are closely associated with their likelihood of being involved in wildlife crime. For example, individuals that feel as though they are not benefiting from revenue sharing funds or who report suffering losses from wildlife are more likely to hunt illegally. Retaliation for crop raiding is also commonly cited by hunters as a reason why they hunt despite knowing that it is illegal to do so.

Currently, the general attitude of people living adjacent to QEPA is negative, with the majority of people reporting that they are disadvantaged as a result of living close to the conservation area (mostly as a result of crop raiding) and that they do not benefit from either tourism or revenue sharing. There is also anger at the perceived lack of response to HWC, particularly in areas affected by elephant crop raiding. This high level of dissatisfaction with the park is likely to be contributing to the high rate of wildlife crime found in communities living adjacent to the PA boundary.

Efforts to tackle wildlife crime, particularly those that rely on local goodwill, will need to overcome the largely negative perception of conservation and wildlife. Activities that reduce the costs of living close to wildlife and/or increase the benefits people gain directly from wildlife are best suited to improving people-park relations.

3.4 Traditional Use

Certain wildlife products have significant cultural value and are used in a variety of traditional rites or practices. Similarly, there are a variety of cultural beliefs surrounding the practice of hunting itself. While the cultural value placed on certain wildlife products creates an additional market that individuals involved in wildlife crime can access, the evidence from the IWT Challenge Fund research suggests that traditional use is, for the most part, a secondary driver of wildlife crime. As such, efforts to reduce demand for wildlife products used in traditional practices (e.g. sensitisation) are likely to have a limited impact in reducing overall offence rates.

4. Priority Offences

This section details the wildlife crimes that have been prioritised within the WCPAP for 2017 to 2022. These offences were selected on the basis that they have the greatest impact on wildlife within QEPA and the local communities living adjacent to the park.

4.1 Illegal Hunting with Firearms

Illegal hunting with firearms represents a serious threat to the long-term survival of species, such as elephants, which are highly valued in international illegal wildlife trade. While other species are also sometimes targeted by armed hunting, access to firearms is difficult and penalties for illegal possession severe, so they are predominantly used in the hunting of high value species. As a result, such species are under considerable pressure and are a priority for conservation throughout the region.

For the most part, Uganda has escaped the large-scale elephant poaching, carried out by organised criminal gangs, which is affecting other range states within the region (Chase et al., 2016). However, hunting with firearms is becoming an increasing problem in QEPA. The IWT Challenge Fund research findings suggest that elephant hunting in QEPA is predominantly carried out by individuals who live in villages close to the PA boundary but have connections to middlemen involved in international wildlife trafficking. As such, while it is important to target individuals higher up the value chain, interventions at the park level are critical to stemming the killing of elephants in QEPA.

Elephants are highly dangerous animals and killing them is not easy. Therefore, the dominant strategy employed for hunting elephants in QEPA is the use of illegally obtained firearms. Hunters report entering the PA at night when patrol numbers are at a minimum, shooting an animal at first light and exiting the parks within hours of entering. Tusks are removed quickly, providing very little risk of encountering ranger patrols. The nature of the relationships between hunters and middlemen is often ad hoc. On occasion hunters will be contacted in advance and will hunt to order. Alternatively they will decide to hunt without making a prior agreement with a middleman and then arrange the sale of any harvested tusks on their return. In either case, sale of the tusks is arranged quickly, providing little opportunity to arrest an elephant hunter with evidence of the offence or to recover the ivory.

4.2 Commercial Hunting and Trading of Bushmeat and Animal Products

Commercial hunting and trade of animals in QEPA largely comprises commercial bushmeat hunting, but this also provides hunters with the opportunity to target species, such as elephants and pangolins, that are valued for products other than their meat and are mostly traded internationally.

4.2.1 Commercial Hunting for High Value Animal Products

While elephants are mostly hunted using firearms (see Section 4.1), the difficulty most hunters have in obtaining firearms means that few hunters are able to employ this approach. Poison injected fruit and traditional traps designed to injure elephants are also used due to their lower barriers to entry but these approaches are reported to be significantly less effective than hunting with guns.

In Murchison Falls National Park, a significant minority of elephant deaths (estimated to be in the region of 20-40%; Travers et al., 2016) result from opportunistic killings.

In such instances, elephants were not the original target species but hunters encountered a situation in which an elephant was vulnerable (e.g. injured through being caught in a snare). This corresponds to the findings of a study of elephant deaths due to wire snares in Zambia (Becker et al., 2013) and suggests that, while interventions that specifically focus on individuals that deliberately target elephants may reduce elephant mortality, some deaths will continue through opportunistic killings unless snaring and other hunting methods aimed at catching bushmeat species can also be reduced. This is also likely to be the case in QEPA (although we didn't specifically investigate this in the research). When elephants are killed opportunistically there may be a longer window between the initial killing of the animal and the sale of the tusks while the hunter finds a buyer, often with a well-known local hunter acting as an intermediary.

Pangolins are another species that is caught opportunistically by hunters whose primary objective is to obtain bushmeat. Highly prized by some cultures for their scales, which are used in traditional medicine in Asia and Africa (Soewu & Ayodele, 2009; Challender et al., 2015), and for their meat, pangolin scales fetch high prices on illegal markets. However, little is known about their distribution and population density within QEPA. Hunters report that they are difficult to find and rarely encountered. As a result, they tend not to be deliberately targeted but are hunted only when the opportunity arises.

As with ivory, well-known hunters are contacted by middlemen with connections to international traffickers. Such middlemen place orders for quantities of scales. Hunters who catch a pangolin will also contact well-known hunters to arrange sales, meaning that these hunters are particularly important links in the sales chain. However, the sporadic nature of hunting opportunities for pangolin means that hunters have often forgotten any prior arrangement they have made and may not honour their original agreement. In the event that pangolins are caught by hunters without middlemen contacts, a locally well-known hunter will often broker a deal.

Other animal products that are commonly traded include porcupine spines, crocodile reproductive organs, hippo tusks, warthog tusks and buffalo horns.

4.2.2 Commercial Hunting and Trade of Bushmeat

Commercial hunting for bushmeat is the most common wildlife crime amongst households living in villages adjacent to the boundaries of QEPA. Over 40% of households are estimated to have hunted for commercial purposes at least once in 2015. The vast majority of hunters are men who became involved at a young age (15-20 years old), often through friends or family members who hunt. Instances where individuals become involved in hunting at a later age are largely caused by the loss of other sources of income, such as the failure of a business. This suggests that efforts to stop people becoming engaged in hunting in the first place are best focussed on young men.

There are a variety of strategies used by hunters including dogs, nets and traps. However, the most common approach is the use of wire snares. These are placed in feeding areas, near watering points or along game trails. Such traps are cheap and easy to produce (particularly wire snares) and difficult to detect by rangers, making them appealing to hunters. However, although effective at killing large numbers of animals, the use of such traps is highly inefficient and results in significant wastage when traps are not checked regularly or fatally wounded animals escape capture (Lindsey et al., 2013). Traps are also often used in combination with fire setting as this promotes regrowth to lure animals. Firearms are rarely used to hunt bushmeat

because access to guns is difficult and hunters are scared to be caught in possession of one.

There is strong seasonality to hunting effort with peaks during the dry season when there are few other income generating opportunities and close to seasonal celebrations, such as Christmas and Easter. Hunting during the dry season allows hunters to see rangers from further away, leave fewer tracks and concentrate effort in areas where animals congregate. There is, however, great variety in the times that hunters choose to enter the PA, the length of time they spend there and the distance with which they penetrate the park. Focussing hunting effort in areas close to PA boundaries limits the time spent travelling to check traps and carry back meat and risk of detection by patrols (Hofer et al., 2000), but carries a greater risk of traps being found by rangers as boundary areas tend to be more heavily patrolled.

The majority of meat brought back from QEPA is sold locally to satisfy significant demand for bushmeat in villages adjacent to the PA boundary. Meat is also sold in trading centres to small chop shops, which serve local and visiting customers and are largely run by women. Prices vary throughout the year depending on supply, but bushmeat is often cheaper and of better quality than domestically produced meat. As such, in many communities, there is a strong preference for bushmeat over meat from domestic livestock to the extent that people are known to try to disguise domestic meat as bushmeat. Bushmeat is also sold fresh or smoked to traders from urban centres, such as Kasese and Kampala, where it yields a higher price. Evidence from elsewhere suggests that demand in urban areas is driven by a complex mix of price, availability, culture, ethnicity and status (van Vliet and Mbazza, 2011). This suggests that even if efforts to increase the supply of alternative sources of animal protein reduce local demand, it may do little to affect demand from urban centres.

Evidence from elsewhere has shown that bushmeat is substitutable with and for other forms of domestic protein, such as beef, goat and chicken, and fish (Rentsch & Damon, 2013). This means that if the price of bushmeat increases, consumption of bushmeat would be expected to fall and the consumption of other protein sources to increase. Similarly, if the price of alternative protein sources increases, the consumption of bushmeat would be expected to increase. A decrease in the price of alternative protein sources would be expected to increase the consumption of those other protein sources and decrease the consumption of bushmeat. This suggests that efforts to reduce the consumption of bushmeat should focus on activities that aim to increase the price of bushmeat by limiting the supply (e.g. through improved law enforcement or through the provision of positive incentives) and/or decreasing the price of alternative sources of protein (e.g. game ranching or animal husbandry). However, it also suggests that attention should be paid to the availability of fish, an important source of protein in many areas around QEPA. If fish stocks fall in the Lake George or Lake Edward, for example through over-exploitation, this would be expected to increase the consumption of bushmeat and further drive illegal bushmeat hunting.

Another common finding from elsewhere is that bushmeat consumption, and the consumption of other protein sources, increases with rising household income (Wilkie et al., 2005; Brashares et al., 2011; Rentsch & Damon, 2013). This has important implications for activities that aim to reduce hunting through the provision of alternative livelihoods, as it suggests that, without appropriate controls on behaviour, bushmeat consumption could actually be increased by such activities, driving further increases in hunting.

4.3 Subsistence Hunting of Bushmeat

Although hunters often retain some portion of meat from their catch, home consumption is rarely the sole driver of hunting. Reference is commonly made to subsistence hunters but the term is confusing as it confounds individuals who hunt purely for home consumption and those who hunt to generate income to pay for basic subsistence items and services. In reality, there is little distinction between these two different types of hunters as both hunt to meet their basic needs.

In terms of the methods used, subsistence hunters do not differ significantly from those who hunt commercially, except with respect to the frequency they visit the park and the number of snares and traps they set. It is common for subsistence hunters to join friends or relatives who hunt more often.

From the perspective of law enforcement, it is very difficult to distinguish between those driven to hunt through need and those who hunt for commercial purposes. However, poorer households are disproportionately affected by law enforcement efforts as they are less likely to be involved in collusion with corrupt rangers and are more likely to serve prison sentences as they may lack the means to pay fines. In addition, increasing fines and custodial sentences may do little to change the behaviour of individuals who hunt to meet their basic subsistence needs because they may feel they have no alternative to hunting. As such, the provision of alternative livelihood options is more likely to be effective in changing the behaviour of subsistence rather than commercial hunters.

5. Current State of Wildlife Crime

In this section, the main areas inside and outside QEPA where wildlife crime rates are greatest are described. How the main drivers of wildlife crime vary spatially is also described. From this, priority areas to focus interventions are identified.

5.1 High Offence Occurrence Areas Within the Protected Area

Using data collected by rangers during patrols, Critchlow and colleagues have produced estimates for the probability of commercial and non-commercial illegal hunting occurring throughout QEPA (Critchlow et al., 2015). These estimates suggest that commercial hunting (defined as illegal hunting of elephant, buffalo or hippo) is restricted to smaller areas of QEPA than non-commercial hunting (defined here as illegal hunting for bushmeat or using snares), which occurs in more places throughout the park (Figure 5.1).

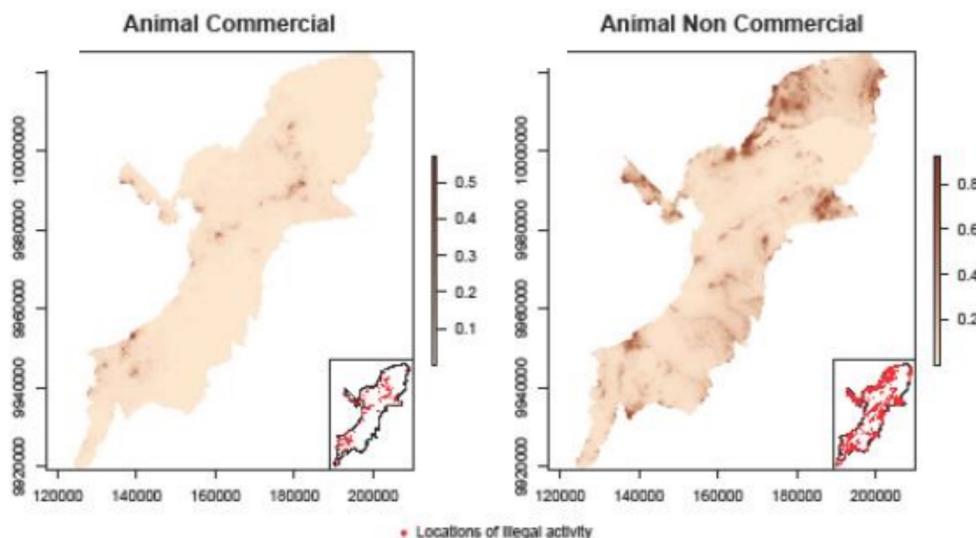


Figure 5.1: Occurrence probabilities of illegal activities in QEPA for commercial animal hunting and non-commercial animal hunting (from Critchlow et al., 2015).

5.2 Critical Sites Outside the Protected Area

The research undertaken as part of the IWT Challenge Fund project produced estimates at the sub-county level for the proportion of households involved in hunting for both subsistence and commercial purposes (Figure 5.2). This suggests that the proportion of households are involved in illegal hunting is relatively constant around the boundary, although the absolute number of hunters in each area will vary due to differences in population density.

5.3 Drivers of Priority Offences

5.3.1 Human Population

The area surrounding QEPA has several large towns and densely populated areas. Consequently, the human pressure on resources within the park is high. However, population density varies significantly around the park (Figure 5.3) such that this pressure also varies, with population density greatest in Kasese and Rubirizi districts.

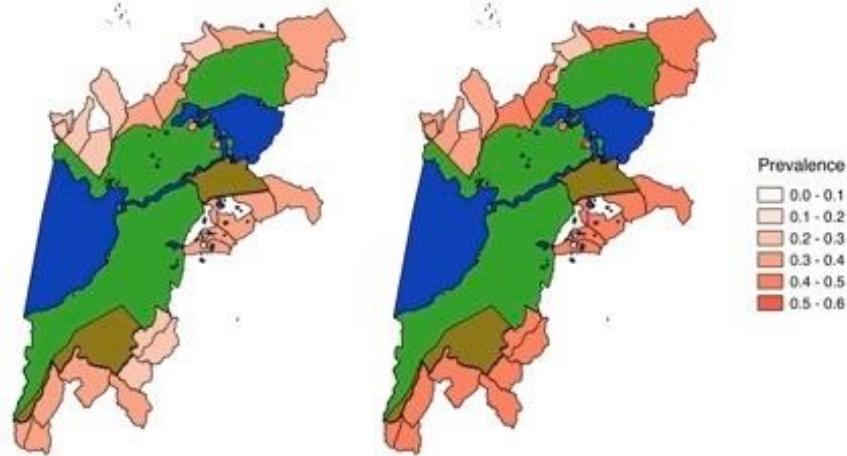


Figure 5.2: Proportion of households estimated to be involved in subsistence hunting (left) and commercial hunting (right) in villages within 3km of the park boundaries for areas neighbouring QEPA

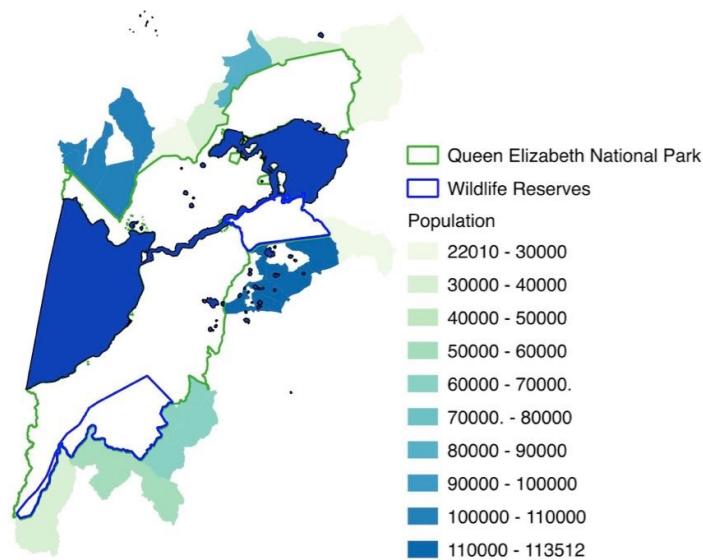


Figure 5.3: Population size of areas surrounding Queen Elizabeth Protected Area. Areas shown correspond to analysis areas for the IWTCF project

5.3.2 Household poverty

Although poverty is not the primary driver of wildlife crime in QEPA (see Section 3), some households are driven to hunting though need, either for food or to earn an income. Figure 5.4 shows the mean poverty scores of households living in villages within 3km of the park boundary for sub-counties bordering QEPA. This suggests that Mitooma and Kamwenge districts would be priority areas for actions aiming to reduce poverty in order to reduce the need to hunt for basic subsistence.

5.4 Priority Areas to Combat Illegal Hunting

As part of the development process for the WCPAP, a planning meeting was held in August 2016 at which priority areas for combatting wildlife crime were identified by relevant UWA staff and NGO partners. The objective of this exercise was to identify the parishes neighbouring the park that have the greatest impact on wildlife populations within QEPA. The results of this prioritisation exercise were then combined with the research findings from the IWT Challenge Fund project to select the priority areas that will become the focus of interventions planned to combat each of the priority offences under the WCPAP.

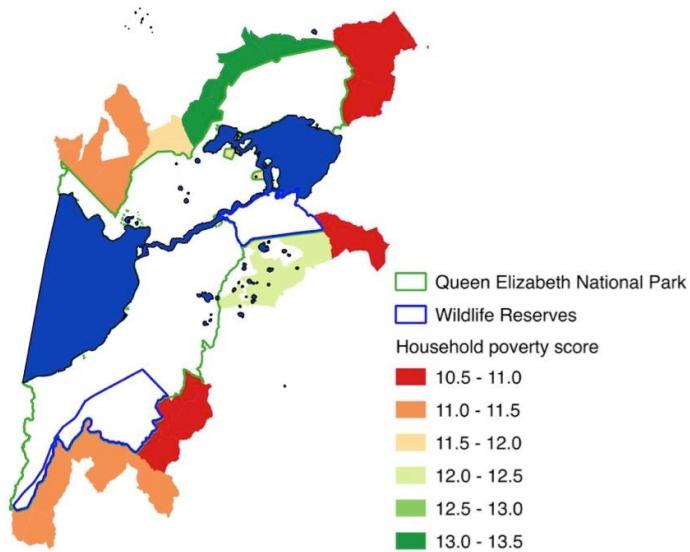


Figure 5.4: Mean household poverty scores as found by the IWTcf project in 2015 for villages within 3km of park boundary for each sub-county bordering QEPA. Lower scores indicate poorer areas. Areas shown correspond to analysis areas for the IWTcf project

5.4.1 Illegal Hunting Using Firearms

Two main areas were identified that are strongly associated with the use of firearms in hunting (Figure 5.5). These included an area in the southern region of the park bordering Ishasha Wildlife Reserve and an area in the northern region of the park in Kasese district.

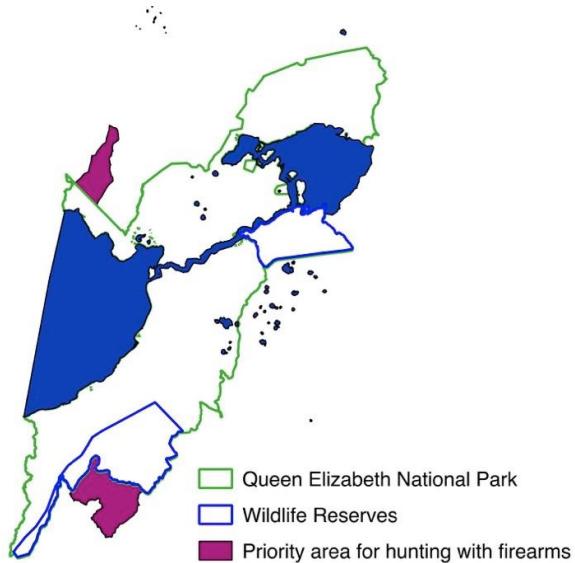


Figure 5.5: Areas identified as being strongly associated with the use of firearms for hunting

5.4.2 Illegal Bushmeat Hunting

Three sub-counties were identified as having the greatest impact on wildlife in QEPA through both commercial and subsistence hunting: Bwambara sub-county in Rukungiri district, Muhokya sub-county in Kasese district and Latoro and Ryeru sub-county in Rubirizi district (Figure 5.6). This shows a degree of overlap between the areas identified as being associated with the use firearms, with Bwambara sub-county featuring in both maps.

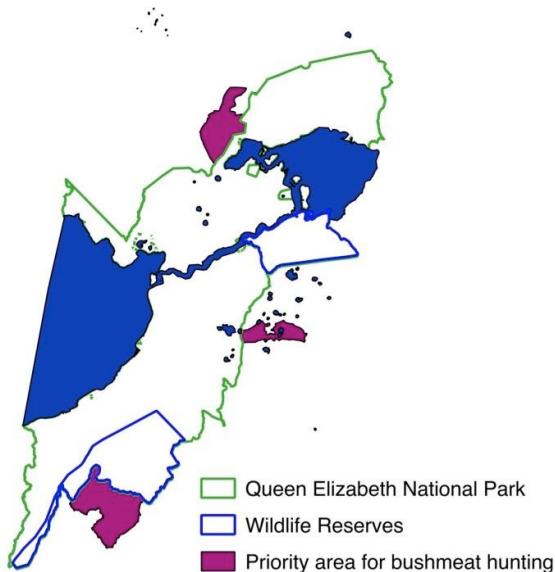


Figure 5.6: Areas identified as being strongly associated with commercial and subsistence bushmeat hunting

5.4.3 Priority Areas for Interventions to Combat Illegal Hunting

Given the high degree of overlap between the parishes identified as having the greatest impact on wildlife in QEPA through illegal hunting, interventions implemented in these areas will contribute to combatting all three offences prioritised under the WCPAP. This suggests that efforts focussed in Bwambara sub-county will have the greatest impact on wildlife crime. Interventions implemented in Nyakikumbu sub-county in Kasese district should have a greater focus on the interventions presented in Section 6 to combat hunting with firearms, while interventions in Muhokya and Ryeru sub-counties should have a greater focus on interventions identified in Section 7 and 8 to combat bushmeat hunting.

6. Illegal Hunting with Firearms

The following section sets out the priority actions that will be implemented under the WCPAP to combat the illegal hunting with firearms in QEPA. For each action we provide a summary table that includes a cost estimate – based on the GMP and AoP for 2016/17 – and a time frame for implementation (shaded cells in the boxes indicate when activities should be implemented).

6.1 Target Groups

6.1.1 Security Forces

For most illegal hunters, access to firearms is limited and poachers have been known to secure illegal guns from corrupt soldiers.

6.1.2 Traffickers

Middlemen and traders who travel to villages neighbouring QEPA are key players in the trade of high value species, such as elephants, and drive the use of firearms by supplying a ready market. They largely pose as bushmeat buyers to make initial contact with hunters. Targeting these individuals will disrupt the trade and increase the risk of arrest to hunters, as it will take them longer to find a buyer.

6.1.3 Community Members

While only a very small proportion of individuals are directly involved in the illegal hunting with firearms in QEPA, community members can be ‘the eyes and ears’ of law enforcement officials through the provision of information on hunters and traffickers.

6.2 Planned Activities

Law enforcement activities are the primary means by which armed hunting is addressed through the WCPAP, with support provided by community conservation activities aimed at encouraging the gathering of actionable intelligence.

6.2.1 Law Enforcement Patrols

Law enforcement patrols are the first line of defence against illegal hunting and the protection of wildlife in QEPA and serve two main purposes: to deter would-be hunters from entering QEPA and arrest any individuals that do so (Keane et al., 2008). Evidence from the Luangwa Valley, Zambia, has shown that increased resource allocation to law enforcement is associated with declines in elephant killing (Leader-Williams et al., 1990; Jachmann & Billiouw, 1997). However, in resource limited contexts, such as QEPA, it is important to balance investment in activities that focus on tackling wildlife crime directly and those that aim to reduce the incentive for individuals to offend in the first place (Cooney et al., 2016).

The covert and targeted nature of hunting with firearms means that law enforcement patrols have a very short window in which to catch perpetrators. For patrols to be effective, information is required on where, how, and by whom hunting is undertaken (Stokes, 2012). Patrols at QEPA are currently deployed in seven different zones. This allows rangers to cover a wider area and to concentrate on hotspots for illegal hunting but has significantly increased the costs associated with patrolling.

Analysis of data collected through law enforcement monitoring (LEM) can help identify those areas where there is the greatest risk of offences occurring. This can help increase the level of detection of offenders and, hence, increase both the rate of arrest and the level of deterrence created by patrols. Piloting of the use of LEM data to improve the effectiveness of patrols in Queen Elizabeth National Park increased the probability of detection in some cases by over 250% at no extra cost (Critchlow et al., 2016). Greater use of such methods at QEPA has the potential to result in similar improvements in patrol effectiveness and is under development by WCS.

Targeted law enforcement activities are also key in the control of firearms. Without access to firearms, elephant hunters are dependent on less effective methods, such as poisoning. Hunters report that access to firearms is one of the greatest determinants of their ability to hunt elephants. As such, it is also important to work with other security agencies to reduce the opportunity for corrupt officers to hire their firearms to hunters.

Table 6.1 Summary action table for law enforcement patrols. Costs are given in Ugandan shillings per year. + indicates activity supported by external funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Conduct law enforcement patrols	LEW	100m					
Expand use of LEM data to increase effectiveness of patrols	LEW / WCS	+					
Work with other security agencies to control firearms in priority areas	LEW	10m					

6.2.2 Community Informants

The GMP identifies the recruitment of informants within local communities and other key market hotspots as a priority management action to combat illegal hunting. Given the covert nature of armed hunting, the limited time hunters spend inside QEPA and the short period of time between the killing of an animal and the sale of any associated wildlife products, the gathering of actionable intelligence is critical to improving the chances of arresting an armed hunter with the evidence required to convict them. Not only can intelligence-based enforcement improve detection but it can also increase deterrence, as hunters know there is a greater chance of being arrested and successfully prosecuted.

For intelligence-based law enforcement to be an effective tool, it is necessary to have a network of informants who can provide on-the-ground information about illegal activities (Stokes, 2012). Verification of intelligence, a key step in the process, may require information from various sources rather than a single informant, making it desirable to have multiple informants positioned within each hotspot community. However, UWA has found the recruitment of informants difficult, particularly in hotspot areas for hunting. People are less likely to provide information about the activities of members of their own community (Wilkie & Painter, 2016), especially when their relationship with the PA is poor. Hence, improving people-park relations is a key step in developing an effective informant network for QEPA.

The IWT Challenge Fund project showed that people living adjacent to QEPA would be significantly more likely to provide information on illegal activities if they were benefiting from conservation interventions or effective actions are being taken to mitigate HWC (Archer, 2015). Greater investment in such activities is expected to greatly increase the rate of intelligence provision. Furthermore, individuals benefiting

from communal resource access agreements (see Section 8.2.3) and wildlife scouts (see Section 7.2.2) are required to provide information on illegal activities as part of their agreements with UWA. As the intelligence provided by these groups has so far not met expectations, further work is required to ensure that these groups understand and honour their responsibilities as part of their agreements.

Individuals who act as informers against members of their own community put themselves at risk of both physical reprisals and ostracism. UWA has a duty of care to protect those providing information and it is essential that informants' identities remain strictly confidential and that direct interaction with informants is kept to a minimum. The use of toll-free hotlines can be useful in this regard. In general, individuals are more likely to become informants if they have developed mutual trust with law enforcement rangers or there is a facility to provide information anonymously. It is also important that informants are provided with proper guidance on how to present themselves. In the past, informants have been keen to associate themselves with UWA and, in the process, have revealed their role to the wider community.

The provision of rewards in return for actionable intelligence is a common practice in law enforcement (Kash, 2002) and is often necessary to develop an effective informant network. In Thailand, WCS, in collaboration with Global Conservation, have implemented an anonymous informant rewards system that uses informants' mobile phones. Informants' phone numbers are scrambled to keep their identity anonymous and they receive rewards through their phone of \$200 for an arrest and \$1000 for a successful prosecution. The implementation of a similar system for QEPA, albeit with different rewards, has the potential to support intelligence gathering and improve the effectiveness of law enforcement activities.

Table 6.2: Summary action table for community informants. Costs are given in Ugandan shillings per year. + indicates activity supported by external funding; * indicates activity requiring additional funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Intelligence unit operation	LEW	40m					
Training in intelligence gathering	UCF	+ 5m					
Support for community conservation initiatives in priority areas	See Sections 7.2.2, 7.2.3, 8.2.4						
Provision of training to informants	LEW	5m					
Work with resource access groups and wildlife scouts to increase provision of intelligence	WCC	5m					
Feasibility study into introduction of mobile money based anonymous informant reward system	CAM	*					

6.2.3 Working with the Judiciary

The sentencing of individuals arrested for wildlife crimes is a key determinant of the ability of law enforcement activities to deter would-be offenders. As such, it is important that individuals prosecuted for serious armed wildlife crimes receive appropriate sentences. In the past, however, this process has been hindered by sentencing magistrates treating wildlife crimes as minor offences and handing down minimum sentences, such as community service, that fail to provide a deterrent to those involved. Logistical constraints have also led to poor record keeping, with the result that repeat and first time offenders often receive similar sentences. Working

with magistrates and police can help to improve the processing of offenders through the criminal justice system (Lindsey et al., 2013).

As part of the IWT Challenge Fund WCS has supported the development of a wildlife crime database in which the records of each offence and the personal details of each offender are stored. The use of this database will help to ensure that successfully prosecuted repeat offenders receive appropriate sentencing. It should, however, be noted that working to increase the severity of sentences is likely to be ineffective if the probability that offenders are arrested remains low (Leader-Williams & Milner-Gulland, 1993).

Table 6.3 Summary action table for working with the judiciary. Costs are given in Ugandan shillings per year.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Awareness raising of magistrates	LEW	5m					
Follow up court cases and participate in prosecutions	LEW	12m					
Maintenance of offenders database	LEW	-					

6.3 Measures of Success

This section identifies a set of key performance targets and indicators against which the success of the interventions proposed in Section 6.2 will be measured. Targets have been set for the 5 year period covered by the WCPAP alongside longer term goals so make clear how the planned interventions fit within a longer term strategy to combat illegal armed hunting (Table 6.4).

In this context, goals are defined as being the ultimate objectives that follow from planned impacts; impacts are the strategic-level objectives from planned interventions; performance targets give the desired direction of change of planned outcomes resulting from specific activities and performance indicators are the quantities identified to measure progress towards those targets.

Table 6.4: Performance targets and indicators for interventions identified to combat armed hunting. * indicates performance indicators dependent on additional funding being secured.

Goal: Increased populations of species targeted by armed hunting	
Impact: Reduced hunting and trade of species targeted by armed hunting	
Performance Targets	Performance Indicators
1.1 Increased effectiveness of law enforcement patrols	1.1.1 Distance patrolled in priority areas 1.1.2 Armed hunters arrested per unit effort 1.1.3 Proportion of illegally killed elephants
1.2 Increased effectiveness of intelligence network	1.2.1 # of registered informants in priority villages 1.2.2 proportion of arrests/prosecutions resulting from community intelligence 1.2.3 # of firearms secured resulting from community intelligence 1.2.4 Completed feasibility assessment of anonymous informant reward system*
1.3 Increased sentencing of armed wildlife crimes	1.3.1 Average sentences for firearms offences 1.3.2 Average sentences for ivory offences 1.3.3 Average sentences of repeat offenders

6.4 Conceptual Model of Planned Interventions

This section presents a conceptual model (Figure 6.1) that has been developed to show how the interventions planned to combat armed hunting (Section 6.2) are expected to achieve their performance targets for the 5 year period covered by the WCPAP and beyond (Section 6.3).

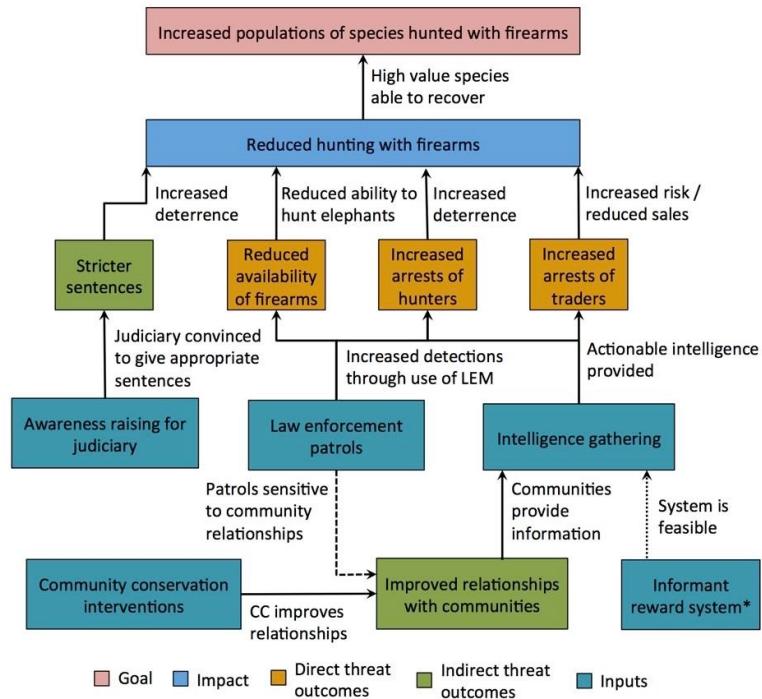


Figure 6.1: Conceptual model showing how planned interventions are expected to achieve performance targets.

7. Commercial Bushmeat Hunting

The following section sets out the priority actions that will be implemented under the WCPAP to combat commercial bushmeat hunting and trade in QEPA. For each action we provide a summary table that includes a cost estimate – based on the GMP and AoP for 2016/17 – and a time frame for implementation (shaded cells in the boxes indicate when activities should be implemented).

7.1 Target Groups

7.1.1 Commercial Hunters

Commercial hunters represent the biggest threat to wildlife in QEPA. The predominant use of indiscriminate methods, such as snaring and trapping, results in significant losses to endangered non-target species (e.g. lions, chimpanzees), wastage through injuries and spoilage. Commercial hunting is widespread, with a high off-take volume to satisfy demand for bushmeat at both a local and national level. There is, however, a balance to be struck with regards to how commercial bushmeat hunters are targeted directly through law enforcement or included in community conservation activities; both activities are required so that the immediate gains from law enforcement can be consolidated into long-term behavioural change via community conservation.

7.1.2 Bushmeat Traders

Although the majority of meat harvested from QEPA is thought to be sold and consumed locally, the wider trade in bushmeat to urban centres and the sale of bushmeat in small chop shops also accounts for a significant volume. The bulk of meat entering the wider domestic bushmeat market does so in trading centres located along the park boundary and is sold to bushmeat traders looking to supply demand from markets and restaurants in urban areas.

7.1.3 Young Men

Commercial bushmeat hunting is almost entirely carried out by men (Lindsey et al., 2011), the majority of whom become involved in hunting at a young age. Breaking the cycle of recruitment of the next generation of hunters will be vital for the long-term success of UWA's effort to combat illegal hunting.

7.1.4 Poor Households

Poor households are disproportionately impacted by law enforcement but in many instances are driven to illegal hunting through need or lack of available alternatives. Efforts to combat commercial bushmeat hunting and trade must ensure that vulnerable households are not adversely impacted.

7.2 Planned Activities

In order to combat commercial bushmeat hunting and trade, a balance is required between interventions that aim to increase the direct costs experienced by commercial hunters, such as law enforcement patrols, and those that seek to address the underlying drivers of hunting, such as efforts to mitigate the impact of HWC or ensure that communities adjacent to QEPA directly benefit from wildlife. The

approach set out in the WCPAP is to focus law enforcement activities on the detection and prosecution of offenders coupled with community conservation activities aimed at building effective working relationships with communities in hotspot areas. The emphasis of community conservation interventions will be to work with all community members, rather than focussing efforts specifically on households involved in commercial bushmeat hunting or trade, in order to develop mutual trust between community members and UWA. In this way, the aim will be to achieve a broad change in attitudes towards QEPA, further community support for conservation and reduce dependence on commercial hunting of bushmeat.

7.2.1 Law Enforcement Patrols and Intelligence Gathering

As with efforts to counter armed hunting, law enforcement patrols are a vital line of defence against commercial bushmeat hunting. Between 2004 and 2013 an average of 252 arrests were made per year in QEPA (UWA, unpublished data). However, the scale of the problem represents a major challenge for law enforcement efforts. The IWT Challenge Fund research shows that 42% of households living in villages within 3km of the boundary of QEPA had been involved in hunting for sale at some point in the year preceding the research. This suggests that only a small proportion of the individuals involved in commercial hunting end up being arrested. This was backed up by the findings from interviews with known hunters in Murchison Fall National Park, which found that approximately only 1 in 500-1000 incursions into the park by illegal hunters result in arrest.

These research findings have significant implications for law enforcement activities in QEPA, as they suggest that the deterrent effect currently created by patrolling is limited; a conclusion supported by the interviews with illegal hunters who widely reported that they were not concerned about encountering patrols while hunting. It also has implications for efforts to increase the sentences handed down to convicted offenders (e.g. through the new Wildlife Act), as these are only likely to be effective if the probability of hunters being arrested is increased. There is strong evidence from a range of different types of crime that people are much more sensitive to increased probability of capture than they are to increased penalties once caught. It is, however, likely that law enforcement patrols continue to have some deterrent effect or else a higher proportion of households would be expected to be involved in commercial hunting. As with hunting and trade in high value species, the effectiveness of patrols can be improved through the use of LEM data (Stokes, 2010). This will serve to increase not only the number of hunters being arrested, but also the number of snares detected and removed from the park, resulting in lower mortality of wildlife.

An effective network of community informants is also an important part of efforts to combat commercial hunting. However, informants are less likely to provide information about the involvement of other community members in commercial bushmeat hunting than they are in the hunting and trade of higher value species, as they are likely to be more sympathetic of their reasons for doing so. Consequently, emphasis will be placed on the use of informants to identify individuals involved in the wider distribution of bushmeat to urban centres. This will have the result of disrupting the trade and limiting the opportunities for hunters to find buyers for the meat they harvest.

Despite the importance of law enforcement efforts in combatting the commercial trade in bushmeat, it is also important to recognise the potential for enforcement activities to undermine the relationships between communities living adjacent to QEPA and those responsible for its management. Individuals arrested inside the boundaries of QEPA frequently report excessive use of violence, including beatings

and, in some cases, torture. Similarly, UWA is commonly suspected of involvement in the disappearance of community members inside the park. Such complaints, whether justified or not, are widely believed and can have serious, long-term effects on efforts to build trust with communities. It is also felt by local people that when complaints are raised, they are not taken seriously by QEPA management. It is therefore essential that such matters are addressed as they arise. Greater coordination between law enforcement and community conservation units is also required at the operational level to minimise the potential for conflicts to arise. As such, quarterly law enforcement meetings will include coordination between law enforcement and community conservation units.

Table 7.1: Summary action table for law enforcement activities. Costs are given in Ugandan shillings per year.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Conduct law enforcement patrols in priority areas	See Section 6.2.1						
Expand use of LEM data to increase effectiveness of patrols	See Section 6.2.1						
Gather intelligence on commercial bushmeat traders	See Section 6.2.2						
Support for community conservation initiatives in priority areas	See Sections 7.2.2, 7.2.3, 8.2.4						
Quarterly coordination meetings between law enforcement and community conservation units	LEW / WCC	-					
Compassionate support to bereaved or injured community members	WCC	5m					

7.2.2 Human Wildlife Conflict Mitigation and Wildlife Scouts

Human wildlife conflict (HWC) is one of the primary drivers of wildlife crime, with the IWT Challenge Fund research finding that households that suffered from livestock predation were 26% more likely to hunt commercially than those that did not. HWC is also the most commonly given reason for local people's negative attitude towards QEPA, particularly in those areas affected by elephant crop raiding. This is compounded by the commonly held perception that incidences of HWC are not responded to or taken seriously by QEPA management. As such, any effort to develop stronger working relationships between UWA and communities living adjacent to QEPA must set out to reduce the costs that local people experience through HWC and ensure that incidences of HWC are responded to.

In order to protect communities from crop-raiding, UWA has installed 74km of trenches, the maintenance of which provides employment opportunities for members of local communities. In addition, UWA has installed 8 chain link fences in Kakari, Kichwamba, Kirugu, Rumuri, Kataara and Katerera and 2km of bee hives in Rubirizi district (see Section 7.2.3). Scare shooting is also carried out by staff deployed at problem animal control posts or permanent ranger posts. These are manned by both rangers and the Uganda People's Defence Force.

A further means to mitigate HWC is through the implementation of wildlife scout programmes, in which local community volunteers are tasked with responding to incidences of HWC, and have already been initiated at Bwindi, Kidepo and Murchison Falls National Parks. The aim of these programmes is twofold: to reduce the incidences of HWC and to improve relationships with local communities by ensuring that incidences of HWC are responded to. All scouts receive training and basic equipment to assist them in their duties but one of the major challenges facing

the programme is how to maintain the participation of the volunteers. Consequently, wildlife scouts at other parks have been provided with additional support and training in chilli farming. Participating scouts are linked with buyers and given seeds and training in cultivation methods. This provides the scouts with a source of income and the raw materials required for chilli based elephant deterrents.

As part of the IWT Challenge Fund project, a review of best practice for wildlife scouts has been undertaken, with lessons learned from other national parks in Uganda and other countries in the region where wildlife scouts or similar schemes have been implemented. The review covers all operational aspects of the wildlife scout programme and makes a series of recommendations for how wildlife scout programmes in Uganda can be improved. Of chief importance are the issues of recruitment and maintaining the motivation of wildlife scouts to participate in the programme (Mwedde et al., 2017). Recommendations are also made for how to maximise the benefits that the programme can bring to improving the relationship with communities involved in the scheme.

The recruitment process for the wildlife scouts programme is critical to its success. One of the recommendations stemming from the best practice review is that participants should be selected through a transparent process that is independent of local leaders in order to avoid suspicions of corruption or nepotism. Focussing recruitment at young men will bring additional benefits as it will provide them with a way of occupying their time, help them to access new sources of income and reduce the chances of them becoming involved in hunting.

As wildlife scouts are not employed by UWA and do not receive salaries, it is important that they benefit from their participation in the scheme through other means. Without this, it is expected that participation in the programme will quickly decline after volunteers' initial enthusiasm recedes. The chilli enterprise schemes, and other such schemes discussed further in Section 7.2.3, are seen as a good way to maintain participation, whilst providing secondary benefits for the programme in the way of raw materials for deterring wildlife. Similarly, village savings groups, which enable members to build up capital and invest in enterprises through small loans can be linked to wildlife scouts as an incentive for participation in the programme. Such support is proposed for wildlife scout groups working with UCF in Rubirizi district.

However, the chief benefit of the wildlife scout programme is not to the wildlife scouts but to the wider community in terms of fewer incidences of HWC, as well as lower impact and greater level of response when incidences occur. In the past, one of the main issues affecting the response to incidences has been the tendency of individuals to exaggerate their claims of damage caused by wildlife. These claims may be widely believed by other community members who do not see the scale of the damage actually caused for themselves. This serves to greatly amplify communities' perception of the impact of HWC and also hampers efforts to understand the scale of the issue. It is recommended that the duties of wildlife scouts be extended to include the assessment and documentation of damage caused by wildlife. The wildlife scouts supported by UCF will be equipped with smartphone devices to enable them to monitor incidences of HWC. In this way, it will be easier to track the scale of HWC in affected villages and, although the Wildlife Act does not currently provide for compensation to be given to affected households, responding to individual incidences of HWC will serve as an important demonstration that the issue is being taken seriously by UWA.

Table 7.2 Summary action table for HWC mitigation activities. Costs are given in Ugandan shillings per year. + indicates activity supported by external funding. * indicates activity in need of additional funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Initiate wildlife scout programme in priority areas	AWCC	15m*					
Implement recommendations of wildlife scout best practice review	AWCC	*					
Support for wildlife scouts in Kyambura sub-county	UCF	+					
Support for wildlife friendly enterprise initiatives	See Section 7.2.3						
Maintenance and expansion of HWC mitigation infrastructure	AWCC	65m					
Scare shooting and ranger response to HWC	AWCC	10m					

7.2.3 Wildlife-Friendly Enterprise Schemes

Wildlife-friendly enterprise schemes aim to provide direct benefits to local communities from the conservation of wildlife in return for pro-conservation behaviour. The creation of alternative income streams is intended to reduce reliance on the income gained through involvement in commercial bushmeat hunting and trade. When well designed, enterprise schemes can also bring many secondary benefits, such as promoting the institutional development of communities (Clements et al., 2010), providing facilities for micro-lending, producing the raw materials for wildlife deterrence or reducing vulnerability to crop-raiding, improving community attitudes towards conservation and reducing reliance on bushmeat as a source of protein (see Section 8.2.4).

Livelihood-based interventions may fail if:

- the link between income generating opportunities and conservation is weak
- there is no market for the goods produced
- the livelihood activities promoted become additional to rather than substitute for illegal activities as a result of no or weak ‘conditionality’ (i.e. compliance with commitments to pro-conservation behaviour is not monitored or enforced)
- participant households and individuals recruited to the interventions are not the ones involved in illegal activities
- the activities promoted do not substitute the benefits gained through bushmeat hunting (e.g. quick profits, social status; van Vliet, 2011)
- the seasonal labour requirements of promoted activities do not match peak hunting periods
- gender specific roles are not accounted for.

Such failings can be avoided with care but it is important to note that livelihood-based interventions may require time and substantial levels of on-going external investment (both of time, capacity and funding) to achieve a positive impact

Activities will focus on the production of chilli and honey, both of which are already supported in different areas of QEPA, and UCF support for home gardens, in which participating households produce fresh vegetables to supply the needs of tourist lodges. In the first instance, the emphasis of these interventions will be on demonstrating the benefits of participation, developing community acceptance of activities, creating market linkages and building the capacity of the institutions necessary for long-term success. In the longer term, increasing emphasis will need to be placed on demonstrating the sustainability of the enterprises created, diversification of products (e.g. agro-forestry, non-palatable crops) and building towards stricter compliance structures as acceptance and capacity increases.

The products identified for initial development (chilli, honey) have the advantage that they are directly linked to activities that reduce the costs associated with wildlife (e.g. HWC mitigation). In the future, this linkage can be strengthened by marketing processed wildlife friendly products (e.g. chilli sauce or honey) for sale in tourist lodges, urban centres or international markets. In the case of the UCF-supported home garden project, the produce is already directly linked to wildlife-based tourism. UWA has already signed 11 resource use agreements (see Section 8.2.3) with beekeeping groups in communities neighbouring QEPA, with a further 10 in the process of signing.

Initially, recruitment will not explicitly focus on specific groups, with the exception of wildlife scouts (as a means of sustaining their motivation to participate in the programme; see Section 7.2.3). The purpose of this is to increase the broader acceptance and support of the activities, rather than to specifically target those households engaged in commercial bushmeat hunting. This approach also has the advantage that it avoids creating perverse incentives, whereby households not engaged in commercial hunting or trade may be encouraged to start doing so in order to meet participation criteria. However, the knowledge generated by the IWT Challenge Fund about hotspots for commercial hunting (Section 5.2) and about the demographic profiles of commercial hunters can help in targeting particular areas and groups for initial support. The UCF-supported home gardens intervention aims to recruit at least 60% women.

It is important to note that the aim of the wildlife friendly enterprise interventions is to develop alternative income streams to reduce reliance on commercial hunting or trade of bushmeat and, alongside other activities, to raise overall household well-being. In addition, as a major driver of hunting is the need to obtain money to meet particular costs (e.g. medical bills), micro-lending facilities can be offered by community enterprise groups to enable members to cope with unexpected costs without depending on hunting. Similarly, as community enterprise groups will be registered as community based organisations (CBOs), they will be able to submit proposals for projects to be funded by revenue sharing. An additional benefit will be to increase the incomes of participating households. While this result is to be welcomed, in the absence of efforts to increase the supply of alternative sources of protein (see Section 8.2.4), it may also be associated with rising bushmeat consumption as households can afford to buy more meat. Hence, efforts to tackle consumption will be essential for ensuring the long-term success of interventions targeting a reduction in commercial bushmeat hunting and trade. Participation in these schemes should be conditional on giving up bushmeat hunting and consumption, and this conditionality should be monitored and enforced (see Section 10.1.2).

Table 7.3 Summary action table for wildlife friendly enterprise activities. Costs are given in Ugandan shillings per year. + indicates activity supported by external funding; * indicates activity in need of additional funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Implement chilli and honey based wildlife friendly enterprise initiatives	WCC	10m *					
Support development of community food gardens at pilot site in Kyambura sub-county	UCF	+					
Capacity building for community enterprise groups	WCC	*					
Identify opportunities for diversifying products	WCC	*					
Implement stricter monitoring and compliance structures	WCC	*					

7.2.4 Reformed Hunter Associations

In some areas, UWA's efforts to sensitise local communities have led to hunters surrendering to QEPA management, handing over of equipment and denouncing other illegal activities. In these cases, ex-hunters are formed into groups (Table 7.4) and receive support for developing alternative sources of income other than hunting. There is need, therefore, to empower and equip the groups with skills to engage in income generating activities. This may require external support in terms of training and expertise.

Table 7.4: Summary of reformed hunting associations in communities neighbouring QEPA.

No.	Group name	No. of ex Hunters	Parish	District
1	Harukungu anti-poaching group	22	Harukungu	Kasese
2	Mundongo anti-poaching group	28	Mundongo	Kasese
3	Nyamirangara anti-poaching	30	Kirembe	Kasese
4	Rwandaro anti-poaching	13	Rumuli	Rubirizi
5	Irimya anti-poaching group	20	Kicuzi	Ibanda
6	Rumuri anti-poaching group	35	Rumuri	Rubirizi
7	Kichwamba anti-poaching group	30	Kichwamba	Rubirizi
8	Muhokya anti-poaching group	50	Muhokya	Kasese
9	Kyondo anti-poaching group	35	Karusandara	Kasese
10	Kidodo anti-poaching group	80	Railway ward	Kasese

These groups have the advantage that incentives are targetted directly at individuals known to be involved in wildlife crime and can therefore be expected to have a greater impact on behaviour. However, there are potential issues surrounding perverse incentives (see Section 10.1.3) and there are concerns that the system is open to abuse. To avoid such issues, reformed hunters should be encouraged to participate in alternative wildlife friendly enterprises (see Section 7.2.3)

Table 7.5 Summary action table for activities in support of reformed hunter groups.
Costs are given in Ugandan shillings per year. * indicates activity in need of additional funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Support reformed hunter associations	WCC	*					

7.3 Measures of Success

This section identifies a set of key performance targets and indicators against which the success of the interventions proposed in Section 7.2 will be measured. Targets have been set for the 5 year period covered by the WCPAP alongside longer term goals so make clear how the planned interventions fit within a longer term strategy to combat illegal hunting and trading of high value species (Table 7.6).

Table 7.6: Performance targets and indicators for interventions identified to combat illegal commercial hunting and trade of bushmeat. * indicates performance indicators dependent on additional funding being secured.

Goal: Increased populations of species targeted in the commercial hunting and trade of bushmeat	
Impact: Reduced hunting and trade of bushmeat species	
Performance Targets	Performance Indicators
2.1 Increased effectiveness of law enforcement activities	2.1.1 Distance patrolled in priority areas 2.1.2 # of snares removed from QEPA per unit effort 2.1.3 Proportion of traders arrested/prosecuted as a result of intelligence provided by community informants
2.2 Reduced impact of HWC on local livelihoods and well-being	2.2.1 # of HWC incidences measured by wildlife scouts 2.2.2 Estimated damage caused due to HWC incidences measured by wildlife scouts 2.2.3 Perception of impact of living adjacent to QEPA in priority areas 2.2.4 Chilli yield used in wildlife deterrence 2.2.5 Length of boundary covered by bee hives
2.3 Reduced dependence on income from commercial bushmeat hunting	2.3.1 # of households engaged in wildlife friendly enterprises 2.3.2 Household income from wildlife friendly enterprises 2.3.3 Income and yields from farming in areas of high HWC 2.3.4 # of reformed hunters engaged in wildlife friendly enterprises*

7.4 Theory of Change/Conceptual Model

This section presents a conceptual model (Figure 7.1) that has been developed to show how the interventions planned to combat illegal hunting and trade in high value wildlife (Section 7.2) are expected to achieve their performance targets for the five-year period covered by the WCPAP and beyond (Section 7.3).

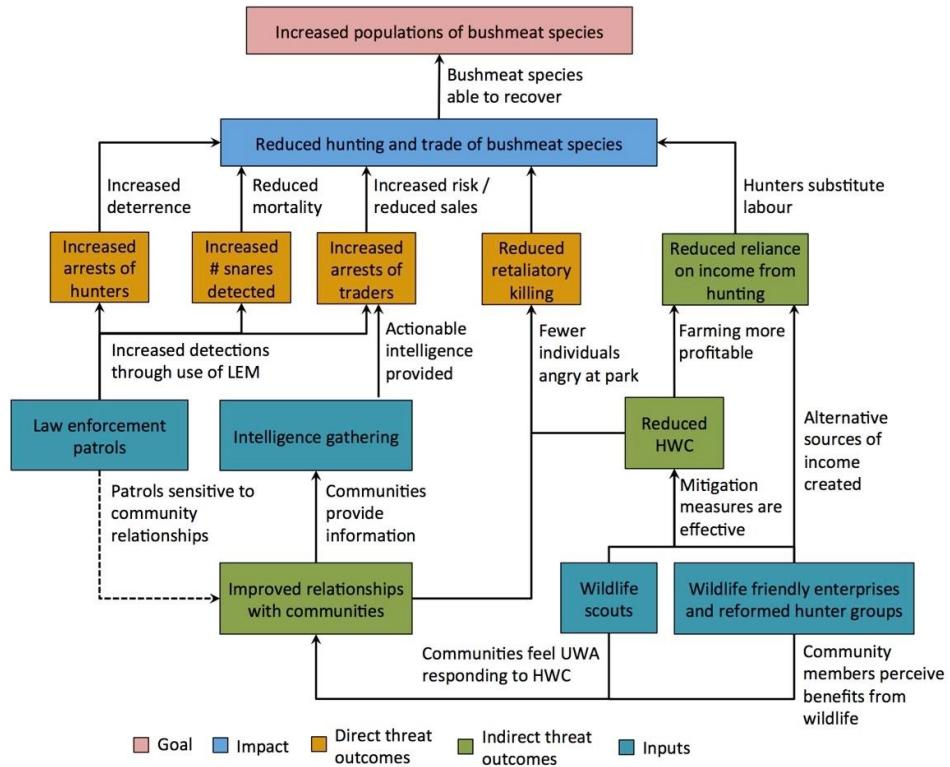


Figure 7.1: Conceptual model showing how planned interventions to combat commercial bushmeat hunting and trade are expected to achieve performance targets.

8. Subsistence Bushmeat Hunting

The following section sets out the priority actions that will be implemented under the WCPAP to combat subsistence bushmeat hunting in QEPA. For each action we provide a summary table that includes a cost estimate – based on the GMP and AoP for 2016/17 – and a time frame for implementation (shaded cells in the boxes indicate when activities should be implemented).

8.1 Target Groups

8.1.1 Food Insecure, Poor and Otherwise Vulnerable Households

Households that are food insecure, poor or otherwise vulnerable, particularly those that have little access to alternative sources of protein, are most likely to engage in the hunting of bushmeat purely for consumption in the home. They are also the most vulnerable to reductions in the supply of bushmeat.

8.1.2 Children

Although children play little part in hunting, except in times of extreme need, many will grow up to become the next generation of hunters or bushmeat consumers. As such, the attitudes of children to wildlife are an important determinant of conservation outcomes in the future.

8.2 Planned Activities

Subsistence hunting is predominantly driven by need. Consequently, efforts to tackle subsistence hunting will be most effective if directed at reducing household consumption of bushmeat, rather than punishing individuals involved in hunting. Attempting to address subsistence hunting through law enforcement measures is likely to disproportionately impact poor and otherwise vulnerable households and undermine efforts to improve relationships with local communities. Where households are driven by need, reduced access to bushmeat without increased availability of alternative sources of protein will impact household food security and nutrition, which can result in stunting of children and have serious impacts on long-term productivity. As such, activities identified in this section focus on reducing household consumption of bushmeat and ensuring the supply of alternative sources of protein.

8.2.1 Inland Water Law Enforcement Patrols

One of the primary sources of animal protein in communities adjacent to QEPA is fish harvested from the Lakes Edward and George and the Kazinga Channel. Evidence from several studies show that fish is strongly substitutable with bushmeat (Rentsch & Damon, 2013), suggesting that a decline in fish stocks is likely to result in a significant increase in demand for bushmeat. Given that fish productivity in Lake Edward and George and the Kazinga Channel is reportedly declining as a result of over-fishing, use of illegal gear and illegal fishing in park waters and breeding grounds (UNEP, 1999; Observer, 2014), it is to be expected that the demand for bushmeat will increase in response. As such, it is important to work with district fisheries officers to protect inland fish resources.

Table 8.1 Summary action table for Inland water patrols. Costs are given in Ugandan shillings per year. * indicates activity in need of additional funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Work with district fisheries officers to protect fish stocks	LEW/DFO	*					

8.2.2 Community Outreach

In part, the consumption of bushmeat is driven by preference and attitudes towards wildlife. Wild animals are primarily perceived as a source of meat or as a threat to people or livelihoods. QEPA is similarly perceived negatively. As such, UWA undertakes a series of community outreach activities, including awareness raising meetings, radio talk shows and a school conservation education programme, in which local schools run wildlife clubs associated with the Wildlife Club of Uganda. The aim of these activities is to increase community awareness of the value of conservation and wildlife and to complement the activities described in Section 8 to improve community perceptions of QEPA.

Table 8.2 Summary action table for community outreach activities. Costs are given in Ugandan shillings per year.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Community awareness raising meetings	WCC	5m					
Radio talk shows	WCC	5m					
School conservation education programme	WCC	5m					

8.2.3 Resource Access Agreements

Resource access agreements are made with local communities under the 2000 Uganda Wildlife Act regulations governing the granting of wildlife use rights. The purpose of these agreements is to allow local communities to access resources, such as fish, grasses and firewood, from within the park and to permit the use of QEPA land to house beehives. This allows local communities that sign memorandums of understanding (MoUs) with UWA to benefit directly from the park and to help meet their basic needs for building materials, fuel, protein and income. As discussed in Section 6.2.2, members of resource user groups benefiting from resource access MoUs are required to provide information on illegal activities and self-monitor compliance with the terms of the MoU, leaving the system open to abuse.

Currently, only three MoU have been signed allowing a resource user group to fish inside the park. Such agreements, provided that fish stocks can be harvested sustainably, can reduce reliance on bushmeat through the provision of a substitutable alternative source of protein.

Table 8.3 Summary action table for resource access agreements. Costs are given in Ugandan shillings per year.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Work with resource access groups to increase provision of intelligence		See Section 6.2.2					
Prioritise expansion of resource access agreements to include fishing	WCC	3m					

8.2.4 Animal Husbandry and Wildlife Ranching

The production of alternative sources of animal protein will be important to avoid threatening the food security of local communities, particularly as efforts to reduce commercial bushmeat hunting and trade will reduce the supply of bushmeat in villages adjacent to QEPA. This reduction in the availability of bushmeat is expected to result in an increase in price, making the production of alternative sources of protein, such as poultry, goat and beef, more profitable by increasing the demand for domestic meat. This in turn may serve to provide additional incentives for livestock husbandry. It may also increase the viability of wildlife ranching outside QEPA to partially compensate for the reduced supply of bushmeat from inside the park.

In the event of increasing bushmeat prices, support for livestock raising for the production of meat (as opposed to storing capital), including training on husbandry techniques, intensification of production, disease management and book keeping, can provide the impetus for the creation of new small businesses in communities adjacent to QEPA. Increasing the supply of domestic meat, which is substitutable for bushmeat on price, will reduce demand for bushmeat among poorer households, who largely select animal protein on the basis of price rather than preference.

Under the 2000 Uganda Wildlife Act, individuals, communities or lead agencies may apply for wildlife user rights. Class A wildlife user rights allow for sport hunting on private or community land, Class C rights allow for wildlife ranching and Class D rights allow for trade in wildlife and wildlife products. In priority areas, where bushmeat hunting is currently high, wildlife ranching offers the potential to replace some of the meat harvested from inside QEPA, while sport hunting and the sale of wildlife products, such as buffalo horn, have the potential to create additional revenue streams. Where demand for bushmeat is partly driven by the preference for bushmeat of higher-income households, the production of legal game meat can serve to reduce illegal hunting. There are, however, many practical barriers to wildlife ranching, especially at the community level, including high initial costs, elite capture, restrictions on the trade of meat and other animal products, variable supply of meat, laundering of illegally caught bushmeat and financial viability concerns (Lyndsey et al., 2013). As such, it will be necessary to undertake a thorough feasibility assessment – potentially in partnership with an NGO with experience of facilitating community based natural resource management start up projects.

Although reductions in bushmeat hunting are not guaranteed by increasing the supply of alternative protein sources, the primary purpose of this intervention is to complement the activities set out in Section 7 by reducing demand and providing a safety net for those adversely affected by efforts to reduce the supply of bushmeat through other means as they transition towards reduced consumption of wild meat.

Table 8.4 Summary action table for animal husbandry and wildlife ranching activities. Costs are given in Ugandan shillings per year. * indicates activities requiring support from external funding.

Activity	Owner	Cost	Y1	Y2	Y3	Y4	Y5
Support for small livestock enterprises	WCC	*					
Feasibility study into the creation of community wildlife ranching and sport hunting	WCC	*					

8.3 Measures of Success

This section identifies a set of key performance targets and indicators against which the success of the interventions proposed in Section 8.2 will be measured. Targets have been set for the 5 year period covered by the WCPAP alongside longer term goals so make clear how the planned interventions fit within a longer term strategy to combat illegal hunting and trading of high value species (Table 8.5).

Table 8.5: Performance targets and indicators for interventions identified to combat subsistence bushmeat hunting. * indicates performance indicators dependent on additional funding being secured.

Goal: Increased populations of species targetted by subsistence bushmeat hunting	
Impact: Reduced subsistence hunting of bushmeat species	
Performance Targets	Performance Indicators
3.1 Increased awareness of benefits of conservation	3.1.1 Perceptions of benefits of conservation among children in priority areas 3.1.2 Perceptions of benefits of conservation among adults in priority areas
3.2 Reduced dependence on bushmeat in priority areas	3.2.1 # of resource users permitted to fish within QEPA 3.2.2 Price of key bushmeat species per kilo 3.2.3 Price of domestic meat per kilo
3.3 Increased food security in priority areas	3.3.1 # of arrests/prosecutions for illegal fishing* 3.3.2 # of individuals trained in livestock rearing* 3.3.3 Yield of domestic meat produced by trained farmers* 3.3.4 Feasibility study of wildlife ranching completed*

8.4 Theory of Change/Conceptual Model

Figure 8.1 presents a conceptual model that has been developed to show how the interventions planned to combat subsistence bushmeat hunting (Section 8.2) are expected to achieve their performance targets for the 5 year period covered by the WCPAP and beyond (Section 8.3).

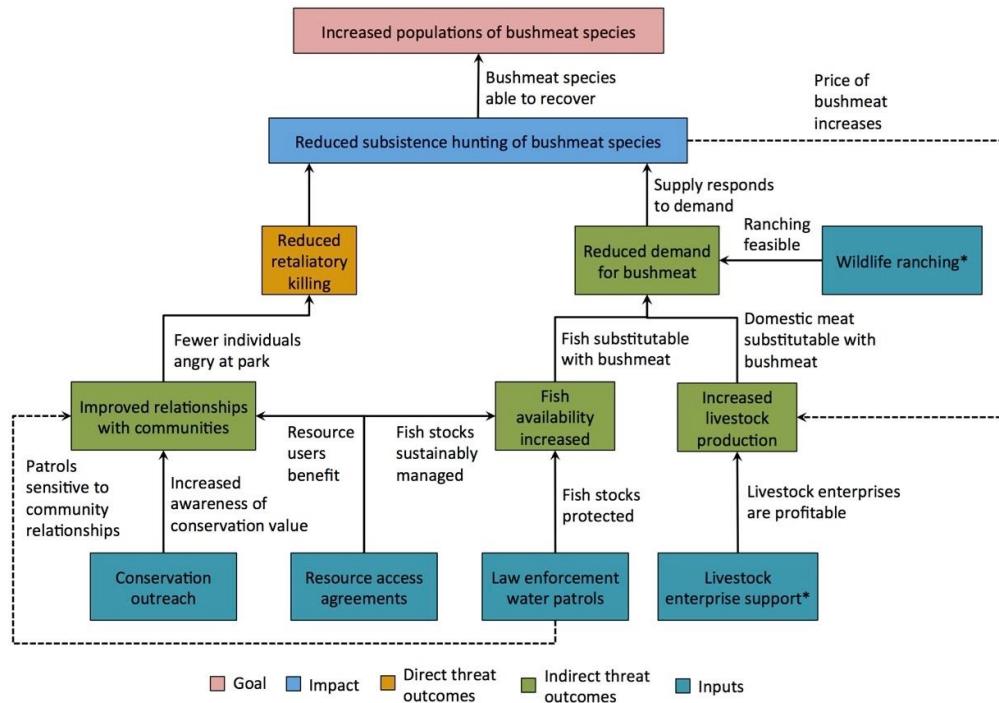


Figure 8.1: Conceptual model showing how planned interventions to combat subsistence bushmeat hunting are expected to achieve performance targets.

9. Intervention Linkages

The following section presents some of the main linkages between the interventions planned for different priority offences, highlighting opportunities for synergies between activities.

9.1 Community Conservation Increases Effectiveness of Intelligence Network

Community conservation and law enforcement efforts are often treated separately, yet both can work synergistically to tackle wildlife crime in QEPA. An example of one of the ways this can work is the role that community conservation activities can play in increasing the provision of actionable intelligence, which can lead to the arrest and prosecution of individuals involved in illegal hunting and trade of wildlife (see Sections 6.2.2 and 6.4). In this way community conservation activities strengthen law enforcement efforts, making them more effective and helping them to create a stronger deterrent for illegal activities.

9.2 Law Enforcement Affects Effectiveness of Community Conservation

Just as community conservation can strengthen law enforcement within QEPA, law enforcement efforts also form an important component of community conservation activities. While some degree of self-monitoring of compliance with community rules governing participation in activities such as wildlife friendly enterprises is desirable, the deterrent effect produced by the presence of possible legal sanctions will influence decision-making, creating both a push and pull effect for avoiding involvement in wildlife crime.

However, although law enforcement activities can work with community conservation to help drive pro-conservation behaviour, they can also work against it. The perceptions of local people towards the park are strongly affected by incidents connected with law enforcement. This is particularly true if members of a community are believed to have been injured or killed by rangers, but may also be caused by the attitude displayed by rangers to local people more generally. The use of appropriate force in performance of duties is expected of law enforcement rangers but it is important that rangers are aware of the implications of their actions and that they treat local people fairly and respectfully.

9.3 Wildlife Friendly Enterprises Linked to Human Wildlife Conflict Mitigation

While both wildlife friendly enterprises and human wildlife conflict mitigation help to reduce household dependence on income derived from wildlife crime, the direct outcomes of the two activities are also linked. By including wildlife scouts, or members of their household, in wildlife friendly enterprises, scouts are provided with both support and raw materials for their actions. Similarly, enterprises linked to beekeeping, or the production of non-palatable crops, reduce the risk of crop raiding.

9.4 Supply and Demand of Bushmeat and Alternative Protein Sources

The supply and demand of bushmeat and alternative sources of protein are intricately linked, with bushmeat and other forms of protein substitutable for each other. This means that as the supply of bushmeat is reduced through interventions planned within the WCPAP, demand for alternative sources of protein is expected to increase. This in turn is expected to make the production of livestock, game and sustainably managed fish more profitable, further reducing dependence on bushmeat.

10. Enabling Conditions and Implementation Barriers

In this section, the primary enabling conditions and barriers to the successful implementation of the interventions presented in Section 6, 7 and 8 are described and appropriate measures to mitigate implementation barriers identified.

10.1 Availability of Funds

The availability of funds remains one of the biggest constraints on UWA's operational capacity for the management of QEPA, particularly with regards to community conservation activities. In the past, this lack of funds has meant the discontinuation of activities aimed at reducing wildlife crime, such as reformed poacher associations, that were either seen as cost ineffective or did not have the available funds to support them. This is particularly so when tourist revenues in any individual year are lower than expected and annual budgets have to be revised down. Such budgetary adjustments typically fall hardest on community conservation activities, which can have long-term consequences in terms of undermining community trust and reducing the effectiveness of activities. In addition, while UWA recognises the contribution of external donor support and collaboration with NGOs to its efforts to combat wildlife crime, such support is not always targeted at the areas of greatest need.

One of the primary objectives of the WCPAP is to set out priority activities for reducing wildlife crime, so that resources can be focussed where they will have the greatest effect, and identify opportunities for greater synergies between activities in order to maximise their effectiveness. As such, although budgetary adjustments may still be necessary, the role and relative importance of different activities in combatting wildlife crime at QEPA is clear.

The WCPAP has also identified areas that, while not currently funded internally, would increase UWA's capacity to combat wildlife crime at QEPA, either through support of existing activities or the creation of new initiatives, and may be suitable for external support or greater internal support should funds be made available. The intention here is to demonstrate how individual activities fit within a wider plan to tackle wildlife crime and to clearly identify priority areas suitable for collaboration with NGOs seeking to partner with UWA. It is strongly recommended that such collaborations are actively pursued to support the activities identified in the WCPAP.

10.2 Cultural Mind Sets and Community Engagement

One of the greatest challenges to the success of the interventions planned under the WCPAP is the current relationship between QEPA management and communities, particularly in priority areas. The state of this relationship stems mostly from the poor perception of QEPA held by local people but is also caused by the suspicion with which local people are viewed by some members of UWA staff. For the planned interventions to have the greatest impact, it will be important to bridge the current gap between local communities and the park. Many of the interventions included in the WCPAP are directly aimed at doing this and present a roadmap for how this relationship can be improved but it will also require a change in mind set to believe that conservation partners and local people can work together towards common goals.

How compliance is handled is particularly important. The long-term effectiveness of the community conservation interventions planned within the WCPAP relies on developing compliance structures, including self-monitoring, community agreed and enforced sanctions and rewards, transparent reporting and conflict resolution procedures. Yet such structures take time to be developed and, perhaps more

importantly, accepted. Over-zealous enforcement of compliance at an early stage may jeopardise acceptance, particularly if the benefits of participation are not felt immediately.

10.3 Perverse Incentives

The provision of positive incentives to change behaviour is one of the three guiding principles on which the WCPAP is based. However, it is important to avoid the creation of perverse incentives that may encourage behaviour that threatens the long-term success of the WCPAP. The primary challenge in this regard is ensuring that households not currently engaged in wildlife crime are not incentivised to become involved in crime on the basis that this will increase their chances of participation in one of the planned community conservation interventions, an effect that can emerge both within communities and between communities.

At the local level, if incentives are directed at households engaged in wildlife crime there is a risk that this may encourage law-abiding households to become involved in wildlife crime specifically to become eligible for external support, or cause resentment at the perceived unfairness. Such an effect would threaten to undermine the objectives of the WCPAP by encouraging more households to engage in wildlife crime rather than fewer. Consequently, the initial approach taken under the WCPAP will be to allow all community members to participate in each of the interventions planned. Where participation is constrained either through limited resources or for practical reasons (e.g. wildlife scouts), recruitment will be targeted at priority groups but not whether or not a household is engaged in wildlife crime. As such, the focus of this approach will be in increasing the wider acceptance and support for QEPA within each community and addressing the underlying drivers of wildlife crime on the basis that this will reduce support for wildlife crime over time.

Beyond the priority communities identified in the WCPAP, there is a risk that households from neighbouring communities or further afield may be incentivised to migrate to villages receiving support. Such a honeypot effect has been found to exist for PAs around the world (Wittemyer et al., 2008) and can be a problem for interventions that seek to provide incentives for pro-conservation behaviour (Ferraro & Kramer, 1997). In these cases it is important to set clear eligibility rules for participation in an activity (Balmford & Whitten, 2003). There is also a low risk that members of neighbouring communities decide to increase their involvement in wildlife crime such that their village is included in an intervention. Although the risk that this occurs is considered low, it will be necessary to qualitatively monitor behaviour in neighbouring villages and to expand support where appropriate (e.g. successful wildlife friendly enterprises may be suitable for expansion to other villages given sufficient demand).

10.4 Political Will

Political will represents a potentially critical obstacle for the long-term successful implementation of the WCPAP. In the past, local politicians have undermined public opinion of QEPA and promised to allow access to park resources as a means of securing votes. The effects of such interference can be difficult to undo. Consequently, the support of local leaders for the interventions planned under the WCPAP is essential. As such, coordination meetings will be held at all levels of local administration in priority areas to ensure that local leaders understand the proposed interventions and the benefits that they will bring to communities. It is also expected that once these benefits have been demonstrated to local communities, there will be less backing for politicians that threaten the continuation of support.

11. Partnerships

Many of the drivers identified in Section 3 are consequences of wider societal issues that may require a broad coalition of stakeholders to address. In such cases it will be necessary to form partnerships with other organisations or stakeholders. This section details the partnerships that will be vital for the long-term success of the WCPAP.

11.1 District Fisheries Officers

Under the WCPAP, UWA will work with district fisheries officers to protect fish stocks in the Lakes George and Edward and the Kazinga Channel from over-fishing and illegal fishing practices.

11.2 Local Authorities

Efforts to combat wildlife crime under the WCPAP will be coordinated with local authorities through annual workshops (see Section 10.1.4).

11.3 NGOs

The Wildlife Conservation Society is a long-term supporting partner of UWA, providing technical and financial assistance to wildlife monitoring and law enforcement in QEPA. Under the WCPAP, WCS will support the maintenance of the wildlife crime offenders database and the development of new approaches to improving patrol effectiveness through the analysis of LEM data.

The Uganda Conservation Foundation is national NGO working to support conservation in Uganda. Through a separate IWT Challenge Fund project, UCF are working with UWA to develop community enterprises and support 50 wildlife scouts in Kyambura sub-county and to provide training in intelligence gathering and investigation skills.

Natural Resource Conservation Network (NRCN) is the implementing organisation of the NGO, Eco Activists for Governance and Law Enforcement (EAGLE) of professionals who are involved in the investigation, prosecution and reporting of wildlife crime in Uganda.

11.4 Local Institutions

The involvement of local religious leaders, cultural institutions and women and youth groups in activities proposed under the WCPAP may be advantageous in ensuring the local acceptance of activities and providing access to key target groups, such as young men.

Support from local Wildlife Committees, which are provided for in the Wildlife Act, may also serve to strengthen relationships with local communities.

12. Capacity Gaps

This section identifies some of the principal capacity gaps that may hinder the successful implementation of the WCPAP and provides measures to address them.

12.1 Training

One of areas currently impeding UWA's capacity to address wildlife crime is the challenge of ensuring that the training needs of staff responsible for implementing interventions, particularly community conservation wardens and rangers, are met. The development of a training programme for community conservation staff has been identified as a priority activity by the Community Conservation Directorate. Such a training programme would seek to address key skills gaps – particularly intervention planning, coordination with law enforcement, conflict resolution, gender sensitisation, monitoring and reporting. It is also important that law enforcement staff receive training in how to respectfully interact with local communities. All staff responsible for implementing the WCPAP will receive appropriate training as identified by the wardens in charge of law enforcement and community conservation.

12.2 Logistical Support

In addition to ensuring that staff with responsibilities for implementing the WCPAP have received the appropriate training, it will also be necessary to ensure that they have adequate logistical support. Wardens in charge of law enforcement and community conservation will conduct a review of logistical support needs to ensure that the interventions planned under the WCPAP can be conducted.

12.3 Expertise

Regardless of training, there will be some expertise required for the successful implementation of some of the proposed interventions that is not be contained within UWA or partner organisations. All plans for specific interventions identified under the WCPAP will include a skills assessment to identify any external expertise requirements.

13. Review Process

Progress towards the performance targets identified in Sections 6.3, 7.3 and 8.3 will be assessed using the stated performance indicators on an annual basis. In most instances, these indicators have been selected so that they provide information regarding progress towards intervention outcomes or threats and are simple to monitor without placing a significant burden on implementing staff. Where baseline datasets do not currently exist, indicators will need to be measured before interventions are initiated. A number of different monitoring approaches will be required to measure progress towards performance targets. These are described below.

After performance of the WCPAP has been assessed at the end of the five year cycle, the WCPAP will be revised to cover the period 2021-2026. This process will include the re-evaluation of priorities and the redesign of interventions where required.

13.1 Law Enforcement Monitoring

As described in Sections 6.2.1 and 7.2.1 monitoring of law enforcement patrols using SMART enables more effective patrol routes to be determined and will provide information relating to performance indicators 1.1.1, 1.1.2, 1.1.3, 1.2.2, 1.2.3, 2.1.1, 2.1.2, 2.1.3 and 3.3.1.

In addition to SMART, the tracking of offenders through the justice system will be continued using the wildlife crime offenders database and will provide information relating to performance indicators 1.2.2, 1.3.1, 1.3.2, 1.3.3, 2.1.3 and 3.3.1.

13.2 Wildlife Scouts

In the course of their duties, wildlife scouts will record information relating to the number of human wildlife conflict incidences reported to them, as well as the severity of these events. This will provide information relating to performance indicators 2.2.1 and 2.2.2.

13.3 Enterprise Accounting

Accounting processes of the community resource groups responsible for managing wildlife friendly enterprises and resource assess agreements will provide information on the scope and profitability of each enterprise and will cover performance indicators 2.2.4, 2.2.5, 2.3.1, 2.3.2, 2.3.4, 3.3.1, 3.3.2 and 3.3.3.

13.4 Household Surveys

Household surveys in villages in priority areas will provide information on community perceptions of QEPA and basic socio-economic data. This will cover performance indicators 2.2.3, 2.3.3, 3.1.1 and 3.1.2.

13.5 Market Surveys

Monthly market surveys of animal protein sources will allow UWA to track the effect of interventions aimed at reducing the supply of bushmeat and increasing the supply of alternative sources of animal protein. As the collection of this data will be difficult for rangers, these surveys will be undertaken by wildlife scouts to ensure that the data collected is an accurate reflection of market prices. Market surveys will provide information on performance indicators 3.2.2 and 3.2.3.

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