HUMAN-WILDLIFE CONFLICT MICROINSURANCE SCHEME

LIVELIHOOD INSURANCE FROM ELEPHANTS (LIFE) KENYA

Global Wildlife Program (GWP) and Environment, Natural Resources and Blue Economy (ENB) Webinar

Tuesday, November 12, 2019
“Daudi is a livestock and crop farmer from Rombo, Kajiado county. He has 11 children in school and at the time of our visit he had lost all his 7 acres of watermelon and pumpkins to elephants. Many of his cattle died in the recent drought. He is unsure of what the future holds, and yet he afforded us a smile.”
Human-Wildlife Conflict in Kenya: Hotspots

- Laikipia
- Nyeri
- Narok
- Kajiado
- Taita Taveta
- Lamu
Government Interventions

- Wildlife conservation and Management Act of 2013
- Elephant translocations
- Erecting of electric fences
- KWS Elephant collaring and monitoring
Community Interventions

- Community based compensation schemes
- Bee-hive fences
- Predator-proof bomas
- Chilli fences
RESEARCH AREAS

Taita Taveta County

- Tsavo Ecosystem
- 12,000+ elephants
- 60%+ of land occupied by Tsavo East and Tsavo West National park
- Economic activities: tourism, farming (mainly subsistence farming), livestock rearing and mining
- 28 Community owned ranches
- Research conducted in all the 4 sub counties (Wundanyi, Mwatate, Taveta and Voi).
- 11 FGDs were held in the following locations: Voi (test FGD), Gimba, Talio, Manoa, Taveta, Maungu, Kasigau, Ndome, Mililo, Wundanyi and Dembwa.
- 120+ respondents

Kajiado County

- Amboseli Ecosystem
- 1700+ elephants
- Economic activities: farming (mainly subsistence farming) and livestock rearing
- 87% of HWC is crop-raiding
- Group ranches
- 11 FGDs were held in the Kajiado south sub county and in the following locations: Isinet (test FGD), Entonet, Rongai/Kilima Mawe, Sombet, Kuku ranch, Rombo, Namelok and Impiron
- 113+ respondents
## A SUMMARY OF THE RESEARCH FINDINGS

<table>
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<th>OBJECTIVES</th>
<th>TAITA TAVETA COUNTY</th>
<th>KAJIADO COUNTY</th>
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| Demographics | - Mixed group of respondents, 60% being men  
- Average age 49 (75% of respondents above 35)  
- Size of household: 4.5  
- 58% depend on farming as major source of income  
- Average monthly income: KES. 13,317 (12474 Major source of income)  
- 52% of respondents had savings in banks, MPESA, SACCOs & Chamas  
- Average monthly expenses: KES. 12,391 | - Mixed group of respondents, 73% were men  
- Average age 42 (30% of respondents were 35 and below)  
- Size of household: 4.1  
- 87% depend on farming & livestock keeping as major source of income  
- Average monthly income: KES. 45,054 (KES. 41,198 from Major source of income)  
- 63.7% of respondents had savings in banks, MPESA, SACCOs & Chamas  
- Average monthly household expenses: KES. 24,603.39 |
| Risk profiles | Frequency of risks | Severity for risks |
| 1. Poor harvest | 1. Drought |
| 2. Wildlife invasion | 2. Wildlife invasion |
| 3. Drought | 3. Diseases |
| Frequency of risks | Severity for risks |
| 1. Wildlife invasion | 1. Wildlife invasion |
| 2. Drought | 2. Sickness |
| 3. Poor harvest | 3. Drought |
| Perceptions and experiences with regards to wildlife with a focus on HWC | - Negative. No benefit to the community  
- HWC Triggers: drought  
- Wildlife that attack frequently had the most severe losses: elephants, baboons, monkeys and lions | - Mixed perceptions  
- HWC triggers: drought, population growth, living in migratory routes  
- Wildlife that have the highest frequency and severity of attacks are elephants, hyena & zebra |
| Cost and coping mechanisms | Cost losses incurred | Coping mechanisms |
| - Livestock (cattle, sheep and goats): between KES.4000-80,000 | - Loans, fundraising, leasing out their land, fundraising, govt and local compensations |
| - Poultry: KES. 700-1500 | - Majority have no ways to cope |
| - Farm inputs: KES. 7000-12,000 | | |
| Coping mechanisms: fundraising, savings, loans, planting alternative crops; | - Willingness to accept scheme  
- WTP per month: KES. 50 to KES.1,500  
- Suggested payment cycles: quarterly or annually  
- Alternative payment: goats | - Scheme management to be a partnership between local community and the insurance company  
- Premium payment/ claim payouts to be done by MPESA or a local office |
| HEC insurance scheme perceptions | | |
| Distribution channels | | |
| Scheme management to be a partnership between local community and the insurance company  
Premium payment/ claim payouts to be done by MPESA or a local office | Scheme management to be a partnership  
Of the local community & insurance company  
Premium payment/ claim payouts to be done by MPESA or through a local office |
1. A Micro-insurance product is a welcomed idea in both regions though there is a need for extensive education as there is limited information on Insurance.

2. A joint partnership between the insurance company and the local community is preferred.

3. The claims process must be simple and fast

4. The community members seem concerned that the project is elephant-specific yet they interact with other wildlife

5. Premium payment may be a challenge as most farmers have very low incomes. Willingness to pay is low

6. There might be a need to merge the scheme with existing mitigation measures

7. Working with community members is key; Claim verification should be done with community members’ input

8. Benefits should not be too high (lessons from existing schemes such as HACSIS, Big Life, MWCT, ATE)

9. Work with private tourism stakeholders, group ranches, carbon credit schemes and farmer cooperatives to contribute to a premium fund
Product Development & Pricing of HWC Insurance
Benefits of microinsurance schemes

- Understands the needs of communities and co-creates the insurance solutions with them for buy-in and ownership.
- Employs a Human centred design
- Pre-determined benefit contracts and simple claims processes
- Ability to pool larger numbers, employ technology and manage the entire client journey
Data

- HWC Incidence data
- HWC Compensation data
- Remote sensing/Census data -> Maps
- Data from existing HWC compensation schemes by CBOs
Insurance Principles apply

1. Event resulting in loss must be **random**
2. Loss must be **definite** and **measurable**, in terms of amount and time
3. **Economic loss** should be **significant** for the insured
4. Must be able to calculate the **probability** of loss
5. Should insure a “**large**” number of similar exposures
6. Premiums must be **affordable** relative to expected loss
7. There should be minimal risk of **catastrophic** events that cause multiple claims simultaneously
Risks to be covered

- Human Death
- Human Injury
- Crop Damage
- Livestock Death
- Property Damage
Summary: Calculating risk premium

Experience pricing
- Uses past claims experience
- Used when there is confidence in data

Exposure pricing
- Assumptions of key determinants
- Used in the absence of good data

Credibility pricing
- Combines experience and exposure pricing
- Used when experience data is scares or there is no confidence in the data
Risk Premium – Basic Formulas

- Risk Premium = Expected Cost of Insurance:
  - HWC incidence data and Census data will be used to determine likelihood/frequency of insured event
  - HWC Compensation data and studies on economic impact of wildlife will be used to determine expected amount of insurance claim
  - Calculated per insured unit:
    - insured person, insured property, insured animal, etc
  - Calculated relative to the period for which the premium is paid
    - for example, annually
**Components of Gross Premium**

**Gross Premium**
- Risk Premium = “expected cost of claims”
- Risk/Security Margin
- Expected investment earnings

**Net Premium**

**Expenses**
- Start up and development costs
- Marketing and Distribution
- Operating costs
- Net cost of reinsurance
- Cost of capital
- Taxes

**Profit margin**
- Profit Margin
- Surplus and equity build up (self insured programs)
Pilot of 1,000 households across our pilot counties

$80 per household per year
How will premiums be funded?

- Mitigation
- Public Education
- Premium payment
- Investment in technology
- Litigation claims

Proposed HWC Fund

- Payment for Ecosystem Services
- Donor agencies & Foundations
- National Treasury
- Private sector

Donor agencies & Foundations
Private sector
National Treasury
Payment for Ecosystem Services
Claims Verification

- Community Verification Officers
- Use of technology
- Encourage good behaviour
- Fixed benefit principle
- Proven mitigation effort
- Leverage existing insurance claims processes
Way forward

Product Design
Done

Prototype testing
Jan 2020

Pilot phase: product rollout
Q1 2020
Thank you!