



REPUBLIC OF KENYA

**MINISTRY OF TOURISM  
AND WILDLIFE**

# **TASK FORCE ON HUMAN-WILDLIFE**

**CONFLICT COMPENSATION SCHEMES**

# **Final Report**

**July 2020**

This is a report for the Government of Kenya.

The production of this report was supported by the Government of Kenya with technical input from the members of Task Force on Human-Wildlife Conflict Compensation Schemes.

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# PREFACE

Conflicts between people and wildlife currently rank amongst the main threats to conservation in Africa, because wildlife survival needs often overlap with those of human populations. In Kenya, with a significant proportion of wildlife occurring outside Protected Areas, one of the critical challenges to conservation is how to enhance and sustain coexistence between people and wild animals. Therefore, managing Human-Wildlife Conflicts (HWC) in Kenya involves a multi-pronged approach.

The Taskforce on HWC Compensation Scheme was appointed by the Cabinet Secretary for Tourism and Wildlife on 14th June 2019. The Terms of Reference for the Task Force included to collate, collect and compile relevant data and information on existing HWC compensation schemes as well as developing an implementation strategy with clear recommendations on the most suitable schemes for the Government to adopt to enhance human-wildlife co-existence. The Taskforce worked around eight (8) Terms of Reference key among them being to explore and recommend a broad range of ideas on enabling co-existence between people and wildlife particularly in free range wildlife areas, and to prepare a report with clear recommendations on practical methods to mitigate HWC and the best suitable scheme(s) with a full 5-year financial plan.

The team adopted a methodology that comprised of literature review and desktop analysis, focused group discussions with technical experts and key opinion leaders, field visits, and consultative meetings with stakeholders representing communities, elected representatives, Ministries and Agencies, Council of Governors, Non-state actors, and the private sector. During the field visits, community leaders were engaged in Taita Taveta, Kitui, Makueni, Kajiado, Narok, Laikipia, Isiolo, Nyeri, Meru, Tharaka-Nithi, and Garissa Counties.

The field interactions revealed that communities want a faster and efficient compensation payment that is timely and not delayed. The further want faster response to reported incidences especially human injuries for the victims to be taken to hospital to safe life; and human death for the immediate families to be consoled; while they expressed the need to ensure adequate and effective mitigation measures are put in place to prevent the conflicts from occurring; and that the list of animals causing problems/conflicts is not exhaustive on the WCMA, 2013 Third Schedule. Within the areas with high wildlife numbers, there are small-scale HWC consolation schemes that are implemented by non-state actors in some conservancies and group ranches across the country.

The Taskforce recommends the establishment of a HWC Insurance Scheme to manage risks and administer liabilities on four categories of HWC (human death and injury, property damage, crop destruction, and livestock predation). The personal bodily injury and human death from wildlife as per the schedule is provided based on the Continental Scale of Benefits and a proposed maximum of KES 3,000,000 for human death.

I wish to thank all the community representatives in key wildlife ecosystems, and other stakeholders including the elected representatives for creating time to interact with the taskforce; I sincerely thank the entire Taskforce members for their efforts, dedication and time invested to ensure we deliver on the terms of reference and present this report. The team of technical experts from the private sector showed unparalleled commitments and dedication, to make this report a reality, and I thank them all.

Lastly, I would like to appreciate the leadership and teamwork provided by the Cabinet Secretary for Tourism and Wildlife, Hon. Najib Balala, EGH, towards enhancement of the conservation and management of Kenya's wildlife for its resilience and posterity. This report is the product of such leadership, and ensures that efforts to guarantee continued wellbeing of the wildlife estate in Kenya are not eroded.



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# LIST OF ACRONYMS

Acronyms	Full Name
<b>AAL</b>	Annual Aggregate Limit
<b>CVO</b>	Community Verification Officer
<b>CVR</b>	Community Verification Officer's Report
<b>HWC</b>	Human Wildlife Conflict
<b>HWSRS</b>	Human Wildlife Self Reliance scheme
<b>KWS</b>	Kenya Wildlife Service
<b>MNC</b>	Mara North Conservancy
<b>MWCT</b>	Maasai Wilderness Conservation Trust
<b>MMWCA</b>	Maasai Mara Wildlife Conservancies Association
<b>PTD</b>	Permanent Total Disability
<b>P&amp;S</b>	Pain and suffering
<b>SLA</b>	Service Level Agreement
<b>TOR</b>	Terms of Reference
<b>TLU</b>	Tropical Livestock Unit
<b>WCMA</b>	Wildlife Conservation and Management Act
<b>WIBA</b>	Work Injury Benefits Act

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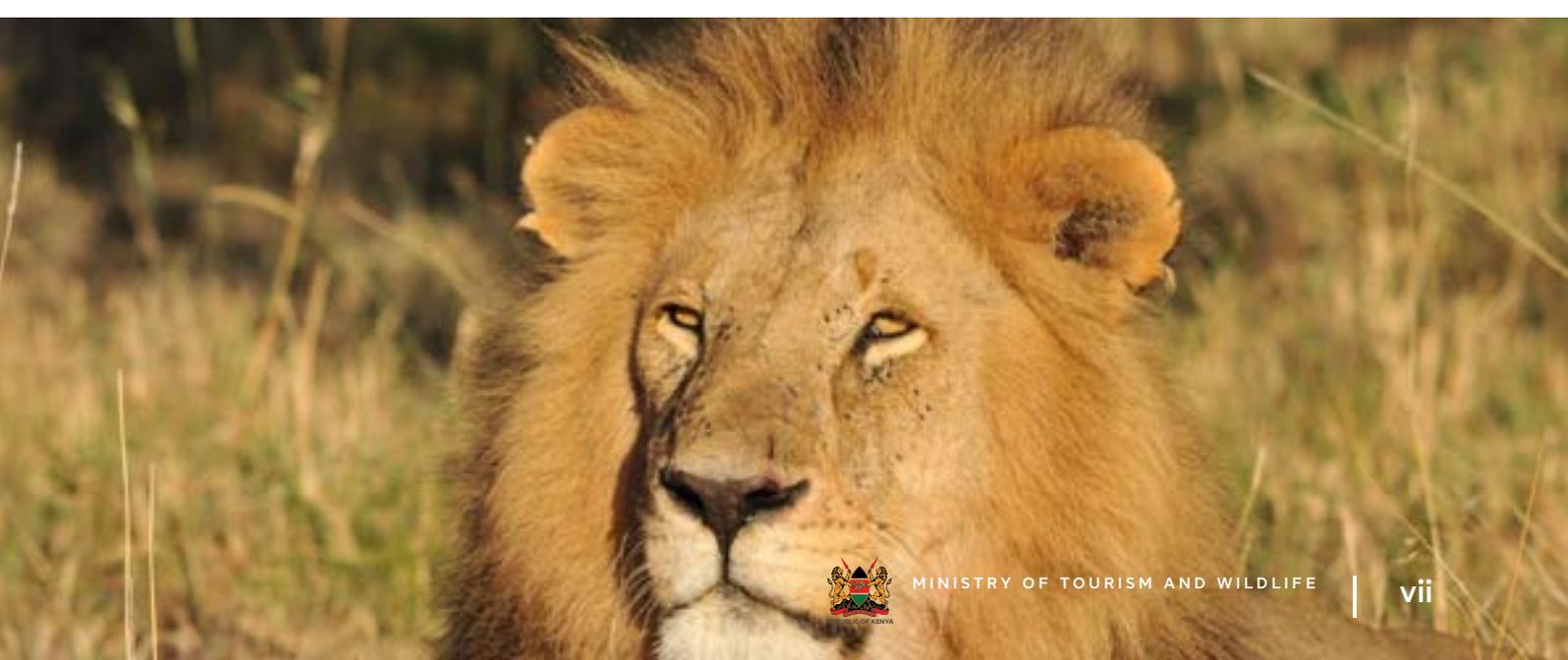
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# EXECUTIVE SUMMARY

The taskforce on human-wildlife conflict compensation scheme was appointed by the Cabinet Secretary for Tourism and Wildlife on 14th June 2019. The Task Force was appointed to collate, collect and compile relevant data and information on existing human-wildlife conflict compensation schemes and to develop an implementation strategy with clear recommendations on the most suitable schemes for the Government to adopt to enhance human-wildlife co-existence. We present the outcome of the work undertaken by the Taskforce with suggestions on human-wildlife mitigations, proposed insurance scheme, governance, financing, implementation, policy guidelines and recommended amendments to the current Wildlife Conservation and Management Act, 2013 to align it with the task force report.

Data on human-wildlife conflicts and compensation for losses incurred because of human-wildlife conflicts (HWC) were acquired from the Kenya Wildlife Service (KWS). The data was summarized to provide details on HWC and compensation for human death, human injury, property destruction, livestock predation/depredation and crop damage. A comprehensive literature review on matters involving HWC in Kenyan and around the world was undertaken to inform the task force members on the best practices. Field visits and discussions with key opinion leaders in Kenya's major conservation regions including Tsavo Conservation Area (TCA), Amboseli Ecosystem, Maasai Mara Ecosystem, Samburu-Laikipia Ecosystem, and Meru Conservation Area were undertaken. Further, we held meetings to discuss specific issues on HWC, compensation for losses caused by HWC and HWC mitigation measures. Standard methods were then used to analyze the data, develop specific reports and to design the now proposed HWC insurance scheme product, price the product and develop a claim administration process. We further present the key findings of the task force as well as task force conclusions and recommendations.

Compensation for HWC is practiced in different countries like Botswana and Namibia where government compensation and insurance schemes exist; China (Government Insurance Scheme), India and Pakistan (Private and NGOs funded insurance schemes), United States of America (State Government compensation scheme). Currently, the Kenya Government operates a National HWC Compensation Scheme under the current WCMA, 2013. However, smaller and site specific compensation schemes occur for example the Big Life Predator Compensation Scheme in Mbirikani Group Ranch and Maasai Wilderness Conservation Trust's Wildlife Pays program in Kuku Group Ranch both in Kajiado County, Livestock insurance Scheme in Borana conservancy in Laikipia County and the Maasai Mara livestock consolation scheme in Narok County. Most compensation schemes suffer from lack of funds and fraud. They are also small scale, species specific and compensate for specific animals. However, their performance can be improved by better administration and allocation of adequate funds.



The proposed product seeks to console affected victims of HWCs and strives to relieve the Government of legal liability. The product recognizes four categories of HWC (i.e., human death and injury, property damage, crop destruction, and livestock predation).

**Section 1:** Scope of consolation payments for human death or injury.

<b>SECTION I - HUMAN PERSONAL - INJURY OR DEATH</b>		
<b>Cover</b>	Personal Injury/Death and Medical Expense as a result of an Accident as defined in the Policy document	
<b>Subject matter covered</b>	Kenyan citizens and registered residents in Kenya outside protected Wildlife areas	
		<b>Maximum Limit</b>
	<b>Death per Person</b>	KES 3,000,000/-
<b>Limits of liability</b>	<b>Permanent Total Disability (PTD)</b>	Continental Scale KES 3,000,000/-
	<b>Pain and Suffering</b>	12 months
	<b>Medical Expenses</b>	KES 150,000/-
	<b>Funeral Expenses</b>	KES 50,000/-
	<i>Note: Pain and suffering is KES13,500 – per month</i>	

The personal bodily injury and human death from pre-determined wildlife is provided based on the Continental Scale of Benefits. A proposed maximum of KES 3,000,000 for death is provided. Besides, it is proposed that medical, pharmaceutical and hospital expenses be covered but capped at a maximum of KES 150,000 as well as funeral costs at KES 50,000. Pain and suffering is proposed to be paid for 12 months at the rate of KES 13,500 per month.

**Section II:** Scope of consolation payments for crop damage

<b>SECTION II - CROP DAMAGE</b>		
<b>Cover</b>	Loss or damage to un-harvested growing crop following an Accident as defined in the Policy Document	
<b>Subject matter covered</b>	Un-harvested growing crops outside the protected Wildlife areas	
<b>Limits of liability</b>	<b>Per any one claim/claimant</b>	KES 150,000/-
<b>Basis of valuation</b>	<b>Input cost per Acre</b>	KES 15,000/-

Crop damage includes un-harvested growing crop and compensation is based on input costs incurred capped at between KES 15,000 per acre to a maximum of KES 150,000 (Section II) per incident.

Livestock predation leading to death is based on Tropical Livestock Unit (TLU). The livestock to be compensated include cattle, camel, goat, sheep and donkey.

### Section III: Scope of consolation payments for livestock predation

SECTION III - LIVESTOCK MORTALITY		
<b>Cover</b>	Livestock Predation and Depredation as a result of an Accident as defined in the Policy Document	
<b>Subject matter covered</b>	Livestock outside the protected Wildlife areas, namely: Cattle, Camel, Goats, Sheep, and Donkey	
<b>Limits of liability</b>	Based on Tropical Livestock Units (TLU)	
	<b>1 TLU is Equivalent to</b>	KES 30,000 /-
	<b>Cattle = 1TLU</b>	KES 30,000 /-
	<b>Camel = 1.4TLU</b>	KES 42,000/-
	<b>Goat/Sheep = 0.15TLU</b>	KES 4,500/-
	<b>Donkey = 0.5TLU</b>	KES 15,000/-
	<i>Note: 1TLU = KES30,000</i>	
	<i>The boma should be properly fenced ; The herder is above the age of 18 at the time of loss; No form of negligence should have been demonstrated by the herder/livestock owner</i>	

### Section IV: Scope of consolation payments for property damage

SECTION IV - PROPERTY DAMAGE	
<b>Cover</b>	Loss or damage to property due to an Accident as defined in the Policy Document
<b>Subject matter covered</b>	Buildings/Out Structures and Harvested Crops (Stock) outside the protected Wildlife areas
<b>Limits of liability</b>	<b>Per any one claim/claimant</b> KES 150,000/-
<b>Basis of valuation</b>	<b>Replacement cost</b>

Premium due to property damage is also provided and is capped at KES150,000 per any one claim (Section IV). The damaged property to be considered for compensation will include buildings, out structures and harvested crops stored in granaries.

*The CVO and the KWS official on the ground will advise as to whether or not the boma was properly fenced i.e. with no gaps that would otherwise make the livestock vulnerable to attack*

**Section V: Proposed benefits for commercial general liability**

<b>SECTION V – COMMERCIAL GENERAL LIABILITY</b>		
<b>Cover</b>	Indemnity of legal liability to the relevant agencies arising out of Wildlife activities. Cover the costs of liability claims made against relevant agencies from third party personal injury or death, third party property damage including legal costs...	
<b>Subject matter covered</b>	Legal liability as a result of activities of the relevant agencies in connection with Wildlife activities in the Republic of Kenya.	
<b>Limits of liability</b>	<b>Per any one claim/claimant</b>	KES 100,000,000/-
	<b>Incidents per year</b>	20
	<b>Incidents per year (AAL)</b>	KES 2,000,000,000/-
<b>Basis of valuation</b>	Legal awards including costs	

Under the Commercial General Liability the settlement is in respect of legal liability to the relevant agencies arising out of Wildlife activities (Section V). It covers the costs of liability claims made against relevant agencies from third party for personal injury or death, third party property damage including legal costs, which solely arise from Wildlife activities within Kenya.

The exclusion risk section provides a list of circumstances or conditions under which the policy does cover such cases. For instance, the policy shall not cover injury, death or disablement caused/contributed by or arising from accident occurring in wildlife protected area, injury or death as a result of an incident other than Human-Wildlife Conflict.

For crop damage the insurance shall not cover, storm, tempest, floods, subterranean fires, hay and straw. For livestock predation and depredation, the insurance shall not cover destruction in compliance with any legal requirement of Government or local or public authority, theft, and veterinary expenses. Lastly, for property damage the insurance shall not cover loss by theft during or after the occurrence as a result of incidence arising out of an Accident, bullion or unset precious stones, and explosives. Finally, Commercial General Liability insurance shall not apply to expected or Intended Injury.

Insurance claims is a demand made by the person or entity insured and addressed to the insurance company for the payment of benefits under a policy. The claim process is as described below:

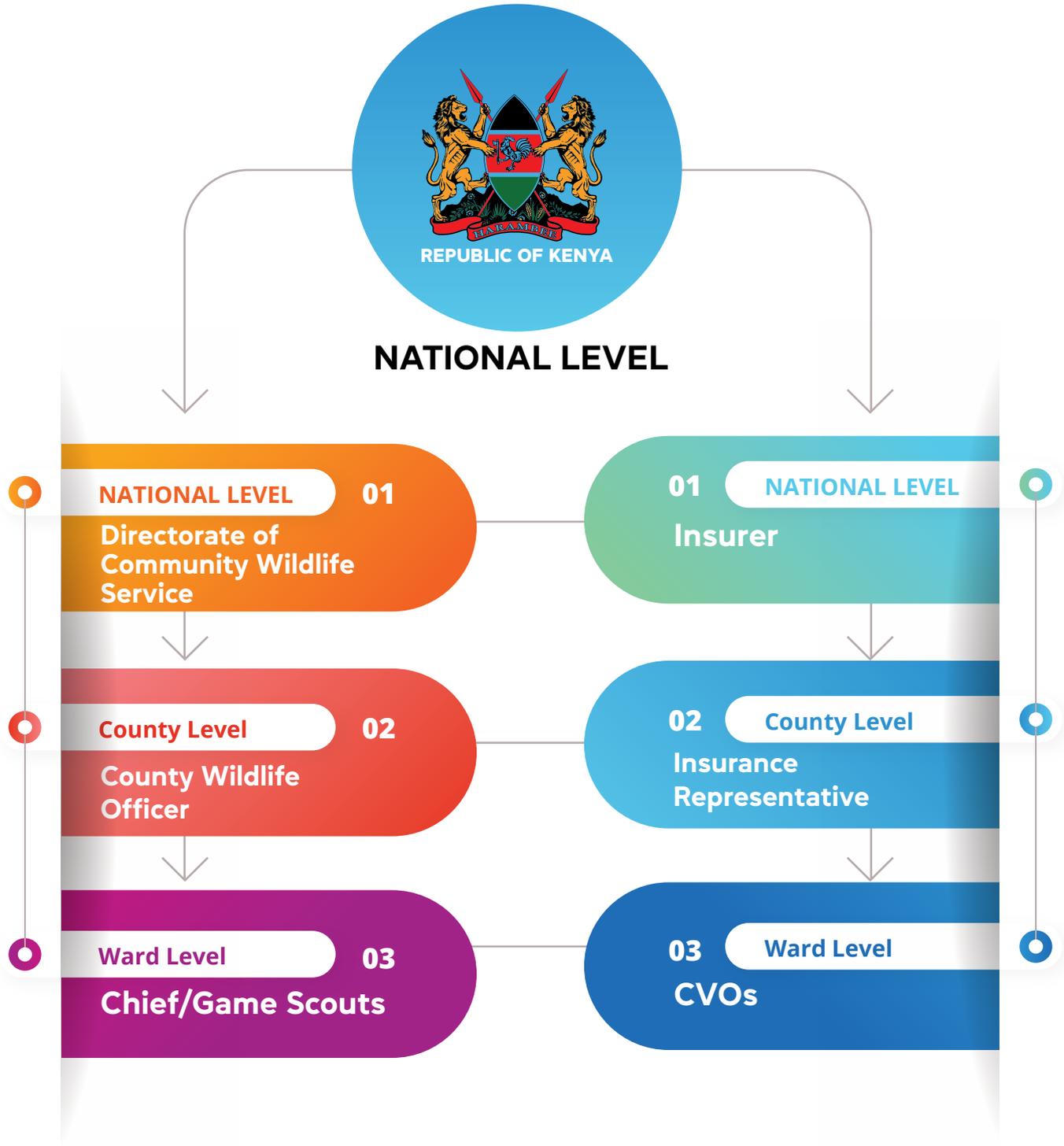
1. An attack by wildlife occurs resulting in either of the following;
  - i. Loss of human life or bodily injury
  - ii. Livestock predation, crop and property damage
2. Notification of an incidence will be made by the claimant either individually through the USSD code or by dialing the hotline; or through the nearest local government representative, invariably the Chiefs/Sub Chiefs. They become the first point of call and advise the claimant accordingly. On receipt of the notification, the technology hub simultaneously notifies all stakeholders, that is the local KWS outpost, community representatives, the police (in death and injury instances), and the insurance company. (we propose a single simultaneous call to these entities)
3. KWS receives the incidence notice and dispatches appropriate field officers to assess the nature of damage on the ground. KWS agents also carry with them a comprehensive incidence report form to capture more details.

4. For livestock predation, crop and property damage, Community Verification Officers (CVO) nearest to the scene are notified through the technological hub and they attend to the scene as soon as possible. They capture the claim information and take pictures & record neighbor's witness statement through voice or video recording. The witness will append and verify that what the CVO is recording appropriate information. All these facets will generate a Community Verification Officer's Report (CVR). The information is immediately reflected in the hub.
5. The CVO works at the ward level and reports to the County Insurance Representative who will check claim documentation and either request for further information or recommend for payment to the insurer.
6. For human death and injury, the CVO will also be on the ground as a representative of the community and the insurance company.
7. Insurance company meanwhile opens a claim file for the client but await to be furnished with the requisite documentation
8. On filling the incidence report, KWS sends a copy of incidence report to the insurance company via the technology hub who in turn request for relevant documents from claimant
9. Claimant fills insurance claim form and sends requisite documents to insurance
10. Insurance undertakes a verification and assessment process and if satisfied completes the claim analysis. After these, they issue the pay/not pay verdict
11. In the event of death and extreme injuries, the insurer may send a private investigator for further scrutiny.
12. If the insurer is satisfied and issues a pay verdict, the client is called upon for the offer and to sign the discharge voucher + issue bank/payment details
13. This is followed by claim benefit remittance to the bank/mobile bank (cheque, EFT, mobile transfer depending with size of the benefit and the agreement)
  - Verdict details will be communicated to the claimant by the insurer
  - Advise and request for further documentation will be communicated by the insurer to the claimant
  - Specific documentation and personnel requirements are elaborated below
14. Sometimes, the claimant may challenge the payout amount or any other aspect regarding Payment and may go to court to challenge the payout decision. In this case, the insurer appoints a legal representative to guide through the process. The case may then proceed to court or alternative dispute resolution organ whereupon a verdict of payment or no payment is given
15. Upon the submission of all the necessary documentation, the lifetime of the payout should be 60-90 days
16. A comprehensive list of requirements and documentation are also required during claim of the four circumstances. These include for instance, police abstract, incident report from KWS, burial permit, post-mortem report in case of human death. For livestock predation, crop and property damage photographs, community verification officer (CVO) report are some mandatory requirements.

Premium calculations were based on experience data from the KWS incidence and compensation reports, that encompasses the entire country. Based on KES 3Million death benefit, we calculate a base price for this product as KSH 3.435Million including snakes, but KSH 1.597Million without snakes. Assuming KES 5Million death benefit, the price increases to KES 4.427Billion and 1.915Billion without snakes. Assuming a death benefit of KES 1Million and KES 2Million, the cost of the premium will be KES 2.444Million and 2.939Million with Snakes as well as 1.279Million and 1.438Million without snakes respectively. Due to data incompleteness, Taita Taveta, Kajiado, Narok and Meru Counties have been suggested for pilot test for a period of eight (8) months.

The TF proposed the governance structure provided below, which is the proposed framework through which the scheme shall be governed. The governance structure has been designed to encourage a claims verification process that is simple, efficient and effective. The governance structure has also borrowed lessons learnt from the current national scheme and other community schemes. Each level has detailed and specific roles that have been adequately defined (e.g., chiefs or their assistants report claims, while the Ministry develops policy and legislation and budget support).

**Proposed Scheme Governance Structure**



We propose the establishment of the Human-Wildlife Co-existence Fund (HWCF) to ensure coordinated fund-raising and funding of human-wildlife co-existence programmes. The fund will be used to: fund the insurance scheme, implement HWC mitigation measures, undertake conservation education and awareness, and carry out wildlife research and monitoring. The fund should be supported by a fund administrator (CEO) and a secretariat. An independent board shall be established to manage the fund. The board shall comprise of representatives from the following: Ministry of Tourism and Wildlife, The National Treasury, Ministry of Interior and national government coordination, Ministry of Devolution, Chief Executive of the HWC Fund, Representative of the Council of Governors, Kenya Wildlife Conservancies Association (KWCA), Kenya Wildlife Service, Wildlife Research and Training Institute, and Four Independent Non-Executive Directors (INED). The fund shall draw finances from the following: Appropriation by national assembly, Conservation levies, Tourism levies, Payment for ecosystem services (e.g., Energy generation, Water, Carbon off-setting, Mining), and donations and grants from philanthropists, private sector, foundations, development partners and NGOs.

The following are the key recommendations by the task force:

1. Amend the WCMA, 2013 to reflect the product design, claim process and product pricing as indicated in the task force report. The Act should also provide for an appeal process and arbitration through Insurance Regulatory Authority (IRA)
2. The WCMA, 2013 to be amended to reflect the new schedule of wildlife responding to the risks covered in the scheme
3. Scrap County Wildlife Conservation Committees.
4. The names suggested for the proposed scheme are as follows:
  - a. Human-Wildlife Conflict Consolation Insurance Scheme
  - b. Human-Wildlife Conflict Insurance Scheme
  - c. Human-Wildlife Co-existence Consolation Insurance Scheme
5. Establishment of a Human-Wildlife Co-existence Fund which will contribute to the premiums of the scheme as well contribute to various conflict management methods.
6. There is need for the adoption of technology on the claims process. The scheme should consider leveraging on existing technologies to improve on efficiency of the entire process e.g. USSD for reporting, block chain to coordinate the various entities, drones for verification etc.
7. The scheme should consider the adoption of mobile money payment systems for claim payouts.
8. There is need for public education and awareness on the scheme and mitigation measures
9. Following our proposal on using chiefs and sub chiefs in the local administration level, there is a need for training of the said administration unit on claims notification.
10. Provide emergency medical response services including air and road ambulance evacuation and medical rescues. This will also include inclusion of anti-venom medication in snake hotspots.
11. The HWC insurance compensation should set out as a pilot scheme for at least eight months in the following Counties: Taita Taveta, Kajiado, Narok and Meru to test the claims administration process as well as harmonize data collection methods. The results of this pilot will be crucial in adjusting the scheme before country-wide roll out.

# 1.0 INTRODUCTION

## 1.1 Background of HWC in Kenya

Human wildlife conflict (HWC) refers to the interaction between wildlife and human beings that causes a negative impact, and often resulting to some form of loss. The types of Human wildlife conflict include death and injury of both human beings and animals, human threat, crop damage, livestock predation and depredation as well as property damage. Crop raiding is regarded as the most common form of HWC. The conflict is often exacerbated by a wide array of factors with the most prevalent being population growth, climate change, and land use changes.

Human wildlife conflict in Kenya occurs frequently in the dryland areas which boast a majority of the wildlife population in the country. The top 5 counties that have had the highest reported incidences of HWC include Taita Taveta, Narok, Lamu, Kajiado and Laikipia. The top 10 species of wildlife that are responsible for the most HWC incidences are elephants, buffaloes, hyenas, hippos, leopards, baboons, monkeys, snakes and crocodiles. Elephants are responsible for the highest incidences of crop raiding and has the highest number of reported threat incidences. Human threat is considered as the most common type of HWC followed by crop damage and livestock predation. In order to deal with the conflict, various mitigation measures have been put in place. These range from physical barriers such as electric fences and predator proof bomas to financial mitigation measures that hope to lessen the conflict by reduction of the losses incurred by humans.

The taskforce on human-wildlife conflict compensation scheme was formed after the National consultative forum and was appointed by the Cabinet Secretary for Tourism and Wildlife on 14th June 2019 for a period of 60 working days. The consultative forum for the first time brought together members of the private sector, the government, community organization as well as other non-state actors to discuss matters HWC. The composition of the taskforce reflected this multifaceted approach and was appointed to collate, collect and compile relevant data and information on existing compensation schemes and to develop an implementation strategy with clear recommendations on the most suitable schemes for the Government to adopt to enhance human-wildlife co-existence. This report is a summary of the outcome of the duties undertaken by the taskforce and is accompanied by six (6) reports which have been put together in response to the TORs of the Taskforce on Human Wildlife Conflict Compensation Schemes. The sections of the various reports encompass the following:

1. The Consultative Forum report;
2. The Field Consultation Report;
3. The Status of Human-Wildlife Conflict in Kenya covering the period 2008-2018;
4. HWC Product Design (including policy wordings);
5. Claims administration (including claim forms);
6. HWC Conflict Management and Mitigation measures;
7. Pricing and 5-year Financial Forecast;
8. HWC Fund;
9. Governance Structure;
10. Implementation Plan;

The taskforce has been guided by the following terms of references of which have been addressed as indicated in Table 1 below.

**Table 1:** Addressing the Terms of References

Terms of References	How it has be addressed
a) Examine all the Schemes presented on Human-Wildlife Conflicts Compensation schemes but not limited to: <ul style="list-style-type: none"> <li>• Joint proposal by Insurance companies to include financial requirements.</li> <li>• Proposals by Non-State actors based on existing programmes to include financial requirements, and to gauge the success, viability and sustainability of such sponsored programmes.</li> </ul>	<ul style="list-style-type: none"> <li>• Field consultation report</li> <li>• Consultative forum report</li> <li>• The final report</li> </ul>
b) Study all final detailed proposal(s) received on relevant schemes from concerned parties.	<ul style="list-style-type: none"> <li>• Field consultation report</li> </ul>
c) Explore all other innovative options on mitigating Human-Wildlife conflicts in the country.	<ul style="list-style-type: none"> <li>• Taskforce report on corridors</li> <li>• HWC Mitigation and pricing report</li> <li>• Human Wildlife conflict management and mitigation report</li> </ul>
d) Explore and recommend a broad range of ideas on enabling co-existence between people and wildlife particularly in free range wildlife areas.	<ul style="list-style-type: none"> <li>• Taskforce report on corridors</li> <li>• Human Wildlife conflict management and mitigation report</li> </ul>
e) Study options and recommend a framework on apportioning responsibility with beneficiary stakeholders in wildlife sector.	<ul style="list-style-type: none"> <li>• HWC Fund</li> </ul>
f) Document lessons learnt from existing schemes, including the national scheme, to inform future solutions.	<ul style="list-style-type: none"> <li>• Field consultation report</li> </ul>
g) Provide recommendations on the financing mechanism for suitable compensation Scheme(s) to include but not limited to Government allocations.	<ul style="list-style-type: none"> <li>• HWC Actuarial report- pricing</li> </ul>
h) Explore and recommend development of an independent HWC Fund.	<ul style="list-style-type: none"> <li>• HWC Fund</li> </ul>
i) Provide recommendations on how long-term data can be aggregated from government and non-state actors for the purpose of designing a HWC scheme.	<ul style="list-style-type: none"> <li>• Mitigation and pricing report</li> </ul>
j) Prepare a Final Report with clear recommendations on practical methods to mitigate HWC and the best suitable scheme(s) with a full 5-year financial plan.	<ul style="list-style-type: none"> <li>• HWC Final taskforce report               <ul style="list-style-type: none"> <li>o Mitigation</li> <li>o Product design</li> <li>o Pricing</li> <li>o Pilot plans</li> <li>o Education &amp; awareness</li> <li>o Training &amp; capacity building</li> </ul> </li> </ul>
k) Develop an implementation plan including the structure required for governance of the Scheme(s).	<ul style="list-style-type: none"> <li>• Implementation framework</li> </ul>
l) The taskforce may co-opt any person with relevant skills and expertise required for the purpose of executing its mandate	<ul style="list-style-type: none"> <li>• DONE</li> </ul>

Our report will begin by summarising a few of the existing compensation schemes and derive some lessons from them. We then give an overview of the proposed product mentioning the scopes of cover of the scheme as well as the proposed claims administration process. This is followed by a section on mitigation which consequently feeds into the pricing of the proposed scheme. We also elaborate on the proposals for the governance, financing and implementation of the said scheme. Finally, we conclude by providing proposals for required amendments to the Wildlife Conservation and Management Act 2013 as well as other recommendations of the task force.

## 1.2 Existing Compensation Schemes

Financial mitigation measures for HWC include compensation, consolation and insurance schemes. They are considered to be ways in which tolerance for wildlife by communities that live in proximity to wildlife can be increased (Madhusudan, 2003). This access to compensation is critical in ensuring that communities support wildlife conservation (Mukeka, et al., 2019). It is perceived that such measures will lead to sustainable biodiversity conservation and ensure ecosystem services thrive. Some of the compensation schemes that exist in the country are outlined in sections 1.2.1 to 1.2.5 below.

### 1.2.1 Big-Life Foundation Predator Compensation Scheme

**Start date:** 2003  
**Status:** Active  
**Location:** Mbrikani Group ranch, Kajiado County  
**Species:** Lions, Elephants, Leopards, Cheetahs, Jackal, Wild dog, Hyenas, Buffalo

Big life works closely with the community members particularly Mbirikani group ranch owners which has about 4600 members. In the scheme, the premiums are paid on a cost-share basis where Big-Life Foundation contributes 70% of all running costs while the farmers through their ranch management contribute 30%. Only farmers who are ranch members benefit from the scheme.

Once a loss is reported, Big-Life Foundation dispatches two officers (i.e., a Maasai and a non-local to eliminate bias) who assess the carcass and verify that it was killed by wildlife. This must be done within 24 hours. The owner must ensure not to tamper with the carcass or harm the wild animal involved. Losses incurred due to negligence such as poorly enclosed boma or an animal left to wander in the wilderness by the herder attract a significantly lower compensation. Upon verification and approval, the losses are recorded, credit notes signed and the claims are paid every two months. To curtail fraud, they have strong community policies.

### 1.2.2 Maasai Wilderness Conservation Trust's Wildlife Pays Program

**Start date:** 2007  
**Status:** Active  
**Location:** Kuku Group ranch, Kajiado County  
**Species:** Lions, Leopards, Cheetahs, Jackal, Baboons, Hyenas

The Wildlife pays consolation scheme primary purpose is to console community members who lost their livestock to wildlife. Kuku group ranch is divided into 10 zones, each having a zone elder, a zone mama, and a verifying officer. Their roles include reporting of losses and verification. The losses are classified into 3 types: Type one (where there was a herder present and the boma was in perfect shape) which gets 100% compensation, type two (where there was negligence in the boma state) which attracts 50% and type three which attracts 33%. It is a pre-condition that the farmer should not tamper with the scene of loss before verification.

The pay-out amounts are determined beforehand. Credit notes are filled, and pictures taken using GPS enabled devices. The claims are settled quarterly by the 7th day of the month through the zone elders who collect the pay-outs and distribute accordingly. The claims per quarter should not exceed 2 million shillings. One farmer cannot claim more than once in a quarter. They regulate the frequency of claims reporting to promote good behaviour.

### 1.2.3 Mara North Conservancy Compensation Scheme

**Start date:** 2016  
**Status:** Active  
**Location:** Mara North  
**Species:** Hyenas, Lions and leopards

This compensation scheme began in 2016, primarily focused on compensating for livestock. The predators responsible for a majority of the HWC incidents are hyenas, lions and leopards. It is funded through member contributions and tourism partnerships. Since the inception of the scheme, they have seen a reduction of HWC incidences by half. The scheme runs with the support of compensation officers who are responsible for verifying the claims. They take photographs on GPS enabled devices and fill in claim forms. Claims received by the organization are deliberated by a committee who meet quarterly. After deliberation, the approved claims are forwarded to MNC Nairobi office for payment. The scheme is credited to have reduced retaliatory attacks on predators contributing to enhanced coexistence.

### 1.2.4 Borana Conservancy: Consolation Scheme

**Start date:** 2016  
**Status:** Active  
**Location:** Laikipia County  
**Species:** Lions

The Borana Conservancy have a community livestock to market programme which willing community members participate in. In a successful sale of an animal, the community member is required to contribute 10% of the proceeds to an insurance kitty for the primary purpose of compensating livestock that has been killed by Lions. Verification is done by cattle supervisors alongside security representatives within the conservancies. Similar to the MNC scheme, they record the GPS coordinates and take photos of the animal that has been killed or injured. Farmers are then compensated accordingly.

### 1.2.5 The National Scheme and Other Schemes Around the World

Compensation for incidents of HWC in Kenya can be traced back to 1979 when the government implemented the first compensation scheme under the then Natural Policy programme. This went on with escalating cost up to 1986 when claims presented exceeded the ability and administration by the government to meet the payment obligation despite payment being low where human death was pegged at Kshs 30,000 and human injuries was Kshs 15,000. Moreover, the time lag between launching the claim and receiving compensation was too long resulting to negative perception by the affected communities towards wildlife. Compensation for crop damage and livestock loss, which used to be paid to affected landowners, was suspended via the amendment of the Wildlife Act (Cap 376, Laws of Kenya) in 1990. This amendment was as a result of the difficulty encountered in their attempts to pay compensation in the past, as the scheme was prone to considerable abuse and expensive to administer.

The government repealed Wildlife Act (Cap 376, Laws of Kenya) in 2014 with the Wildlife Conservation and Management Act, 2013(WCMA, 2013) with section 25 providing for the compensation for human death (Ksh 5,000,000), human injury (permanent injury Kshs Kshs 3,0000, other injuries depending on the extend), crop destruction, livestock predation and property damage (according to prevailing market rates).

Similarly, around the world, there are various schemes that are designed to compensate communities living with wildlife. The table below summarises a few of these schemes (Table 2).

### 1.2.6 Common Challenges Faced by Compensation Schemes

There are some common challenges that cut across board in the schemes that exist and they include the following:

1. **Lack of funds:** A majority of the schemes are donor funded and therefore unsustainable. Some primarily donor funded schemes have collapsed due to lack of funds, an example being the predator compensation scheme established by the friends of Nairobi national park.
2. **Fraud:** Fraudulent claims reman a challenge for a majority of the schemes. A scheme like Predator compensation scheme offered by the Big life foundation has attempted to overcome this through the use of community policing and harsh policies in an attempt to curtail fraud.
3. **Claims administration:** Costs for performing such administration is often high, time consuming and inefficient.
4. **The schemes are small and species specific:** small and specific claims mean that a lack of scale makes it difficult to gauge the success of these schemes.

**Table 2:** Examples of compensation schemes around the world

Country	Type of HWC covered	Status	Species	Type of scheme	Management	Comments
Austria	Livestock predation	Active	Bears and wolves	Compensation	Private	Hunters association pay premiums to insurance companies
Botswana	---	Active	Elephant	National scheme	Government	----
China	Crop damage	Active	Elephant	Insurance	Government	Chinese government pays premium to insurance company
India	Livestock predation	Active	Snow leopards	Insurance	Private	Community members affected pay a monthly premium to an insurance company
Namibia (HAC SIS, HWSRS <sup>2</sup> )	Livestock predation, Crop damage, Human death and Injury	Active	Lions, Cheetahs, Hyenas, buffaloes, Crocodiles, Hippos and Elephants	Compensation	Government and Community Based organizations	Payments are made to registered conservancy-based members only for losses incurred in the community based

<sup>2</sup>Human Animal Conflict Self-insurance Scheme (HAC SIS) which later became Human wildlife self-reliance scheme (HWSRS)

Country	Type of HWC covered	Status	Species	Type of scheme	Management	Comments
Pakistan	Livestock predation	Active	Snow leopard	Insurance	NGOs	----
United States of America (Wisconsin)	Wolves	Active	Wolves	Compensation	State government	----
Zimbabwe	----	Inactive	Elephant	Compensation	District government	----

Source: Morrison et al. (2009); Wilson-Holt and Steel (2019)

### 1.2.7 Lessons learnt from compensation schemes

In spite of the challenges, the schemes have some positive aspects that the proposed scheme has been able to draw from. They include the following:

1. High community involvement: It was noted that the schemes that run successfully really encourage community buy in. This was integral in all the processes including safeguarding against moral hazards. Strict penalties are put against community members who make fraudulent claims which consequently affect the pay-outs of other members. Select community members are also involved in the verification process as verification officers
2. Fixed benefit principle: The consolation figures in most of the schemes are pre-agreed upon
3. Efficient claims processes: the claims administration process is simplified and transparent
4. Use of technology: The claims process of existing schemes leverage heavily on technology in the claims process. GPS enabled devices are used to record incidences, take pictures and accurately record the exact location where the conflict happened
5. Encouragement of preventive/mitigation strategies: The livestock predation compensation schemes encourage community members to employ best practice strategies when safeguarding their livestock. This include the use of predator proof bomas and ensuring that herders are above 18 years

### 1.3 The role of insurance in human-wildlife conflicts

Insurance may be a possible way to improve HWC compensation processes and therefore ensure co-existence between human and wildlife. It has the ability to pool large numbers, employ technology and manage the entire client journey from registration to claim settlement in an efficient way. With this in mind, it is highly likely that employing insurance techniques may benefit the current government-run compensation which has been unable to adequately ensure timely HWC compensation to victims. Encouragement of wildlife conservation, especially outside protected areas (which hosts over 60% of wildlife), is inextricably tied to winning support from local communities that bear the brunt of conflicts. It is therefore imperative for the government to explore ways to promote coexistence.

The principles of insurance are as follows:

- i. Principle of insurable interest – the party being compensated must have actual financial interest in the property destroyed or damaged
- ii. Principle of indemnity – the party being compensated should not benefit from the loss by receiving compensation or consolation that is of more value than the property lost
- iii. Principle of utmost good faith – the party being compensated must act in good faith and not submit exaggerated or fraudulent claims
- iv. Principle of subrogation – the party being compensated must be willing to surrender any other right for compensation in respect of the same loss to the insurance company
- v. Principle of contribution – in case of the damaged property being double insured, the respective insurance companies will contribute towards the same loss
- vi. Principle of proximate cause – concerned with how the loss occurred which must be losses intended to be covered under the policy

## 2.0 METHODOLOGY

Data on human-wildlife conflicts (HWC) and compensation of HWC cases was acquired from the Kenya Wildlife Service. The data was summarized to provide details on HWC cases and compensation for human death, human injury, crop destruction, livestock predation and crop damage. This was followed by field visits and discussions with key opinion leaders from Tsavo Conservation Area, Amboseli ecosystem, Maasai Mara Ecosystem, Samburu-Laikipia ecosystem, and Meru Conservation Area. Furthermore, meetings were held to discuss specific issues on HWC, compensation of HWC cases and HWC mitigation measures where experts were consulted on the matter. Standard methods were then used to analyse the data and design the HWC insurance scheme product, develop claim administration processes and undertake HWC insurance scheme product pricing.

The product pricing applied the burning cost method to estimate the price of the insurance product. For this report, pricing was done using HWC incident and compensation data acquired from KWS. The Gross Premium (GP) was calculated as the sum of Risk Premium (RP), Expenses (E), Risk Margins (RM), Surplus (S), and Equity build up (EB).

$$GP = RP + E + RM + S + EB$$

The burning cost method uses historical experience as the basis, adjusted for current cost savings expected from in place mitigation strategies, to form the base price. The risk premium is based on the average past loss experience, suitably adjusted to reflect changed loss costs and exposures. The risk premiums are then loaded by a management/administration expense amount, commission and a risk margin to arrive at the gross premiums.

The expected cost of compensation amounts is estimated as per the formula below;

$$\{\text{Expected Cost of Compensation payout} = \text{Expected No of Cases} \times \text{Expected Payout}\}$$

The expected number of cases and the resulting expected compensation payments have been determined separately for each of the benefits covered in the product i.e. Human Death, Bodily Injury, Predation, Crop damage and Property damage.

## 3.0 FINDINGS

### 3.1 Product Design<sup>3</sup> : A summary

The product designed pays fidelity to the current Wildlife Conservation and Management Act WCMA, 2013 as it is and uses other acts and laws to compliment the scheme such as the Work Injury Benefits Act (WIBA) and the continental scale for injuries. It is a fusion of science, logic and accepted best practice (global best practice.). The value addition include:

- Use of the continental scale to calculate compensation for injuries
- Medical cover
- Last expense cover
- Introduction of a rescue and evacuation covers

The scheme includes crop damage, property damage and livestock predation and depredation. For crop damage, the prices have been capped with maize input having used KWS data to identify the crops most affected by HWC.

It seeks to compensate affected victims and strives to relieve the government of legal liability. The product recognizes four categories of human-wildlife conflict (i.e., death and injury, property damage, crop destruction and livestock predation). The personal bodily injury and human death from wildlife is provided based on existing standard practices (e.g., the Continental Scale of Benefits). A proposed maximum of KES 3,000,000 for death is provided. Besides, it is proposed that medical, pharmaceutical and hospital expenses be covered but capped at a maximum of KES 150,000 as well as funeral costs at KES 50,000 (Table 3). Schedule-1 provides a list of the wildlife species for which compensation will be paid for various risks.

<sup>3</sup> The HWC Taskforce report on Product design and claims administration has more detailed information about the product, including the policy wordings

**Table 3:** Scope of compensation payments for human injury or death

SECTION I - HUMAN PERSONAL - INJURY OR DEATH		
<b>Cover</b>	Personal Injury/Death and Medical Expense as a result of an Accident as defined in the Policy document	
<b>Subject matter covered</b>	Kenyan Citizens and registered residents in Kenya outside protected Wildlife areas	
	<b>Maximum Limit</b>	
<b>Limits of liability</b>	<b>Death per Person</b>	KES 3,000,000/-
	<b>Permanent Total Disability</b>	Continental scale Up to a maximum 3 million
	<b>Pain and Suffering</b>	Up to a maximum of 12 Months
	<b>Medical Expenses</b>	KES 150,000/-
	<b>Funeral Expenses</b>	KES 50,000/-
<i>Note: Pain and suffering is KES13,500 – per month</i>		

Crop damage includes un-harvested growing crop and compensation is based on input costs incurred capped at between KES 15,000 and KES 150,000 (Table 4).

**Table 4:** Scope of compensation payments for crop damage

<b>SECTION II - CROP DAMAGE</b>		
<b>Cover</b>	Loss or damage to unharvested growing crop following an Accident as defined in the Policy Document	
<b>Subject matter covered</b>	Unharvested growing crops outside the protected Wildlife areas	
<b>Limits of liability</b>	<b>Per any one claim/claimant</b>	KES 150,000/-
<b>Basis of valuation</b>	<b>Input cost per Acre</b>	KES 15,000/-

Livestock predation leading to death is based on Tropical Livestock Unit (TLU). The livestock to be compensated include cattle, camel, goat, sheep and donkey. The table below provides a summary of the compensation amounts for livestock (Table 5).

**Table 5:** Scope of compensation payments for livestock predation

<b>SECTION III - LIVESTOCK MORTALITY</b>		
<b>Cover</b>	Livestock Predation and Depredation as a result of an Accident as defined in the Policy Document	
<b>Subject matter covered</b>	Livestock outside the protected Wildlife areas, namely: Cattle, Camel, Goats, Sheep, and Donkey	
<b>Limits of liability</b>	Based on Tropical Livestock Units (TLU)	
	<b>1 TLU is Equivalent to</b>	KES 30,000/-
	<b>Cattle = 1TLU</b>	KES 30,000/-
	<b>Camel = 1.4TLU</b>	KES 42,000/-
	<b>Goat/Sheep = 0.15TLU</b>	KES 4,500/-
	<b>Donkey = 0.5TLU</b>	KES 15,000/-
	<i>Note: 1TLU = KES30,000</i>	
<b>Suggested possible conditions</b>	<ul style="list-style-type: none"> <li>• The boma should be properly fenced</li> <li>• The herder is above the age of 18 at the time of loss</li> <li>• No form of negligence should have been demonstrated by the herder/livestock owner</li> </ul>	

Claims due to property damage is also provided and is capped at KSH 150,000 per any one claim. The damaged property to be considered for compensation will include buildings, out structures and harvested crops.

**Table 6:** Scope of compensation payments for property damage.

<b>SECTION III - LIVESTOCK MORTALITY</b>		
<b>Cover</b>	Livestock Predation and Depredation as a result of an Accident as defined in the Policy Document	
<b>Subject matter covered</b>	Livestock outside the protected Wildlife areas, namely: Cattle, Camel, Goats, Sheep, and Donkey	
<b>Limits of liability</b>	Based on Tropical Livestock Units (TLU)	
	<b>1 TLU is Equivalent to</b>	KES 30,000/-
	<b>Cattle = 1TLU</b>	KES 30,000/-
	<b>Camel = 1.4TLU</b>	KES 42,000/-
	<b>Goat/Sheep = 0.15TLU</b>	KES 4,500/-
	<b>Donkey = 0.5TLU</b>	KES 15,000/-
	<i>Note: 1TLU = KES30,000</i>	
<b>Suggested possible conditions</b>	<ul style="list-style-type: none"> <li>• <i>The boma should be properly fenced</i></li> <li>• <i>The herder is above the age of 18 at the time of loss</i></li> <li>• <i>No form of negligence should have been demonstrated by the herder/livestock owner</i></li> </ul>	

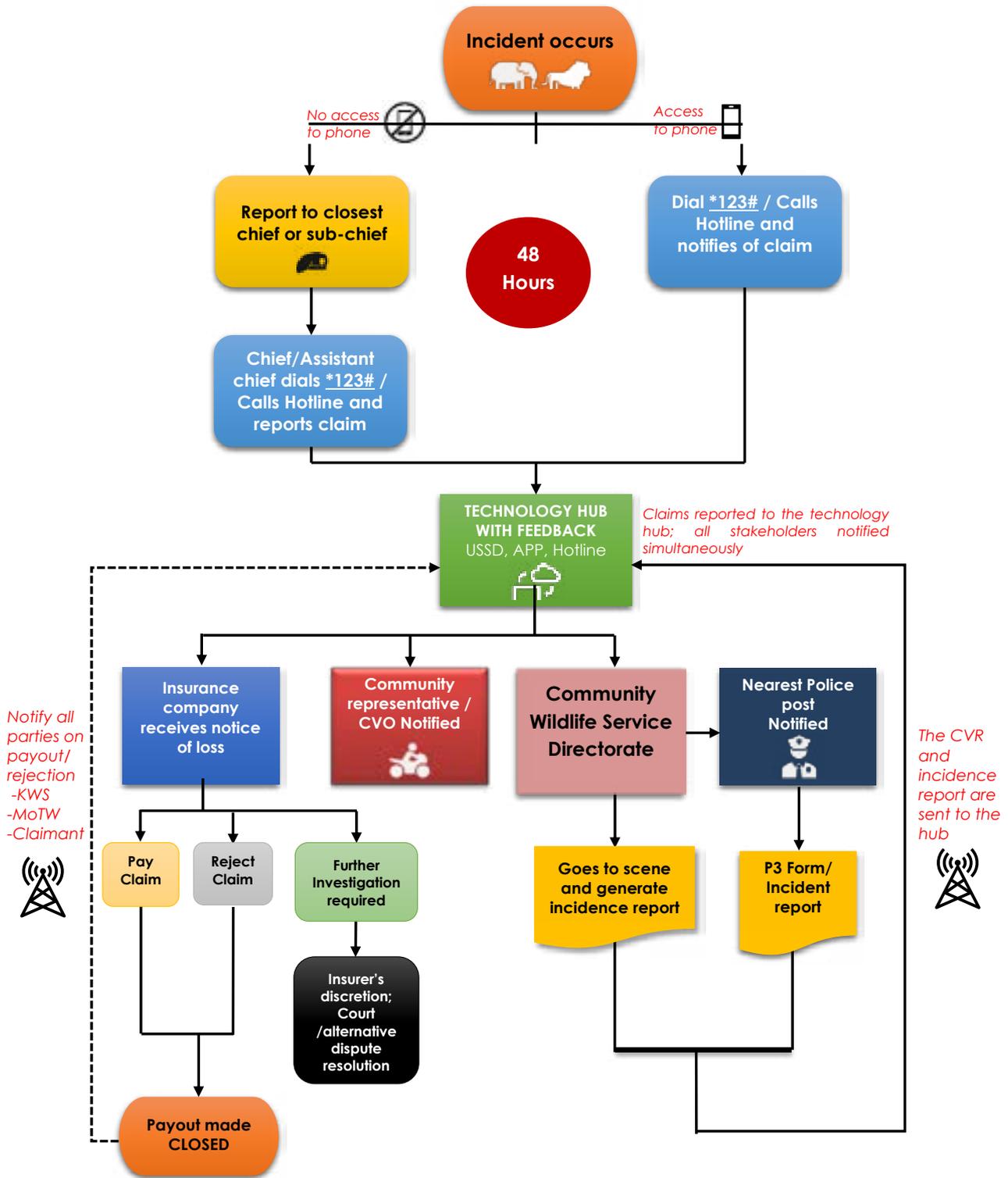
The exclusion risk section provides a list of circumstances or conditions under which the policy does cover such cases. For instance, the policy shall not cover injury, death or disablement caused/contributed by or arising from accident occurring in wildlife protected area, injury or death as a result of an incident other than Human-Wildlife Conflict. For crop damage the insurance shall not cover, storm, tempest, floods, subterranean fires, hay and straw. For livestock predation and depredation, the insurance shall not cover destruction in compliance with any legal requirement of Government or local or public authority, theft, and veterinary expenses. Lastly, for property damage the insurance shall not cover loss by theft during or after the occurrence as a result of incidence arising out of an Accident, bullion or unset precious stones, and explosives.

<sup>4</sup> The CVO and the KWS official on the ground will advise as to whether or not the boma was properly fenced i.e. with no gaps that would otherwise make the livestock vulnerable to attack

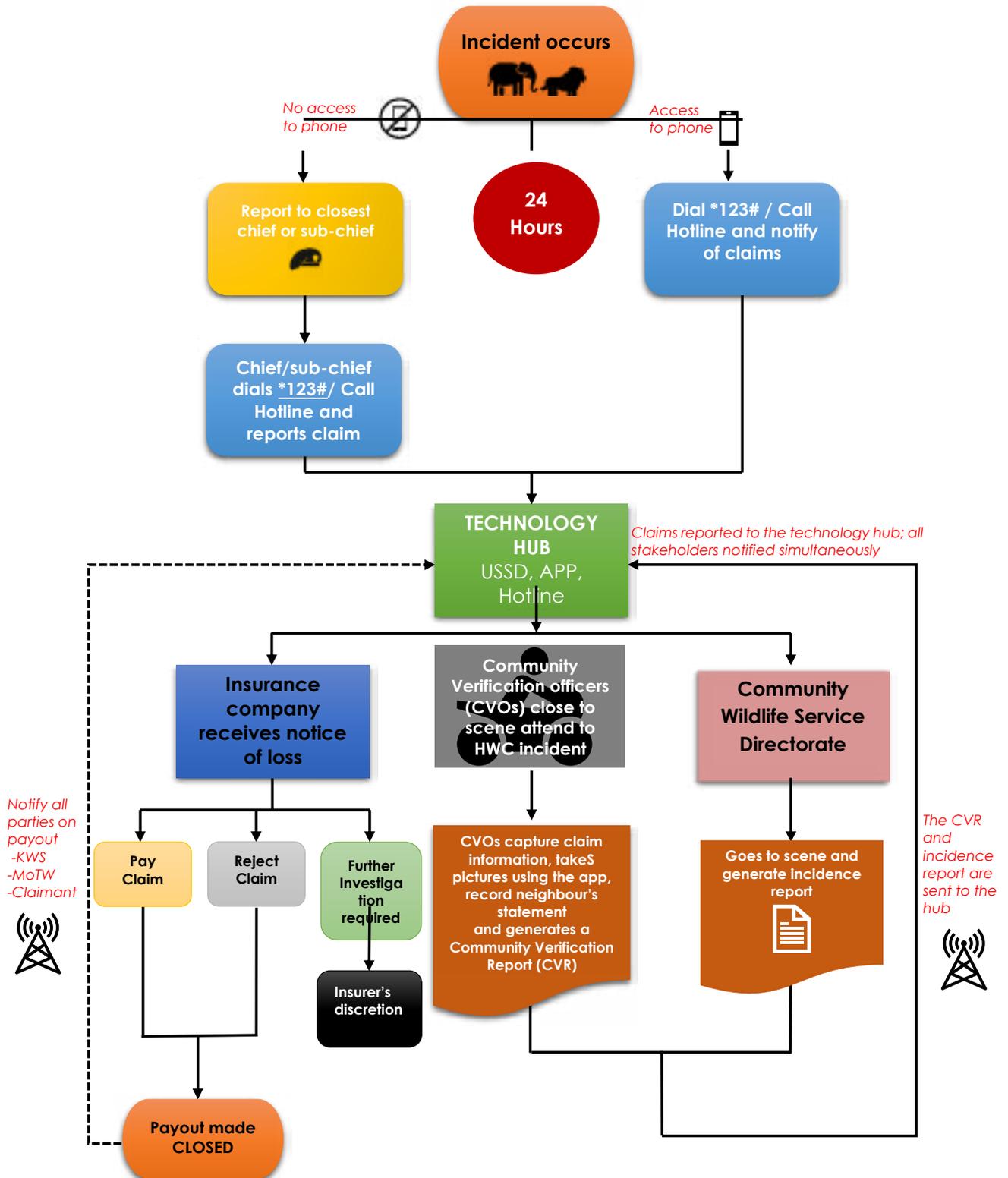
### 3.2 Claims Administration

A crucial measure of successful schemes is acceptable payments made to the aggrieved parties in a timely manner. Such a scheme will be dependent on the following areas four challenges being handled effectively: Cost effective scheme administration, Timely and fair insurance payments, Incentives for future damage prevention and financial sustainability of premium payments. Baring this in mind, it is pertinent for the claims administration process to reflect this. Figure 1 and 2 are the processed flows of the process.

**Figure 1:** Claim administration process flow for human death and Injury



**Figure 2:** Claims process, livestock, crop, and property damage



### 3.2.1. Claims administration process explained

1. A sudden and violent attack occasioned by wildlife on the claimant resulting in either of the following;
  - i. Loss of Human life
  - ii. Human injury leading to medical expenses- Permanent Total Disability (PTD) and Pain and Suffering (P&S)
  - iii. Crop Damage
  - iv. Animal predation/depredation
  - v. Property Damage
2. Notification is made by the claimant either individually through the USSD code or by dialing the hotline; or through the nearest local government representative (the chiefs/assistant chiefs). They become the first point of call and advise the claimant accordingly. On receipt of the notification, the technology hub simultaneously notifies all stakeholders, that is the local KWS outpost, community representatives, the police (in death and injury instances), and the insurance company. (we propose a single simultaneous call to these entities)
3. KWS receives the incidence notice and dispatches appropriate field officers to assess the nature of damage on the ground. KWS agents also carry with them a comprehensive incidence report form to capture more details
4. For livestock predation, crop and property damage, Community Verification Officers (CVO) nearest to the scene are notified through the technological hub and they attend to the scene as soon as possible. They capture the claim information and take pictures & record neighbour's witness statement through voice or video recording. The witness will append and verify that the CVO has recorded appropriate information. All these facets will generate a Community Verification Officer's Report (CVR). The information is immediately reflected in the hub.
5. The CVO works at the ward level and reports to the County Insurance Representative who will check claim documentation and either request for further information or recommend for payment to the insurer.
6. For human death and injury, the CVO will also be on the ground as a representative of the community and the insurance company.
7. Insurance company meanwhile opens a claim file for the client but await to be furnished with the requisite documentation (See section below).
8. On filling the incidence report, KWS sends a copy of incidence report to the insurance company via the technology hub who in turn request for relevant documents from claimant
9. Claimant fills insurance claim form and sends requisite documents to insurance
10. Insurance undertakes a verification and assessment process and if satisfied completes the claim analysis. After these, they issue the pay/not pay verdict
11. In the event of death and extreme injuries, the insurer may send a private investigator for further scrutiny.
12. If the insurer is satisfied and issues a pay verdict, the claimant is called upon for the offer and to sign the discharge voucher + issue bank/payment details
13. This is followed by claim benefit remittance to the bank/mobile bank (cheque, EFT, mobile transfer depending with size of the benefit and the agreement)

- Verdict details will be communicated to the claimant by the insurer
  - Advise and request for further documentation will be communicated by the insurer to the claimant
  - Specific documentation and personnel requirements are elaborated below
14. Sometimes, the claimant may challenge the payout amount or any other aspect regarding Payment and may go to court to challenge the payout decision. In this case, the insurer appoints a legal representative to guide through the process. The case may then proceed to court or alternative dispute resolution organ whereupon a verdict of payment or no payment is given
  15. Upon the submission of all the necessary documentation, the lifetime of the payout should be 60-90 days.



### 3.2.2 Claims Requirements and Documentations

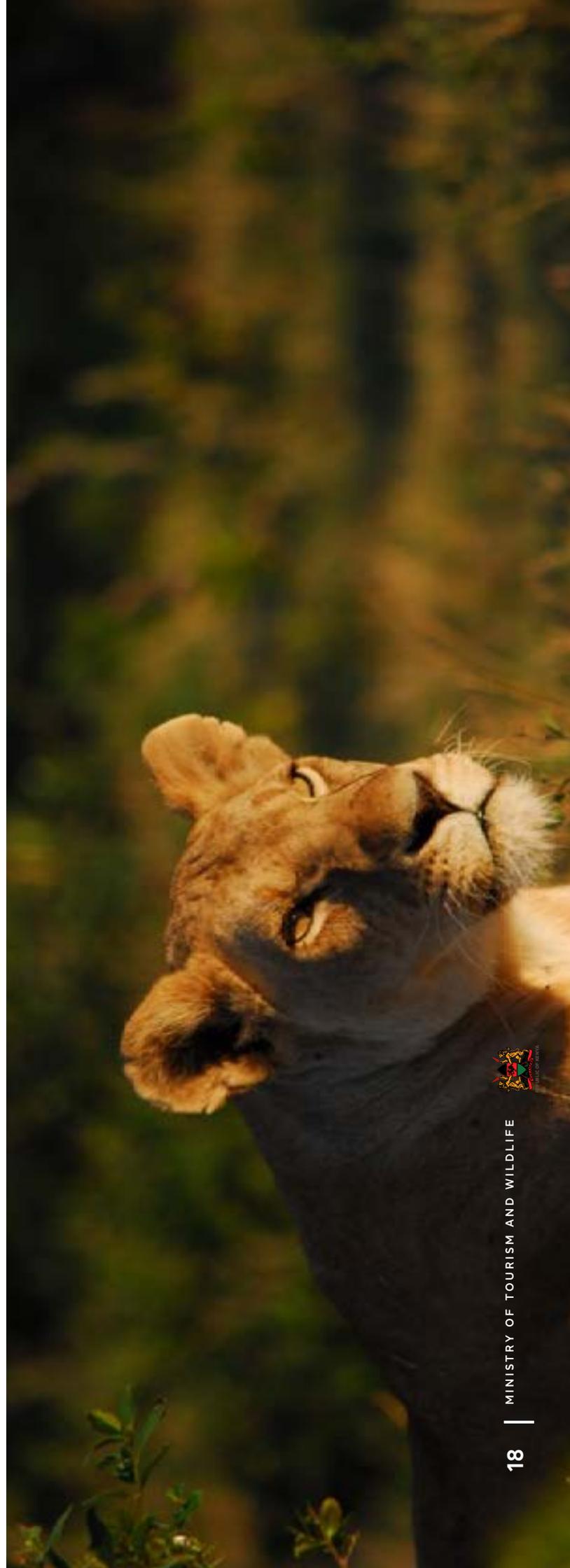
**Table 7: Documents required for claim of different HWC compensation claims**

Requirements	Deaths	Human Injury	Property Damage	Crop Damage	Livestock Predation	Funeral Cover
<b>Notification</b>	Standard- notifications to the chief/assistant chief via call/USSD/ Physical reporting	Standard notifications to the chief chief/assistant chief via call/USSD/ Physical reporting	Standard- notifications to the chief chief/assistant chief via call/USSD/ Physical reporting	Standard notifications to the chief chief/assistant chief via call/USSD/ Physical reporting	Standard notifications to the chief chief/assistant chief via call/USSD/ Physical reporting	Standard notifications to the chief chief/assistant chief via call/USSD/ Physical reporting
<b>Documents to accompany duly filled claim form</b>	<ul style="list-style-type: none"> <li>Police abstract</li> <li>Incident Report from KWS</li> <li>Burial permit</li> <li>Post-mortem</li> <li>Death certificate</li> </ul>	<ul style="list-style-type: none"> <li>Prescribed Medical Report form (insurance)</li> <li>(P3 form)- police Incident Report from KWS</li> <li>Medical expenses bill</li> </ul>	<ul style="list-style-type: none"> <li>Community Verification Officer (CVO) report</li> <li>Photographs</li> <li>Incident Report from KWS</li> <li>Estimates for repairs (optional)</li> <li>Chief's statement</li> </ul>	<ul style="list-style-type: none"> <li>Community Verification Officer (CVO) report</li> <li>Incident Report from KWS</li> <li>Photographs</li> <li>Assessor report (optional)</li> <li>Chief's statement</li> </ul>	<ul style="list-style-type: none"> <li>Community Verification Officer (CVO) report</li> <li>Incident Report from KWS</li> <li>Photos</li> <li>Chief' statements</li> </ul>	<ul style="list-style-type: none"> <li>Police abstract</li> <li>Incident Report from KWS</li> <li>Burial permit</li> </ul>
<b>Person Required</b>	<ul style="list-style-type: none"> <li>Certificate of dependency (by chief)</li> <li>ID of the next of kin</li> </ul>	<ul style="list-style-type: none"> <li>Medical discharge summary where admitted</li> <li>Doctor's progress report (PTD)</li> <li>Copy of ID/Birth certificate</li> <li>Photographs</li> <li>Doctor's monthly review (PAS)</li> </ul>	<ul style="list-style-type: none"> <li>ID document</li> </ul>			
	Medical/ police officers/ chief/ witness/KWS officer/next of kin/Registrar of births and deaths/	Medical/ police officers/chief/witne ss/KWS officer/ Investigator	Community Verification Officer/ KWS officer/ Chief or sub-chief	Community Verification Officer/ KWS officer/ Chief or sub-chief	Community Verification Officer/ KWS officer/ Chief or sub-chief	Medical/ police officers/ chief/ witness/KWS officer/next of kin/Registrar of births and deaths

<sup>5</sup>Claimants MUST consent for any photographs or personal data to be taken; the insurance company MUST ensure privacy of the information

**Table 7:** below provides a summary of documents required for different HWC compensation claims.

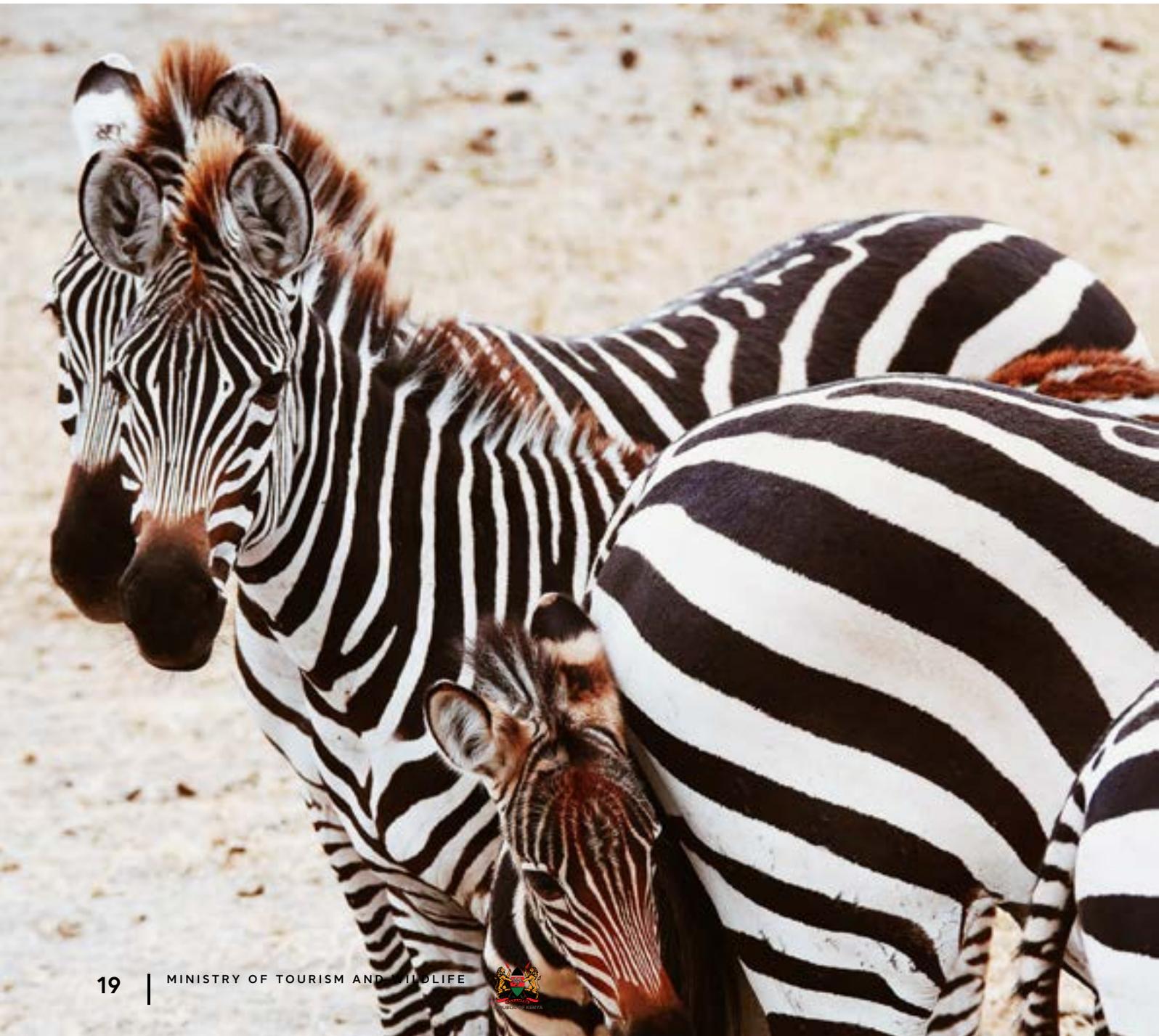
Requirements	Deaths	Human Injury	Property Damage	Crop Damage	Livestock Predation	Funeral Cover
<b>Time</b>	<ul style="list-style-type: none"> <li>- 48 hr notification timeline</li> <li>- 14-day period for all documentation to reach insurer</li> <li>- Payment/deferment/rejection to be done within 90 days of receiving all documentation</li> </ul>	<ul style="list-style-type: none"> <li>- 24-48hr notification timeline</li> <li>- 14-day period for all documentation to reach insurer</li> <li>- Payment/deferment/rejection to be done within 90 days of receiving all documentation</li> </ul>	<ul style="list-style-type: none"> <li>- 24 hr notification timeline</li> <li>- 14-day period for all documentation to reach insurer</li> <li>- Payment/deferment/rejection to be done within 90 days of receiving all documentation</li> </ul>	<ul style="list-style-type: none"> <li>- 24 hr notification timeline</li> <li>- 14-day period for all documentation to reach insurer</li> <li>- Payment/deferment/rejection to be done within 90 days of receiving all documentation</li> </ul>	<ul style="list-style-type: none"> <li>- 24 hr notification timeline</li> <li>- 14 Days upon satisfaction of all docs</li> <li>- Payment/deferment/rejection to be done within 90 days of receiving all documentation</li> </ul>	<ul style="list-style-type: none"> <li>- Last expense paid within 48 hours subject to availing of required documentation</li> </ul>



## 3.3 Human-Wildlife Conflict Management and Mitigation Measures

### 3.3.1 Background

Mitigation on human-wildlife conflicts can reduce the magnitude of losses incurred by communities' thereby promoting co-existence. Mitigation measures include both financial incentives and physical measures. However, effective wildlife mitigation calls for multifaceted approach. Therefore, a combination of mitigation measures is often recommended in situations of human-wildlife conflict. For instance, the most common physical mitigation measures (in form of barriers like fences) used for the larger mammals such as the elephants often fail as the animals learn to circumvent barriers. For insurance pricing to be undertaken, it is pertinent that there is an investment in preventive measures to mitigate the risks accordingly. Figure 3 below provides a summary of understanding of human-wildlife conflicts.





**Figure 3:** Understanding of human-wildlife conflicts

Managing HWC takes on many forms which include the development of community-based insurance/relief schemes, fencing, trenches, deterrents (e.g., noise, lighting), and legal protocols for dealing with straying wildlife, active management of wildlife, community education, hotspot mapping, the use of rapid Response Teams following conflict events and monitoring of results. These actions can be grouped into six conflict management elements namely: policy, prevention, mitigation, understanding the conflict, response, and monitoring as illustrated below. The cost expense of some conflict law management measures, especially the preventative measures such as fence erection will outweigh their cost benefit. Thusly, the raison d'être for conflict management should always be the long-term reduction of conflict and promotion of coexistence vis-à-vis pursuit of short-term monetary or economic gain. The table in section 3.3.1 shows the suggested mitigation strategies that can/are being employed in a variety of the counties.



### 3.3.2 Conflict management strategies and applicable counties per species

Table 8 below provides a summary of the different conflict management strategies used for different species in different counties.

**Table 8:** Different conflict management strategies in different counties

Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
Elephant	Meru Taita taveta Laikipia Nyeri Isiolo Makueni Samburu Kwale Narok Baringo Kajiado	• Erecting & Maintenance of solar/ Electric Fence	KWS, County Government, Conservancies, NGOs,	No of km
		• Water provision (Community & Elephant)	KWS, County Government, Conservancies, NGOs,	No of sites
		• Non-preferred crops (chilies aloe)	Conservancies, Community, CBO	No of programmes established
		• Bio fencing	Community	Sites
		• Watch tower	Community/conservancies	Sites
		• Strengthen & equip PAC monitoring/ response rangers/scouts	KWS, County Government, Conservancies, NGOs	No of units
		• Education and awareness	KWS, Conservancies, NGO	No of awareness programmes
		• Collaring of problematic animals	KWS	No collared
		• Translocation of problematic animals	KWS	No translocated
		• Opening of the migration corridors & construction of overpasses	KWS, Ministry of Finance & Planning; Ministry of Interior and	No of corridors secured

Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
		<ul style="list-style-type: none"> <li>Establishment of community conservancies</li> </ul>	National Government Coordination; Ministry of Infrastructure Development	
<b>Snake</b>	Marsabit Wajir Mandera Kitui Kwale Taita taveta Baringo Tana river Kilifi Makueni	<ul style="list-style-type: none"> <li>Empower and engage communities (education, communication, training and facilitation)</li> <li>Accessible treatments for snakebite (safe, effective, affordable, accessible treatments for snakebite)</li> <li>Strengthen health systems (resources, information and health personnel required for the control of snakebite)</li> <li>Increase partnerships, coordination and information sharing</li> </ul>	KWS, NIMK, Conservancies  MOH, NGO  MOH	Programs undertaken  No of medical facilities offering snake bite treatment  No programs undertaken
<b>Hyenas</b>	Samburu Narok Taita taveta Tana river Marsabit Wajir Mandera Isiolo Garissa Laikipia Kajiado	<ul style="list-style-type: none"> <li>Effective nocturnal livestock management and herding during daytime</li> <li>Enhanced guarding and construction of predator proof bomas</li> <li>Education and awareness creation</li> <li>PAC response teams' predator control equipment</li> </ul>	MoTW, KWS  Communities  Communities, CBOs, NGOs, Conservancies  KWS, Conservancies, NGOs, CBOs  KWS	No programs undertaken  % reduction of attacks  % reductions in attacks  No of awareness programmes  No of predator equipment procured



Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
<b>Leopard</b>	Samburu Marsabit Narok Laikipia Taita taveta Nyeri Nakuru Meru Bomet Eikeyo marakwet Baringo	<ul style="list-style-type: none"> <li>• PAC response teams' predator control equipment</li> </ul>	KWS	No of predator equipment procured
		<ul style="list-style-type: none"> <li>• Education and awareness creation</li> </ul>	KWS, Conservancies, CBOs	No of awareness programmes
		<ul style="list-style-type: none"> <li>• Strengthen PAC response rangers/scouts</li> </ul>	KWS, Conservancies	No of staff trained
		<ul style="list-style-type: none"> <li>• Translocation of problematic animals</li> </ul>	KWS	No of animals translocated
		<ul style="list-style-type: none"> <li>• Construction of predator proof bomas</li> </ul>	Conservancies, NGOs, CBOs	%Reduction in predation incidents
		<ul style="list-style-type: none"> <li>• PAC response teams' predator control equipment</li> </ul>	KWS	No of equipment procured
		<ul style="list-style-type: none"> <li>• Effective nocturnal livestock management and herding of livestock during daytime</li> </ul>	Communities, Conservancies	%Reduction in predation incidents
		<ul style="list-style-type: none"> <li>• Use of lion lights to deter night attack</li> </ul>	Conservancies, CBOs, NGOs	%Reduction in predation incidents
		<ul style="list-style-type: none"> <li>• Education and awareness creation</li> </ul>	KWS, Conservancies, NGOs, CBOs	No of awareness programmes
		<ul style="list-style-type: none"> <li>• PAC response teams' predator control equipment</li> </ul>	KWS	No of predator equipment procured
<ul style="list-style-type: none"> <li>• Strengthen PAC response rangers/scouts</li> </ul>	KWS	No of staff trained		
<ul style="list-style-type: none"> <li>• Translocation of problematic animals</li> </ul>	KWS	No of animals trans located		



Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
<b>Buffalo</b>	Tana river Narok Laikipia Lamu Garissa Taita taveta Nakuru Nyeri Kwale Isiolo Kajiado	<ul style="list-style-type: none"> <li>• Construction of predator proof bomas</li> <li>• Erecting &amp; Maintenance of solar/Electric Fence</li> <li>• Water provision (Community &amp; Elephant)</li> <li>• Non-preferred crops (sisal, aloe)</li> <li>• Bio fencing</li> <li>• Watch tower</li> <li>• Strengthen PAC monitoring/response rangers/scouts</li> <li>• Education and awareness</li> </ul>	<p>Conservancies, NGOs, CBOs</p> <p>KWS, Conservancies, NGOs</p> <p>KWS, NGOs, Conservancies, CBOs</p> <p>Community, CBOs</p> <p>Communities</p> <p>Communities</p> <p>KWS/Conservancies</p> <p>KWS, WCK, CBOs</p>	<p>%Reduction in predation incidents</p> <p>No of km</p> <p>No of water points developed</p> <p>No of programmes established</p> <p>No of fences</p> <p>No developed</p> <p>No of staff trained</p> <p>No of awareness programmes</p> <p>No of programmes established</p> <p>No of staff trained</p> <p>No of awareness programmes</p> <p>% decrease in attacks</p>
<b>Zebra</b>	Samburu Baringo Narok Laikipia Nakuru Lamu	<ul style="list-style-type: none"> <li>• Non-preferred crops (sisal, aloe)</li> <li>• Strengthen PAC monitoring/response rangers/scouts</li> <li>• Education and awareness</li> </ul>	<p>Community, CBOs</p> <p>KWS/Conservancies</p> <p>KWS, WCK, CBOs</p>	<p>No of programmes established</p> <p>No of staff trained</p> <p>No of awareness programmes</p> <p>No of programmes established</p> <p>No of awareness programmes</p>
<b>Hippo</b>	Tana river Embu Homa bay	<ul style="list-style-type: none"> <li>• Enhanced farm guarding</li> <li>• Education and awareness</li> </ul>	<p>Community, CBOs</p> <p>KWS, WCK, CBOs</p>	<p>% decrease in attacks</p> <p>No of awareness programmes</p>

Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
	Kisumu Siaya Nyandarua Lamu Kirinyaga Laikipia Taita taveta	• Erecting & Maintenance of Fences	KWS, Conservancies, NGOs	No of km
		• Trenches/Moats	KWS, Conservancies, NGOs	% decrease in attacks
		• Water provision (Community & Elephant)	KWS, NGOs, Conservancies, CBOs	No of water points developed
		• Provide alternative water sources for community and their livestock	KWS, Conservancies, NGOs, County	No of alternative water sources established
<b>Crocodile</b>	Tana river Mandera Kwale Baringo Garissa Kisumu Kilifi Makueni Turkana West pokot	• Education awareness programs Targeting Schools and Public,	KWS, WCK, CBOs	No of awareness programmes
		• Construction of Crocodile Exclusion Enclosures	KWS, Conservancies, NGOs, County	
		• Construction of safe river crossings/bridges	KWS, Conservancies, NGOs, County	No of safe crossing points established
		• Education and awareness	KWS, WCK, CBOs	No of awareness programmes
<b>Wild dog</b>	Samburu Elgeyo marakwet Laikipia Mandera Nyeri Isiolo Kericho Narok Kakamga	• Non-preferred crops (sisal, aloe)	Community, CBOs	No of programmes established
		• Good livestock husbandry practices	Community, CBOs, Conservancies	No of community training
		• Strengthen PAC monitoring/response rangers/scouts	KWS, Conservancies	No of staff trained

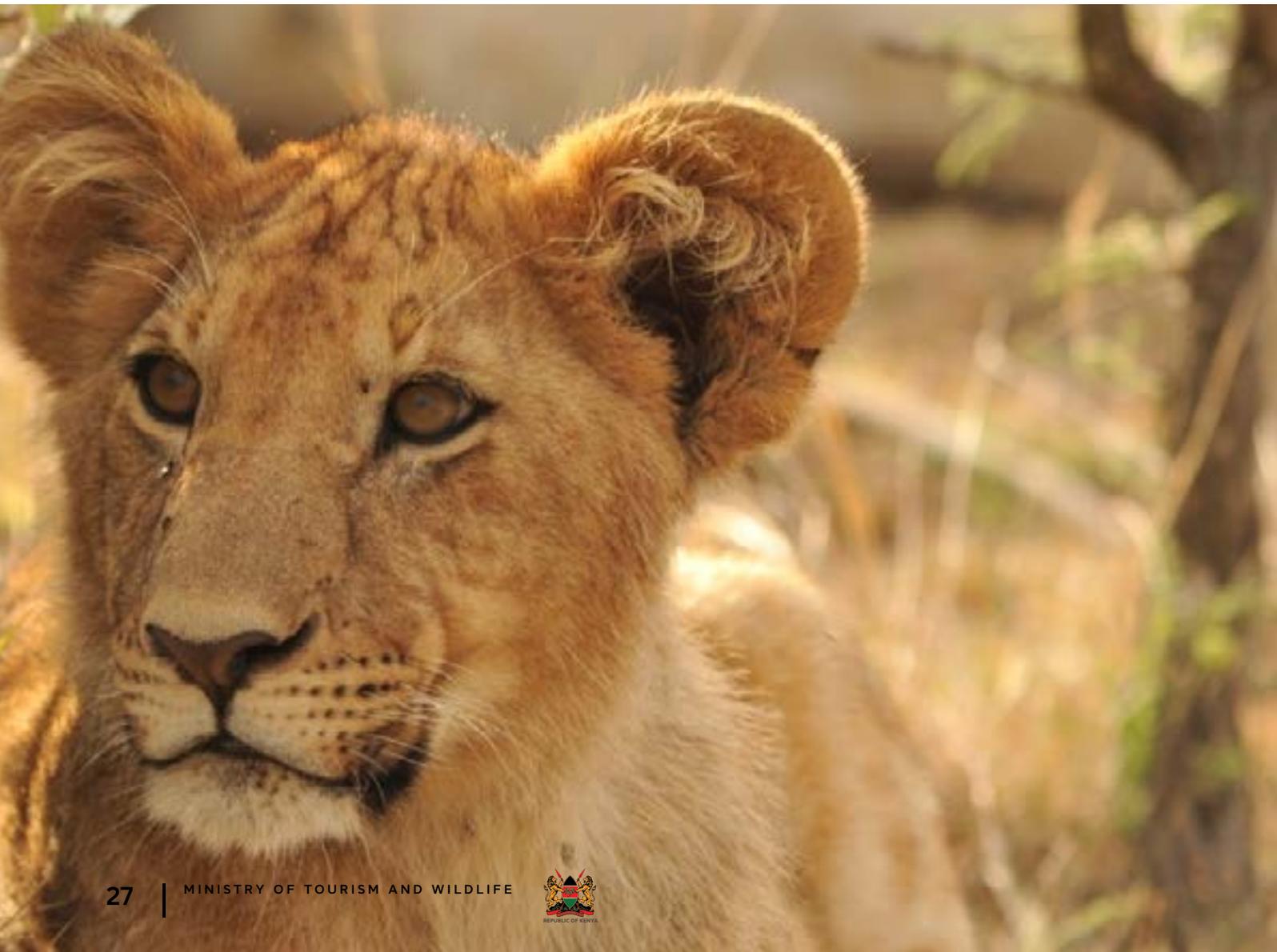
Animal Responsible	County	Conflict Management Strategies	Implementation Agency/Partner	Indicator
<b>Cheetah</b>	Taita taveta Garissa			
	Taita taveta Samburu Marsabit Mandera Tana river Wajir	<ul style="list-style-type: none"> <li>• Education awareness programs</li> </ul>	KWS, WCK, CBOs	No of awareness programmes
	Kajiado Laikipia Garissa Baringo	<ul style="list-style-type: none"> <li>• Good livestock husbandry practices</li> <li>• Strengthen PAC monitoring/ response rangers/scouts</li> </ul>	Community, CBOs, Conservancies  KWS, Conservancies	No of community training  No of staff trained

## 3.4 Human-Wildlife Conflict Insurance Scheme Pricing

### 3.4.1 Background

The insurance scheme offers the following products based on current Wildlife Conservation and Management Act, 2013 (WCMA Act 2013), human death and injury (permanent or temporary disability), crop damage, livestock predation and property damage. An insurance plan to take over the compensation of the victims of human wildlife conflict is estimated to cost **KES 3.435Billion** with snakes covered and **KES 1.597Billion** without including snakes if death is compensated at **KES 3Million**. The plan is expected to provide the following covers: Death; Bodily injuries i.e. Permanent total disability (PTD) and pain and suffering (P&S) and medical expenses; agriculture cover (i.e., crop damage and livestock predation); property coverage.

The Death benefit level is a significant cost driver for this plan since it affects the death payout plus the PTD payouts. The above price estimate is based on a **KES 3Million** death benefit. Assuming **KES 5Million** death benefit, the price increases to **KES 4.5Billion** and **2.0Billion** respectively i.e. 27% and 20% increases respectively. The highest cost contributors are bodily injury claims, death and Livestock predation respectively. Assuming the cases for the above coverages increases by over 30%, the cost of the plan will be affected adversely. Because of this, a pilot, to ascertain the KWS experience, is highly recommended.



at about **KES 3Billion** with snakes covered and **KES 1.5Billion** without snakes annually. We noted a few limitations with the data notably the inconsistencies between the two main data sets supplied by the KWS namely the compensation data and the incidence data. To curtail this, data from other sources including the Big-Life Foundation was used to try and substantiate the data that was provided by the KWS. Expert opinion was also used to derive and validate some of the assumptions used in the pricing work. All the mitigations, both those in place and planned for in the near future, were considered in the pricing. We noted that while the government may have invested on some mitigation strategies, the data available cannot conclusively point to a direct correlation to a reduction in HWC. This however may be determined conclusively if data collection methods are improved and a pilot may shed more light on this. All the prices above have been calculated assuming a 10% commission payment and can be reviewed based on the final commission terms that will be agreed upon.

Due to the shortcoming of the data and given that this is a first in the insurance industry, a pilot of not less than 8 months is recommended. The following counties have been proposed for an 8-month pilot with an estimated cost as shown below (Table 9).

**Table 9:** Cost of piloting the HWC insurance scheme in Taita Taveta, Kajiado, Narok and Meru Counties

Condition	Cost in Counties (KES)				Combined (KES)
	Taita Taveta	Kajiado	Narok	Meru	
With Snakes	170,335,032	127,582,041	119,230,255.33	105,870,847.33	<b>523,018,176</b>
Without Snakes	107,616,836	55,343,230	94,528,922	83,807,017	<b>341,296,005</b>

The proposed counties are some of the HWC hotspots in the country which have a holistic view of the types of the conflict. Kajiado and Taita Taveta are among the chosen counties with significant exposures to snakes. Thus, a pilot with snakes is recommended so that the experience from the counties can be used to inform a final decision on snakes.

### 3.4.2 Pricing Results and Scenarios

The table below shows the estimated cost to the government for such a scheme. It was noted that most of the injury and/or death cases are caused by snakes. This taskforce has deliberated on whether or not to include snakes in the schedule of animals to be compensated with regards to HWC. To accommodate these deliberations, the results will reflect both cases of when snakes are included (**With Snakes**) and excluding snakes (**W/o Snakes**). Based on the data provided and assumptions above, the estimated cost to the government for this scheme is **KES 3.435Billion** with Snakes and **KES 1.597Billion** without (W/o) snakes assuming that compensation for death is **KES 3Million** (Table 10). The price reflects expert opinions and current mitigation strategies in place. The breakdown of the premiums into various components are as follows. However, if compensation for death is increased to **5Million**, then the premiums increase by 20% to 27% from **KES 1.597Billion** to **KES 1.915Billion** without snakes and **KES 3.435Billion** to **KES 4.427Billion** with snakes respectively (Table 10 and Table 11).

In case the Government lowers compensation for death to **KES 1Million** or **KES 2Million**, the premium will be **KES 2.444Billion** and **2.939Billion** with snakes included and **KES 1.279** and **KES 1.438Billion** without snakes being included respectively (Table 12 and Table 13).

**Table 10:** Breakdown of Premiums with proposed death benefit of KES 3M

			In MillionsAdmin
	Item	With Snake	W/o Snakes
A	<b>Death</b>	<b>600</b>	<b>240</b>
B	<b>Injury Benefits</b>	<b>1,434</b>	<b>425</b>
C	PTD	675	169
	Pain & Suffering	207	52
	Medical Expenses	450	113
	Xol	102	92
D	<b>Agriculture Coverage</b>	<b>345</b>	<b>345</b>
	Livestock Predation	306	306
	Crop Damage	38	38
E	<b>Property Damage</b>	<b>30</b>	<b>30</b>
<b>F= SUM (A...E)</b>	<b>Risk Premium</b>	<b>2,408</b>	<b>1,039</b>
<b>G= 5% of F</b>	<b>Risk Margin</b>	<b>120</b>	<b>52</b>
<b>Admin Expenses</b>			
H	Salaries - CVOs & CIR	214	150
I	Transport - CVOs	26	18
J	IT	32	32
K	Investigation costs	102	51
L	Training & awareness	188	94
<b>M= Sum(H,I,J,K,L)</b>	<b>Total Admin Expenses</b>	<b>563</b>	<b>346</b>
<b>N=10% of O</b>	<b>Commission</b>	<b>344</b>	<b>160</b>
<b>O=(F+G+H+M+N)</b>	<b>Gross Premiums</b>	<b>3,435</b>	<b>1,597</b>

**Table 11:** Premium cost with Kshs 5M death benefit

			In MillionsAdmin
	Item	With Snake	W/o Snakes
A	<b>Death</b>	<b>1000</b>	<b>400</b>
B	<b>Injury Benefits</b>	<b>1,884</b>	<b>537</b>
C	PTD	1,125	281
	Pain & Suffering	207	52
	Medical Expenses	450	113
	Xol	102	92
D	<b>Agriculture Coverage</b>	<b>345</b>	<b>345</b>
	Livestock Predation	306	306
	Crop Damage	38	38
E	<b>Property Damage</b>	<b>30</b>	<b>30</b>
<b>F= SUM (A...E)</b>	<b>Risk Premium</b>	<b>3,258</b>	<b>1,312</b>
<b>G= 5% of F</b>	<b>Risk Margin</b>	<b>163</b>	<b>66</b>
<b>Admin Expenses</b>			
H	Salaries - CVOs & CIR	214	150
I	Transport - CVOs	26	18
J	IT	32	32
K	Investigation costs	102	51
L	Training & awareness	188	94
<b>M= Sum(H,I,J,K,L)</b>	<b>Total Admin Expenses</b>	<b>563</b>	<b>346</b>
<b>N=10% of O</b>	<b>Commission</b>	<b>443</b>	<b>191</b>
<b>O=(F+G+H+M+N)</b>	<b>Gross Premiums</b>	<b>4,427</b>	<b>1,915</b>

**Table 12:** Breakdown of premiums with proposed death benefit of KES 1M

		In MillionsAdmin	
	Item	With Snake	W/o Snakes
A	<b>Death</b>	<b>200</b>	<b>80</b>
B	<b>Injury Benefits</b>	<b>984</b>	<b>312</b>
C	PTD	225	56
	Pain & Suffering	207	52
	Medical Expenses	450	113
	Xol	102	92
D	<b>Agriculture Coverage</b>	<b>345</b>	<b>345</b>
	Livestock Predation	306	306
	Crop Damage	38	38
E	<b>Property Damage</b>	<b>30</b>	<b>30</b>
<b>F= SUM (A...E)</b>	<b>Risk Premium</b>	<b>1,558</b>	<b>767</b>
<b>G= 5% of F</b>	<b>Risk Margin</b>	<b>78</b>	<b>38</b>
<b>Admin Expenses</b>			
H	Salaries - CVOs & CIR	214	150
I	Transport - CVOs	26	18
J	IT	32	32
K	Investigation costs	102	51
L	Training & awareness	188	94
<b>M= Sum(H,I,J,K,L)</b>	<b>Total Admin Expenses</b>	<b>563</b>	<b>346</b>
<b>N=10% of O</b>	<b>Commission</b>	<b>244</b>	<b>128</b>
<b>O=(F+G+H+M+N)</b>	<b>Gross Premiums</b>	<b>2,444</b>	<b>1,279</b>

**Table 13:** Breakdown of premiums with proposed death benefit of KES 2M

		In MillionsAdmin	
	Item	With Snake	W/o Snakes
A	<b>Death</b>	<b>400</b>	<b>160</b>
B	<b>Injury Benefits</b>	<b>1,209</b>	<b>368</b>
C	PTD	450	113
	Pain & Suffering	207	52
	Medical Expenses	450	113
	Xol	102	92
D	<b>Agriculture Coverage</b>	<b>345</b>	<b>345</b>
	Livestock Predation	306	306
	Crop Damage	38	38
E	<b>Property Damage</b>	<b>30</b>	<b>30</b>
<b>F= SUM (A...E)</b>	<b>Risk Premium</b>	<b>1,988</b>	<b>903</b>
<b>G= 5% of F</b>	<b>Risk Margin</b>	<b>99</b>	<b>45</b>
<b>Admin Expenses</b>			
H	Salaries - CVOs & CIR	214	150
I	Transport - CVOs	26	18
J	IT	32	32
K	Investigation costs	102	51
L	Training & awareness	188	94
<b>M= Sum(H,I,J,K,L)</b>	<b>Total Admin Expenses</b>	<b>563</b>	<b>346</b>
<b>N=10% of O</b>	<b>Commission</b>	<b>294</b>	<b>144</b>
<b>O=(F+G+H+M+N)</b>	<b>Gross Premiums</b>	<b>2,939</b>	<b>1,438</b>

### 3.4.3 Stress Testing of Results

The table below shows the impact of each item on price assuming incidence cases increases by the percentages shown in the first row of the table. From the table, the highest risks are from the following coverages:

1. Bodily injury coverages i.e. PTD, P&S and medical expenses
2. Death Cover.

For instance, an increase of death cases by 30% increases cost by 6%. Similarly, an increase of Injury cases by 30% increases the overall cost by 15%. An increase of both death and injury cases by 30% result to an increase of cost by more 21% (Table 14).

**Table 14:** Impact of incidental increases on price per Incident type (With Snakes)

Item	% Increase				
	10%	20%	30%	50%	100%
Death	2%	4%	6%	10%	20%
Injury	5%	10%	15%	24%	49%
Animal Predation	1%	2%	3%	5%	10%
Crop Damage	0%	0%	0%	1%	1%
Property Damage	0%	0%	0%	0%	1%
Death Plus Injury	7%	14%	21%	35%	69%

Table 15 below shows the same analysis without snakes.

**Table 15:** Impact of incidental increases on price per Incident type (Without Snakes)

Item	% Increase				
	10%	20%	30%	50%	100%
Death	2%	4%	5%	9%	18%
Injury	2%	5%	7%	12%	24%
Animal Predation	2%	4%	7%	11%	22%
Crop Damage	0%	1%	1%	1%	3%
Property Damage	0%	0%	1%	1%	2%
Death Plus Injury	4%	8%	13%	21%	42%

Due to the shortcomings of the data provided and the possibility that it is highly likely that not all cases might have been reported, the stress test results above shows the likely cost increase if the actual cases vary from the expected cases based on the data.

#### 3.4.4 Financial Forecast

The government is actively working to minimize cases of HWC by continually implementing mitigation measures. Several conflict management strategies have been put in place to mitigate HWC and prevent the conflict . These measures are expected to reduce cases of HWC and consequently may affect the cost of the insurance plan in future. The estimated reduction of conflict by these projects and the cost implication to the insurance plan in the long term have been considered. The table below shows the expected cost reduction to the plan once the top 10 strategies are complete .

From the data provided, the long-term financial position of this plan is forecasted based on the following assumptions:

From the mitigation strategies provided, the predominant strategy by the government is the installation of fences, which has been effective the deterrent of large mammals such as elephants. Thus, the impact these fences will have on HWC in the future have been estimated. The data provided by KWS has been used to estimate the proportion of incidences associated with larger animals and the table below shows the ratios. For instance, only 12% of death cases in the compensation data was caused by the big mammals.

The table includes the best estimate of percentage reduction in cases assuming 100% effectiveness of fences and that the whole ecosystem will be fenced at the completion of the project. However, because of this improbability other scenarios have been provided based on various proportion of effectiveness. The table below shows the various scenarios. The maximum percentage reduction column represents an assumption that the fences will inhibit 100% of the cases by large animals. The median scenario assumes 50% effectiveness of the fences once complete and the minimum scenario assumes a 25% effectiveness. The others column represent the impact of the other mitigation strategies apart from physical barriers.

<sup>6</sup> More information on these strategies are documented in the HWC Taskforce report on Human *Wildlife Conflict Management and Mitigation*

<sup>7</sup> Some of the projects are yet to start or be completed with no clear completion date. As a result, some of the time depended projections may be affected.

**Table 16:** Percentage reduction with various degrees of effectiveness of fences (Include actual base number)

	Max	Median	Min	Others
Death	12%	6%	3%	3%
Injury	8%	4%	2%	3%
Crop Destruction	30%	15%	7%	10%
Predation	27%	13%	7%	10%
Property Damage	50%	25%	13%	0%

Another significant assumption for the financial forecast is the long-term administration expenses for the plan. The first-year expenses are steep due to the initial setting up expenses that one would expect to reduce after initial set up. A long-term expense average of KES 250M has been assumed based on the breakdown provided by the team.

Based on the above assumptions, the table below shows the long-term projected position of this plan assuming all the mitigation suggested are implemented.

**Table 17:** Long-term projected Costs (with snakes)

Description		Expected	Worsed Case
<b>Death</b>	<b>466,050,420.17</b>	<b>503,025,210.08</b>	<b>521,512,605</b>
TPD	552,278,633	579,889,317	593,694,658
P&S	168,997,262	177,446,131	181,670,565
Medical Expenses	368,185,756	386,592,878	395,796,439
XOL	83,455,438	87,627,719	89,713,859
<b>Bodily Injury</b>	<b>1,172,917,089</b>	<b>1,231,556,044</b>	<b>1,260,875,522</b>
Camels	6,300,000	6,300,000	6,300,000
Cattle	180,000,000	180,000,000	180,000,000
Goats	56,250,000	56,250,000	56,250,000
Sheep	56,250,000	56,250,000	56,250,000
Donkey	7,500,000	7,500,000	7,500,000
<b>Animal Predation</b>	<b>306,300,000</b>	<b>306,300,000</b>	<b>306,300,000</b>

Description		Expected	Worsed Case
Property Damage	12,000,000	12,000,000	12,000,000
Crop Damage	23,107,047	23,107,047	23,107,047
Claim Cost	1,980,374,556	1,980,374,556	1,980,374,556
Risk Margin	99,018,728	99,018,728	99,018,728
<b>Risk Premiums</b>	<b>2,079,393,283</b>	<b>2,079,393,283</b>	<b>2,079,393,283</b>
Salaries - CVOs & CIR	198,980,586	198,980,586	198,980,586
Transport - CVOs	23,925,088	23,925,088	23,925,088
IT	7,541,800	7,541,800	7,541,800
Investigation costs	96,436,398	96,436,398	96,436,398
Training & awareness	103,427,072	103,427,072	103,427,072
<b>Administration Cost</b>	<b>430,310,944</b>	<b>430,310,944</b>	<b>430,310,944</b>
<b>Commissions</b>	<b>278,856,025</b>	<b>278,856,025</b>	<b>278,856,025</b>
<b>Gross Premiums</b>	<b>2,788,560,253</b>	<b>2,788,560,253</b>	<b>2,788,560,253</b>

**Table 18:** Long-term projected Costs (without snakes)

Description		Expected	Worsed Case
<b>Death</b>	<b>186,420,168.07</b>	<b>201,210,084.03</b>	<b>208,605,042</b>
TPD	138,069,658	144,972,329	148,423,665
P&S	42,249,315	44,361,533	45,417,641
Medical Expenses	92,046,439	96,648,219	98,949,110
XOL	75,109,894	78,864,947	80,742,474
<b>Bodily Injury</b>	<b>347,475,307</b>	<b>364,847,028</b>	<b>373,532,889</b>
Camels	6,300,000	6,300,000	6,300,000
Cattle	180,000,000	180,000,000	180,000,000
Goats	56,250,000	56,250,000	56,250,000
Sheep	56,250,000	56,250,000	56,250,000
Donkey	7,500,000	7,500,000	7,500,000
<b>Animal Predation</b>	<b>306,300,000</b>	<b>306,300,000</b>	<b>306,300,000</b>

Description		Expected	Worsed Case
Property Damage	12,000,000	19,500,000	23,250,000
Crop Damage	23,107,047	28,766,023	31,595,512
Claim Cost	875,302,522	920,623,136	943,283,443
Risk Margin	43,765,126	46,031,157	47,164,172
<b>Risk Premiums</b>	<b>919,067,648</b>	<b>966,654,293</b>	<b>990,447,615</b>
Salaries - CVOs & CIR	198,980,586	198,980,586	198,980,586
Transport - CVOs	23,925,088	23,925,088	23,925,088
IT	7,541,800	7,541,800	7,541,800
Investigation costs	96,436,398	96,436,398	96,436,398
Training & awareness	103,427,072	103,427,072	103,427,072
<b>Administration Cost</b>	<b>430,310,944</b>	<b>430,310,944</b>	<b>430,310,944</b>
<b>Commissions</b>	<b>149,930,955</b>	<b>155,218,360</b>	<b>278,856,025</b>
<b>Gross Premiums</b>	<b>1,499,309,546</b>	<b>1,552,183,596</b>	<b>2,788,560,253</b>

Based on the data provided and the above assumptions, the expected long-term forecast of the financial cost of this plan is at about KES 3B with snakes and KES 1.6B without snakes.

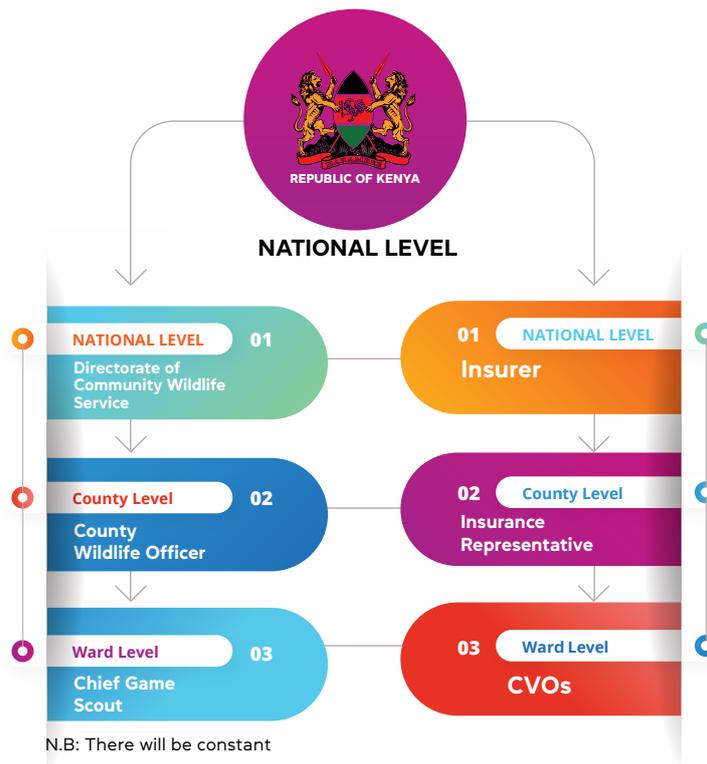
## 4.0 GOVERNANCE STRUCTURE

### 4.1 Background

The governance structure provides a framework through which the Human Wildlife Co-existence Compensation Scheme (HWCCS) is governed. It shows the interaction between different parties within the scheme and provides a mechanism for decision-making. The scheme will fall under the Ministry of Tourism and Wildlife and will have two main arms: the government and the private sector. The government arm will be represented by a new proposed Directorate under the Ministry of Tourism and Wildlife. This directorate will oversee the county and ward level personnel that will be involved in reporting HWC. On the private sector side, the chosen insurance company will be responsible to oversee its personnel who will be in the county and ward levels depending on the level of HWC in any particular county.

The governance structure has been designed to encourage a claims verification process that is simple, efficient and effective. The governance structure has also borrowed lessons learnt from the current national scheme and other community schemes. One of the major lessons is the need to involve the community in the decision-making and verification process of claims. It is in this spirit that the contracted insurance company will be expected to provide a mechanism to work with the communities in this process. A technology platform consisting of a database and communication mechanism will be set up and will anchor the communication between all parties from the grassroots to the national level on all HWC cases.

**Figure 3: HWCCS Governance Structure**  
communication at each level between the government representative and the insurance industry representative. This constant communication is represented by the red dotted line.



## 4.2 Roles

### 4.2.1 Chief/Assistant Chief

- Report the claims through the USSD platform
- Education and awareness on importance of wildlife
- Witness cases
- Pass information to national government system
- Assist the victim to fill forms in the case of death
- Enforce relevant laws and regulations on wildlife
- Inform insurers and government systems on false claimants
- Recommend effective and appropriate mitigation measures
- Oversee the game Scouts
- Data collection on HWC (photographs, evidence)

### 4.2.2 Community Verification Officers (CVOs)

- Education and awareness on the insurance scheme
- Report the claims through the USSD platform
- Verification of HWC claims
- Evidence generation (photographs, GPS location)
- Follow-up on claims documentation
- Flag out false claimants
- Provide feedback on the claims verification process
- Assist claimants to complete documentation
- Recommend effective and appropriate mitigation measures
- Pass information and answerable to the county insurance office

### 4.2.3 County Insurance Representative

- Administer claims at the county level
- Recommend to insurer payment of simple claims
- Recommend to insurer investigation of suspicious claims
- Where necessary, visit the incident scenes
- Pass all documentation to insurance HQ
- Education and awareness on the HWCCS
- Share all data and information on HWC claims reported with the County Warden

### 4.2.4 County Wildlife Officer

- Coordinate all HWC matters at the county level
- Education and awareness on wildlife conservation
- Implement mitigation measures
- Respond to incidences of HWC
- Maintain a county database on all HWC incidences, claims and status

#### 4.2.5 Directorate of Community Wildlife Service

It is recommended that the broad function of this Directorate will include management of wildlife outside National Parks and Reserves including HWC compensation, Licensing, Communities/Conservancy Management, Conservation Education, promoting co-existence, corridors and dispersal areas, Stakeholder coordination and Industry governance. In implementing this scheme, the directorate will be responsible for the following:

- Implement national HWC policy
- Maintain a national database on all HWC incidences, claims and status
- Preparation of national work plans and budget to support HWC
- Prepare a national strategy on HWC
- Prepare and distribute materials on HWC for public education (digital, print, radio, social media, TV)
- Coordinate all Wildlife County Wardens
- Training of staff involved in HWC
- Implement and monitor HWC mitigation measures to the parent ministry
- Monitoring and evaluation
- Procurement of the insurance scheme

#### 4.2.6 Insurance Company

- Receive premiums from the government
- Assume HWC risks on behalf of government
- Payment of claims
- Institutionalization of risk management
- Maintain a database on HWC claims
- Education and awareness on HWC insurance scheme
- Provide reports and feedback to The Directorate of CWS regularly
- Monitoring and evaluation
- Advise government on scheme improvements and optimization
- Training strategy for partners

#### 4.2.7 Ministry

- Policy and legislation development
- Monitoring and evaluation
- Budgetary support

## 5.0 FINANCING MECHANISMS FOR THE HUMAN-WILDLIFE CONFLICT COMPENSATION SCHEME

### 5.1 Introduction

The current funding of human-wildlife conflict compensation is sourced from the exchequer. The establishment of the human-wildlife co-existence fund is important to ensure coordinated fund-raising and funding of human-wildlife co-existence programmes in Kenya. The goal is to ensure the country has adequate funds to facilitate human-wildlife co-existence programmes, therefore enhancing community per capita income and consoling individuals who bear the cost of living with wildlife.

## 5.2 Purpose of the fund

The human-wildlife coexistence fund will have diverse purposes with an overall goal of encouraging co-existence between the human communities and wildlife. Some of the key purposes of the fund are to finance:

- 1) Implementation of HWC mitigation measures: The fund will be used to finance new HWC mitigation projects as well as maintenance of the existing HWC mitigation measures.
- 2) Conservation education and awareness: One of the issues that came out strongly during field visits was the lack of general knowledge and understanding of how the current wildlife compensation scheme operates. As the adage goes, knowledge is power, initial intense and subsequent public education campaigns in wildlife conflict areas will contribute to the success of the scheme. The fund will therefore be used to support public conservation education.
- 3) Premium payment: Despite the willingness by the government to settle compensation claims, there has been inadequate funding. The fund will be used to pay premiums to the Human-Wildlife Conflict Compensation Scheme.
- 4) Development and maintenance of the HWC database, including the technology hub: The primary owner of the technological hub will be the state who will give access rights to partners.
- 5) Support Litigation: In the case that claimants are not satisfied and sue the state for damage, the litigation fees shall be sourced from the fund.
- 6) HWC related research and innovation as well as matters regarding Human-Wildlife Coexistence in the country

## 5.3 Fund Administration and Corporate Governance

The fund will be supported by a fund administrator (CEO) and a secretariat. An independent board shall be established to manage the fund. The board shall comprise of representatives from the following:

- Ministry of Tourism and Wildlife
- The National Treasury
- Ministry of Interior and national government coordination
- Ministry of Devolution
- Chief Executive of the HWC Fund
- Representative of the Council of Governors
- Kenya Wildlife Conservancies Association (KWCA)
- Kenya Wildlife Service
- Kenya Wildlife Research and Training Institute
- Four (4) Independent Non-Executive Directors (INED)

## 5.4 Financing mechanism

The human-wildlife co-existence fund shall draw funds from the following:

- Appropriation by national assembly
- Conservation levies
- Tourism levies
- Payment for ecosystem services (e.g. Energy generation, Water, Carbon off-setting, Mining)
- Donations and grants from philanthropists, private sector, foundations, development partners and NGOs.

## 6.0 FINALIZATION AND IMPLEMENTATION FRAMEWORK OF THE HUMAN-WILDLIFE CO-EXISTENCE COMPENSATION INSURANCE SCHEME

Actions/Activities	Responsibility	Timeline
<b>Report Finalization</b>		
Submission of 1 <sup>st</sup> draft report to the task force	Secretariat	31 <sup>st</sup> January 2020
Presentation of 1 <sup>st</sup> draft report to Cabinet Secretary	Chairman, TF	3 <sup>rd</sup> February 2020
Consultation with Insurance Regulatory Authority (IRA) on the product and its approval	Chairman, TF & IRA	February 2020
Preparation of the final TF Report to the Chairman of TF	Secretariat	March 2020
Handing over of final TF report to the Cabinet Secretary	Chairman, TF	July 2020
Handing over of final TF report to the Cabinet Secretary	Chairman, TF	July 2020
<b>Report Implementation</b>		
Piloting of scheme (Taita Taveta, Narok, Kajiado and Meru Counties)	Ministry of Tourism & Wildlife	August 2020
Review Results of the pilot scheme and make necessary adjustment	Ministry of Tourism & Wildlife	May 2021
Education and awareness	Ministry of Tourism & Wildlife	July 2020 & continuous
Roll out of the plan	Ministry of Tourism & Wildlife	July 2021
HWC Mitigation measures	Ministry of Tourism & Wildlife, Conservation Partners, Counties, Communities and landowners	July 2020 & continuous
Research and Innovation	Ministry of Tourism & Wildlife	July 2020 & continuous
Monitoring and Evaluation	Ministry of Tourism & Wildlife	Every Year

## 7.0 PROPOSED AMENDMENTS TO THE WCMA ACT, 2013

- i. Provide for an accelerated benefit for death to cover funeral expenses at a level of **KES 50,000**
- ii. Adopt the continental scale for permanent total disability injuries that provides varied benefits based on the level of injury up to a maximum of **KES 3,000,000**. The continental scale is a globally accepted scale for injuries.
- iii. Introduce medical expenses for injuries up to a limit of **KES 150,000**
- iv. There is need to amend the benefits awarded for crop damage, livestock predation and depredation to defined benefits.
  - a. To include that Crop damage will be paid for any crop up to a maximum limit of **KES 150,000** per event or the real loss depending on which one is less
  - b. The following livestock will be covered: cattle, goats, sheep, camels and donkeys using the tropical livestock unit (TLU). The proposed TLU will be **KES 30,000** which is equivalent to the value of a cattle as shown below

**Table 14:** Tropical Livestock Unit (TLU) valuation

Livestock	TLU	Value (KES)
Cattle	1	30,000
Sheep/Goat	0.1	3,000
Donkey	0.5	15,000
Camel	0.4	42,000

- v. The current act provides for two separate schedules for wildlife that cause human wildlife conflict. The two lists are divided for death/injury and crop/livestock/property damage. The proposal is to have 4 schedules of wildlife addressing the risks as follows:
  - a. Human death and injury (elephant, lion, leopard, rhino, hyena, crocodile, cheetah, buffalo, hippo, wild dog, snakes)
  - b. Livestock predation and depredation (Elephant, buffalo, hyena, leopard, lion, wild dog, leopard, crocodile, cheetah, snake, jackal)
  - c. Crop Damage (elephant, buffalo, hippo, zebra, eland)
  - d. Property (elephant, buffalo, hippo, hyena, zebra)
- vi. Provide for an appeal process and arbitration through IRA
- vii. The claims and compensation functions of CWCC to be amended--- amend or review section 19(i)(a). It is the proposal that the CWCC be scrapped off in totality
- viii. Give effect to WCMA, 2013 Section 24(b) on the consortium through PPP with insurance industry
- ix. Review/ amend Section (25) to be consistent with the proposed policy
- x. The functions of local administrators especially chiefs and assistant chiefs in insurance claim process for HWC.
- xi. Notification and verification process for insurance claims currently done by KWS will need to be changed to relieve them and task the functions on insurance consortium.
- xii. Inclusion of other species in the schedule.

## 8.0 CONCLUSION AND RECOMMENDATIONS

In addition to the proposed amendments to the act, we recommend the following:

- a) The name of the scheme to be: Human-Wildlife Conflict Compensation Scheme
- b) There is need for the establishment of Community Wildlife Service Directorate, delinked fully from KWS. The new Directorate will oversee conservation and management of wildlife outside protected areas including HWC as well as implementation of the HWC insurance scheme
- c) It is important to establish a Human-Wildlife Co-existence Fund. The fund will be used to finance the scheme's premiums as well as implement various HWC mitigation and management measures
- d) The HWC insurance compensation should set out as a pilot scheme to collect more data to recalculate the premium estimates. It is the proposal of this taskforce that an 8-month pilot be conducted. The four counties recommended for the pilot are Taita Taveta, Narok, Kajiado and Meru. These three hotspots represent a holistic view of the types of HWC experienced across the country. This being a scheme that would be first of its kind, there is need to test out the claims administration process as well as harmonize data collection methods. The results of this pilot will be crucial in adjusting the scheme before official roll out
- e) There is need for public education and awareness on the scheme and mitigation



measures. Public education will need to be conducted for the community members, especially in hotspot counties to understand it. A good awareness campaign will go a long way in improving the reception and ownership of the scheme.

- f) Emergency medical response services including air and road ambulance evacuation and medical rescues be provided in cases of severe injuries. This will also include inclusion of anti-venom medication in snake hotspots.
- g) Following our proposal on using chiefs and assistant chiefs in the local administration level, there is a need for training of the said administration unit on claims notification.
- h) Mitigation and prevention strategies should be strongly encouraged. Livestock herders should be encouraged to install predator proof bomas and child herding should be discouraged.
- i) There is need to have a definitive prioritization schedule for construction of electric fences in hotspot areas. Heavy financial investment is also recommended to facilitate the installations of these fences which have been known to contribute to the reduction of HWC, particularly crop raiding incidence.
- j) Snake prevention and awareness should be integrated into community education and outreach programmes to help alleviate the losses that are caused by the snakes.
- k) There is need for the adoption of technology on the claims process. The scheme should consider leveraging on existing technologies to improve on efficiency of the entire process (e.g., use of USSD for reporting, block chain to coordinate the various entities, drones for verification as well as mobile money payment systems should be adopted for small claim pay outs)
- l) The price estimates are largely based on the data provided by KWS. The estimated premium cost should therefore be taken as the lower boundary of the expected compensation cost. It is recommended that the government supports better data collection methods and streamline the processes. The proposed claims administration process and proposed claim forms hopes to ensure that.
- m) During this period sufficient data should be collected to enhance the estimates. More data on animal predation should be collected to validate the estimated annual cases. Additionally, a census on livestock mortality in an ecosystem or county to validate the number of cases expected is encouraged.
- n) For the scheme to be successful, there will be a multi-sectoral approach with partnerships of both state and non-state actors. The government is recommended to be the key player in ensuring and enabling environment for such a collaboration
- o) There is need to develop the idle parks and encourage wildlife investment. This may attempt to offload the population pressure in the HWC hotspots which usually have national parks and reserves.
- p) There is need support expansion of PAC and PAMU units for better response time in matters HWC.

## 9.0 SCHEDULE - 1: LIST OF WILDLIFE SPECIES FOR WHICH COMPENSATION SHALL BE PAID

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### Human Death & Injury

1. Elephant
2. Lion
3. Leopard
4. Rhino
5. Hyena
6. Crocodile
7. Cheetah
8. Buffalo
9. Hippo
10. Wild Dog

### Predation

1. Hyena
2. Leopard
3. Lion
4. Wild Dog
5. Leopard
6. Crocodile
7. Cheetah
8. Jackal

### Crop Damage

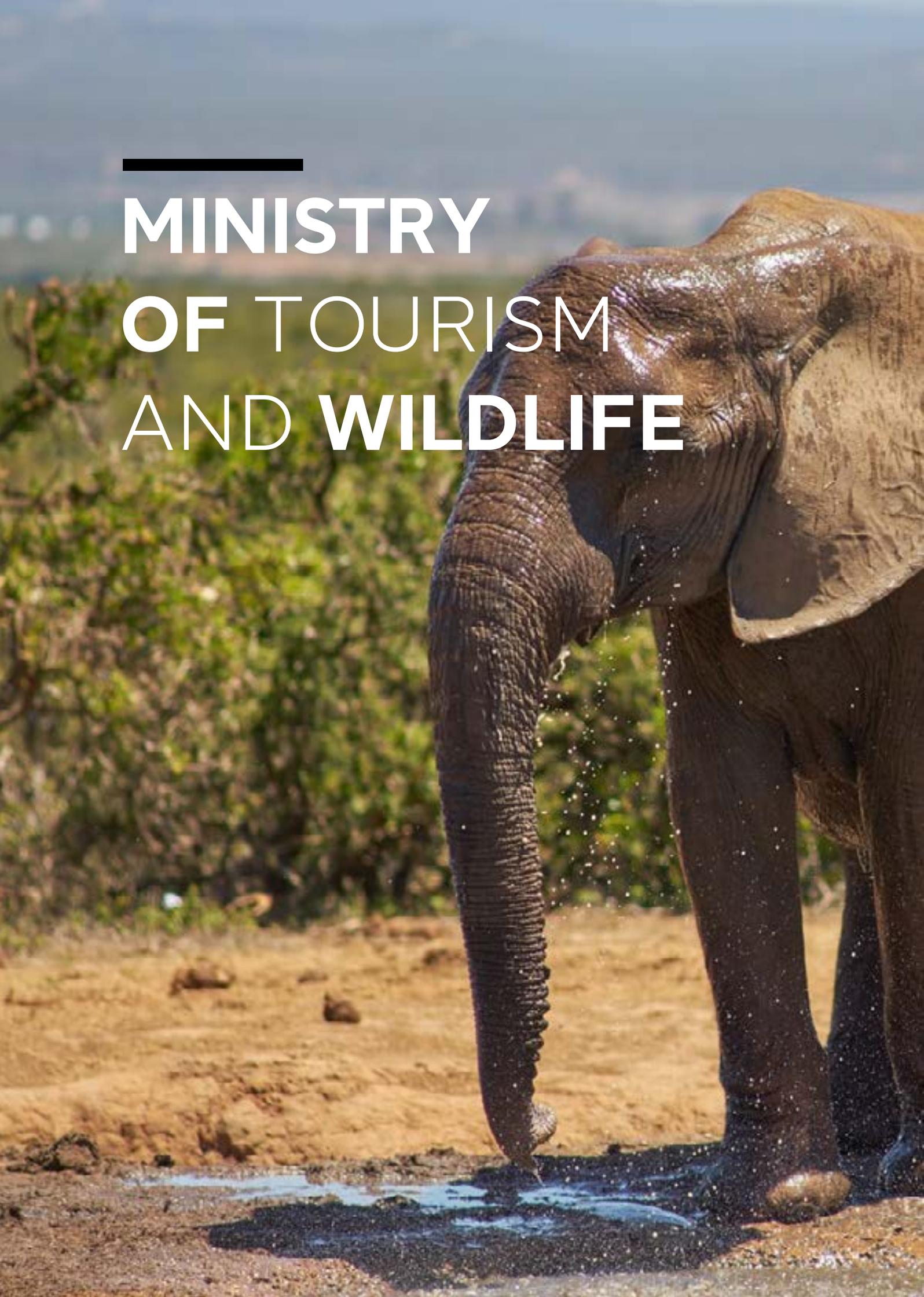
1. Elephant
2. Buffalo
3. Hippo
4. Zebra
5. Eland
6. Rhino
7. Wildebeest

### Property

1. Elephant
2. Buffalo
3. Hippo
4. Hyena
5. Zebra

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# MINISTRY OF TOURISM AND WILDLIFE





## 10.0 REFERENCES

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