Insurance to promote human-wildlife coexistence
A guide for governments, conservationists and insurers
About the authors
International Institute for Environment and Development (IIED), AB Entheos, Institute of Policy Studies of Sri Lanka (IPS), Seratu Aatai, Actuarial Partners and Zoological Society of London (ZSL)
Corresponding author: paul.steele@iied.org

Produced by IIED’s Shaping Sustainable Markets Group
The Shaping Sustainable Markets Group works to make sure that local and global markets are fair and can help poor people and nature to thrive. Our research focuses on the mechanisms, structures and policies that lead to sustainable and inclusive economies. Our strength is in finding locally appropriate solutions to complex global and national problems.

Acknowledgements
We would like to thank the Livelihoods Insurance from Elephants (LIFE) project team from IIED (Olivia Wilson-Holt, Paul Steele, Holly Dublin, Cinzia Cimmino, Ranak Maher and Dilyys Roe); AB Entheos (Barbara Chesire, Anne Kamau, Betty Chebet and Zipporah Muchoki); IPS (Manoj Thibbotuwawa, Heli De Alwis and Athula Senaratne); Actuarial Partners Consulting (Hassan Scott Odierno and M Khairul Izad) and Seratu Aatai (Farina Othman); plus Simon Hedges and Becky Shu Chen (Zoological Society of London), for inputs to this guide.

Published by IIED, September 2023
https://pubs.iied.org/21586IIED
ISBN 978-1-83759-041-4
Cover photo: Elephant crossing sign, Sri Lanka. Credit: Paul Steele

International Institute for Environment and Development
235 High Holborn, Holborn, London WC1V 7DN, UK
Tel: +44 (0)20 3463 7399
www.iied.org
@iied
www.facebook.com/theIIED
Download more publications at www.iied.org/publications
IIED is a charity registered in England, Charity No.800066 and in Scotland, OSCR Reg No.SC039864 and a company limited by guarantee registered in England No.2188452.

IIED publications may be shared and republished in accordance with the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International Public License (CC BY-NC-ND 4.0). Under the terms of this licence, anyone can copy, distribute and display the material, providing that they credit the original source and don’t use it for commercial purposes or make derivatives. Different licences may apply to some illustrative elements, in which instance the licence will be displayed alongside. IIED is happy to discuss any aspect of further usage. Get more information via www.iied.org/website-terms-conditions

IIED is a charity registered in England, Charity No.800066 and in Scotland, OSCR Reg No.SC039864 and a company limited by guarantee registered in England No.2188452.
This guide is for governments, conservationist practitioners and insurers to design and introduce insurance schemes to reduce human-wildlife conflict (HWC) and promote human-wildlife coexistence. Certain species, such as elephants, are major causes of HWC across Africa and Asia. They trample or eat crops, predate livestock, damage property and can cause human injury and death. This leads to a cycle of biodiversity loss, as wildlife are killed directly by local farmers or pastoralists, or indirectly through outsiders’ support for poaching. This HWC problem will likely grow as 30x30 targets for conservation are implemented. This guide draws on experiences in Kenya, Malaysia and Sri Lanka to identify seven steps to introduce commercial insurance scheme to promote human-wildlife coexistence.

Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acronyms and abbreviations</td>
<td>4</td>
</tr>
<tr>
<td>Summary</td>
<td>5</td>
</tr>
<tr>
<td>Key responsibilities</td>
<td>6</td>
</tr>
<tr>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>Background to the LIFE project</td>
<td>7</td>
</tr>
<tr>
<td>Objectives</td>
<td>7</td>
</tr>
<tr>
<td>Audience</td>
<td>7</td>
</tr>
<tr>
<td>Step 1. Understand private insurance opportunities and challenges</td>
<td>8</td>
</tr>
<tr>
<td>Step 2. Identify and agree partners</td>
<td>9</td>
</tr>
<tr>
<td>Step 3. Undertake market research and estimate actuarial risks</td>
<td>11</td>
</tr>
<tr>
<td>Step 4. Finance insurance premiums</td>
<td>14</td>
</tr>
<tr>
<td>Step 5. Design insurance product and market structure</td>
<td>15</td>
</tr>
<tr>
<td>Step 6. Pilot the insurance scheme and monitor effectiveness</td>
<td>18</td>
</tr>
<tr>
<td>Step 7. Roll out the insurance scheme nationally</td>
<td>20</td>
</tr>
<tr>
<td>References</td>
<td>21</td>
</tr>
<tr>
<td>Additional resources</td>
<td>22</td>
</tr>
</tbody>
</table>
## Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVO</td>
<td>claims verification officer</td>
</tr>
<tr>
<td>ESCAMP</td>
<td>Ecosystem Conservation and Management Project</td>
</tr>
<tr>
<td>HEC</td>
<td>human-elephant conflict</td>
</tr>
<tr>
<td>HWC</td>
<td>human-wildlife conflict</td>
</tr>
<tr>
<td>IIED</td>
<td>International Institute for Environment and Development</td>
</tr>
<tr>
<td>IPS</td>
<td>Institute of Policy Studies</td>
</tr>
<tr>
<td>IUCN SSC</td>
<td>International Union for Conservation of Nature, Species Survival Commission</td>
</tr>
<tr>
<td>KWS</td>
<td>Kenya Wildlife Service</td>
</tr>
<tr>
<td>LIFE</td>
<td>Livelihoods Insurance from Elephants</td>
</tr>
<tr>
<td>NGO</td>
<td>nongovernmental organisation</td>
</tr>
<tr>
<td>USSD</td>
<td>Unstructured Supplementary Service Data</td>
</tr>
</tbody>
</table>
Summary

This guide is for governments, conservation practitioners and insurers to design and introduce insurance schemes to reduce human-wildlife conflict (HWC) and promote human-wildlife coexistence.

HWC imposes significant costs on poor, small-scale farmers and pastoralists in many parts of the world, particularly those living adjacent to protected areas and on larger-scale operations such as plantations. Costs include losses from crop damage, livestock injury or death, property damage and human injury or death. Opportunity and other indirect costs add to the burden of HWC. Biodiversity is also impacted as wildlife is often injured or killed in retaliation.

HWC occurs “when animals pose a direct and recurring threat to the livelihood or safety of people, leading to the persecution of that species.”1 Human-wildlife coexistence is defined as a “dynamic but sustainable state in which humans and wildlife co-adapt to living in shared landscapes, where human interactions with wildlife are governed by effective institutions that ensure long-term wildlife population persistence, social legitimacy, and tolerable levels of risk.”2

Mitigating conflict and promoting human-wildlife coexistence is therefore a top conservation priority, as illustrated by the release of the International Union for Conservation of Nature Species Survival Commission (IUCN SSC) Human-Wildlife Conflict and Coexistence Specialist Group’s timely guidelines, which include a good practice checklist.3

Predator species and elephants are major causes of HWC across Africa and Asia. They trample or eat crops, predate livestock, damage property and sometimes cause human injury and death, which can lead to individual animals being killed directly by local farmers or pastoralists, or indirectly through outsiders’ support for poaching.

Particularly susceptible are the African savannah elephant (*Loxodonta africana*) and the Asian elephant (*Elephas maximus*), both listed as ‘endangered’ on the IUCN Red List, and the African forest elephant (*Loxodonta cyclotis*), listed as ‘critically endangered’, making it vital that efforts to limit human-elephant conflict reduce threats to elephants as well as to people.4 Efforts to mitigate HWC include financially offsetting the costs through government-funded compensation schemes. But these have several disadvantages, including limited funds, delays and fraudulent claims. Insurance schemes can provide an alternative but have been mostly tried with nongovernmental organisations (NGOs) and there is a limited experience of engaging with commercial private insurance.5

In 2018 IIED, with partners in Kenya (AB Consultants, now AB Entheos) and Sri Lanka (Institute of Policy Studies), implemented the Livelihoods Insurance from Elephants (LIFE) project, funded by the UK government’s Darwin Initiative, to facilitate private sector insurance for small-scale farmers and pastoralists for damage caused by HWC. From 2020, the project also began working with a partner in Malaysia (Seratu Aatai) funded by the Global Environment Facility.

Based on lessons from the LIFE project, this guide sets out seven clear steps to design and introduce an insurance scheme to promote human-wildlife coexistence:

Step 1. Understand private insurance opportunities and challenges
Step 2. Identify and agree partners
Step 3. Undertake market research and estimate actuarial risks
Step 4. Finance insurance premiums
Step 5. Design insurance product and market structure
Step 6. Pilot the insurance scheme and monitor effectiveness
Step 7. Roll out the insurance scheme nationally.

Together, these steps provide a way to reduce HWC and promote coexistence between humans and animals. Working with national partners while drawing from the experiences summarised in this guide, it should be possible to get a scheme up and running in about two years (the LIFE project was delayed by the COVID-19 pandemic, meaning the three-year project took longer than expected, at over four years). The key roles of different partners are set out below.
## Key responsibilities

<table>
<thead>
<tr>
<th>STAKEHOLDER</th>
<th>ROLE</th>
</tr>
</thead>
</table>
| Government wildlife authority             | • Identify HWC hotspots  
• Gather data on HWC incidence and risk  
• Verify claims  
• Carry out monitoring and evaluation |
| Conservation NGO                          | • Identify HWC hotspots  
• Gather data on HWC incidence and risk  
• Carry out market research on interest and demand from potential policyholders  
• Verify claims  
• Carry out monitoring and evaluation |
| Insurance or reinsurance company          | • Determine probability of risk occurrence  
• Design insurance product including coverage types, and pricing and profit margins  
• Offer insurance scheme  
• Process and verify claims |
| Insurance broker                          | • Determine probability of risk occurrence  
• Design insurance product including coverage types, and pricing and profit margins  
• Process and verify claims |
| Insurance consultant                      | • Gather data on HWC incidence and risk  
• Carry out market research on interest and demand from potential policyholders  
• Design insurance product including coverage types, and pricing and profit margins  
• Design technology and applications for claims processing, verification and payments  
• Process and verify claims  
• Carry out monitoring and evaluation |
| Farmer/pastoralist (the policyholder)     | • Provide data on HWC incidence and risk  
• Provide information on HWC insurance interest and demand  
• Test applications for claims processing, verification and payments  
• Verify claims  
• Carry out monitoring |
| Community-based organisation              | • Provide data on HWC incidence and risk  
• Provide information on HWC insurance interest and demand  
• Verify claims  
• Carry out monitoring |
| Independent data collection service provider | • Gather data on HWC incidence and risk  
• Carry out market research on interest and demand from potential policyholders |
| Independent IT or software company        | • Design technology and applications for claims processing, verification and payments |
Introduction

Background to the LIFE project
The Livelihoods Insurance from Elephants (LIFE) project was intended to facilitate private sector insurance for small-scale women and men farmers and pastoralists for damage caused by human-wildlife conflict (HWC), primarily from elephants. It originally focused on two countries with high rates of human-elephant conflict (HEC) – Kenya and Sri Lanka – but in 2020, the project expanded to include Sabah, Malaysia. In Kenya, the Wildlife Conservation and Management Act 2013 lists a variety of species for which compensation is paid for human death and injury, as well as crop, livestock and property damage, so here the project also focused on large predators, such as big cats, as well as elephants.

Globally, national wildlife authorities and conservation practitioners have tried many different interventions to reduce HWC. These include physical measures, such as fences, reactive measures such as culling problem animals, and financial measures, such as compensation – but these have had limited success. To date, there have been few efforts to involve commercial insurance companies in HWC mitigation methods.

The project aimed to help the governments of the three countries pilot new insurance schemes, learn from each other, and develop effective national approaches. The countries all have different arrangements for government compensation for HWC. In Kenya, the project proposed replacing a government-managed compensation scheme with a privately-managed insurance scheme. In Sri Lanka, the project piloted a private scheme offering new and additional insurance coverage alongside an existing government compensation scheme. And in Malaysia, although large-scale farmers have access to insurance from elephants, small-scale farmers have no recourse to insurance or government compensation, so the project sought to fill this gap.

Research undertaken in these three countries generated lessons that can inform the development of similar schemes elsewhere by using this guide and disseminating other materials. This has already begun in Thailand, where a UK government-funded Darwin Initiative project, led by the Zoological Society of London in partnership with IIED, is undertaking a national HEC insurance feasibility assessment, with the aim of piloting a scheme by the end of the project.

Objectives
Based on learnings from Kenya, Sri Lanka and Malaysia, this guide aims to provide a generalised set of steps for stakeholders (including governments, conservation practitioners and private insurance companies) to follow when designing and implementing insurance schemes for small-scale farmers and pastoralists experiencing HWC.

Audience
This guidance is intended for use by:

- **Government decision makers** to demonstrate the value of engaging with private insurance companies to reduce the costs of HWC and so protect livelihoods and conserve biodiversity
- **Conservation practitioners** to conserve biodiversity and develop global best practice in HWC mitigation, and
- **Insurers** to illustrate new market opportunities in HWC insurance.

HUMAN-WILDLIFE CONFLICT IN LIFE PROJECT COUNTRIES

- In Kenya, about 35 people are killed by elephants and wildlife authorities shoot between 50 and 120 problem animals each year. In addition, Kenya Wildlife Service (KWS) data show that between 2020 and 2022, more than 2,000 people were injured by wild animals.
- In Sri Lanka, over 200 elephants have been killed every year since 2010. Cases of HEC continue to rise, with 145 people killed by elephants and 433 elephant deaths in 2022.
- In Sabah, Malaysia, there were over 650 HEC incidents reported between 1997 and 2018. This included crop and property damage, and human injuries. Unofficial statistics also indicate that up to 20 elephants may be killed every year as a result of HEC.
Step 1. Understand private insurance opportunities and challenges

a) Governments, conservation practitioners and private insurers need to understand and agree the **opportunities** of engaging with private insurance companies:

- Private insurance companies have greater experience in risk management compared to government or NGO-led compensation schemes – for example, in claims processing and verification, and fraud control.
- Private insurance could be an effective solution for reducing loss and damage caused by HWC and demonstrate political good will in countries where incidents incur significant costs for local people.
- Governments should be open to partnering with private insurance companies and could replace ineffective government-managed compensation schemes with privately-managed insurance schemes.
- Private insurance is likely to be easiest to implement when the government has already committed to transferring its compensation scheme to the private sector. This can also help avoid complications with duplication where farmers and pastoralists affected by HWC are eligible for both government compensation and pay-outs from private insurance cover.

b) Governments, conservation practitioners and private insurers need to understand and agree the **challenges** facing private insurance schemes for HWC, particularly the following four issues:

- **Who will pay premiums?** Ideally, insured persons (farmers and pastoralists) would pay a percentage of the premium to encourage mitigation actions and avoid fraudulent claims. In reality, most farmers and pastoralists will not be able to afford to pay the full premiums, meaning it is likely external co-funding will need to be sourced. This should come from the government as a replacement for existing compensation schemes (such as in Kenya), but this requires significant resources and may take time. Where government funding is lacking or delayed, insurance schemes often rely on donor funding and have failed to be sustainable due to a lack of long-term funding commitments. Before the pandemic, economic benefits from wildlife, including tourism receipts and park entrance fees, were possible sources of co-financing. However, reduced tourist numbers, coupled with other factors such as political insecurity and climate change effects, have left countries vulnerable to over-reliance on tourism. It may therefore be necessary to look for other funding sources – for example, from payments for ecosystem services, community banking and microloans. See also Step 4.
- **Fair and timely payments.** Consultations with farmers and pastoralists regarding government compensation show that many have faced difficulties with having claims accepted and settled, alongside a perceived unfairness where schemes have limited cover – all of which can lead to mistrust.
- **Incentives for moral hazard (meaning changed behaviour due to insurance cover).** To understand whether claims are genuine, fraudulent or overstated, assessing their nature and seriousness is vital. Moral hazards include an increase in HWC incidents due to reduced mitigation efforts by farmers/pastoralists, and an increase in encroachment into protected areas. Insured households therefore need incentives and payment conditions that ensure they still seek to mitigate or avoid conflict with wildlife, even when insured, much as motor insurers penalise speeding offences and other risk-taking. Schemes should be implemented by well-respected insurance companies who have experience in understanding, managing and minimising these risks, though government wildlife authorities and conservation NGOs can also support with monitoring activities.
- **High transaction costs and excessive profit margins.** While verifying claims can be costly, time-consuming and inefficient, private insurance companies also need to ensure their profits are not excessive to keep the costs of premiums manageable.
Step 2. Identify and agree partners

a) **Agree objectives** for engaging with a private insurance scheme, depending on the nature and history of government compensation schemes and political will to experiment and reform. This could involve:

- Replacing a government compensation scheme with private insurance, as in Kenya
- Piloting private insurance alongside a government scheme, as in Sri Lanka, or
- Providing private insurance where no scheme (government or private) existed, as in Sabah, Malaysia.

b) Decide **who needs to be involved and their role.** Partners will include organisations mitigating HWC impacts for people and wildlife or helping to finance these activities, such as government wildlife authorities, private insurance companies, conservation practitioners, other service providers, such as think tanks and insurance design experts, development partners and donors. This will involve:

- Identifying and engaging national practitioners from the public and private sectors across conservation and insurance industries, and
- Holding an inception meeting with partners to discuss key issues and agree a detailed workplan, with roles and responsibilities.

c) Hold a **consultative dialogue and agree partnerships** for implementation – that is, the government’s role, funders for a pilot scheme, potential insurers, and conservation practitioners). Partners should:

- Agree a framework for what the insurance scheme will or will not be designed to cover
- Appoint a taskforce to collate, collect and compile relevant data and information on existing levels of HWC and past or ongoing compensation schemes, and develop an implementation strategy with clear recommendations on the most suitable schemes to adopt, and
- Develop a mechanism to work with affected farmers and pastoralists (potential policyholders) throughout the process. This should be based on the principle of free, prior and informed consent.

d) Understand existing **wildlife policies and legislation and insurance regulatory frameworks** and identify early enough if changes will need to be proposed.
CONSULTATIVE FORUM ON INNOVATIVE HUMAN-WILDLIFE COMPENSATION SCHEMES IN KENYA

• On 15 May 2019, the LIFE project, along with the Kenyan Ministry of Tourism, Wildlife and Cultural Heritage, funded and co-organised a national consultative forum to discuss possible solutions for designing an HWC compensation scheme. It was attended by over 150 participants from government agencies, private insurance companies, the national parliament and conservation organisations.

• Key discussion points included the need to involve farmers and pastoralists in validating claims, for historical data for accurate pricing of premiums and for quick claim payment procedures.

• At the forum, the ministry’s cabinet secretary committed to establishing a taskforce to come up with measures the government and private sector could collaborate on to mitigate costs to farmers and pastoralists arising from HWC. On 14 June 2019, the cabinet secretary formally appointed the HWC Compensation Scheme taskforce to develop recommendations, including for suitable insurance schemes.

• On 3 December 2019, the cabinet secretary announced plans to hand over the government compensation scheme to the private sector. The taskforce subsequently designed a pilot insurance scheme with the help of several of the private insurance companies present at the forum. In May 2023, they announced that the Kenyan government would pilot the scheme later that year.
Step 3. Undertake market research and estimate actuarial risks

a) Gather data on HWC incidence and risk:

- Conduct a situational analysis to understand the nature and extent of losses nationally and sub-nationally in HWC hotspots. This should include a detailed assessment in all affected areas (or at least in priority areas) and a review of its causes, socioeconomic and biodiversity consequences, and the potential contribution and viability of insurance as a mitigation measure.\textsuperscript{13,14}

- Data collection should cover the frequency and severity of HWC incidents, including crop raiding, livestock injury and death, property damage, and human injury and death, over a representative time period.

- Quantitative data should ideally cover the previous ten years and can be gathered from different sources, including government wildlife authorities and NGOs working locally. Schemes should also consider using local information from farmers and pastoralists. It is important to bear in mind that any data collected could be misrepresentative of real occurrences.

- Qualitative data on perceptions of HWC, current mitigation measures and coping mechanisms, and recommendations for a proposed scheme, can be collected from focus group discussions, inception meetings and interviews from visits to hotspots. These data can support the design of an insurance scheme.

- Analyses should address factors such as settlement and weather patterns (including drought) and their impacts on HWC.

- Data should also be used to generate a baseline for HWC-related wildlife fatalities.
b) Consult with farmers, pastoralists and community-based organisations in HWC hotspots to determine the level of interest and demand from potential policyholders:

- Conduct field visits to hotspots to understand local perspectives, establish relationships and determine different risk levels
- Determine farmers’ and pastoralists’ interest in taking out insurance against HWC and willingness to participate in a pilot scheme or project, and
- Determine farmers’ and pastoralists’ willingness to pay and understand their ability to afford premiums or if external financing would be required (see also Step 4).

c) Calculate actuarial risks:

- Insurance companies or brokers should use the data collected under Step 3 (a) to estimate their liabilities.
- Movement data for wildlife of concern can be useful for an in-depth investigation of temporal and spatial patterns of pathway use and risk profile for elephants and other species.
HOUSEHOLD SURVEY DETAIL COLLECTION METHODS

In Sri Lanka, the project carried out participatory rural appraisals in the pilot districts to develop village maps, an understanding of HWC and interest in private insurance. This was used to design a comprehensive survey for detailed data collection from 200 households. Administered by a private sector data collection service provider, the survey gathered information related to HWC on damages, mitigation measures, strengths and weaknesses of existing insurance schemes, malpractices, and land tenure issues, as well as community recommendations. The survey was designed to identify key stakeholders and institutions relevant to HWC trends, including damage rates and the distribution of risk in different cropping seasons of the year.

In Kenya, AB Consultants collected the data in Kajiado and Taita-Taveta County through focus groups, to gain an understanding of household risk profiles and prioritisation, perceptions of HWC, costs and current coping mechanisms, and views on a proposed insurance scheme. AB Consultants also used questionnaires to collect demographic and financial data to understand income levels and saving patterns to inform both willingness and ability to pay for premiums. It designed risk cards to assist respondents who were not literate or numerate and employed research assistants from the communities to help with buy-in.

In Malaysia, Seratu Aatai worked closely with local communities to identify the drivers of HEC and to plan mitigation actions needed in specific areas. As part of the LIFE Sabah programme, Seratu Aatai conducted workshops to introduce the idea of a private HEC insurance scheme to the local communities as a potential solution to the challenges of coexisting with elephants. To maintain a strong link to the communities, Seratu Aatai selected one or two young members from each village to be involved in the programme as field coordinators. Their role was to help gather data (either via an app called GeoODK or a form), monitor elephant movements and implement mitigation measures to protect crops.
Step 4. Finance insurance premiums

a) Identify the amount of money needed for **financing premiums in the short and medium terms**:  
   • For the initial or pilot period of the scheme, it might be appropriate to source donor funding. See also (c) below.

**FINANCING PREMIUMS IN THE LIFE PROJECT**

• In Kenya, the government agreed to finance the scheme and pay for the pilot as a prototype for the roll-out of a larger government-funded national scheme. The pilot is expected to be implemented in late 2023.

• In Sri Lanka, the scheme did not benefit from strong government buy-in. The Institute of Policy Studies (IPS) team initially engaged with the World Bank to pay the first year premiums to the insurance provider, SANASA. However, when these funds were not secured, they turned to the United Nations Development Programme, who have demonstrated substantial interest in supporting the scheme.

• In Malaysia, the project initially targeted stakeholders from the palm oil supply chain to support the financing of insurance premiums. However, due to escalating HEC, the government has since indicated their intention to develop a new policy to compensate those affected by elephant conflict, with Seratu Aatai engaging in discussions with the Central Bank of Malaysia about a pilot scheme.16

b) Consider the possibility of **full or partial co-financing by customers**:
   • Use field surveys or participatory rural appraisal methods to understand the willingness of farmers and pastoralists to use insurance and co-finance premiums
   • Co-design a cost-sharing mechanism for the various stakeholders
   • Engage with farmers and pastoralists to understand their preference for financing premiums as a group or individually
   • Consider engaging with farmers and pastoralists to co-develop diversified livelihood options to increase their ability to pay premiums, and
   • Consider including other types of insurance coverage, such as accidents at work or health, as product bundles to increase demand from a larger group and cover potential funding shortfalls for HWC insurance alone.

**PAYMENT THROUGH FARMER ASSOCIATIONS**

In Sri Lanka, the LIFE project engaged with the World Bank-funded Ecosystem Conservation and Management Project (ESCAMP), which implemented community-managed electric fencing projects in Kurunegala and Anuradhapura Districts, two HEC hotspots. As wild elephants can damage fences, ESCAMP requested the inclusion of additional coverage for elephant damage to electric fences. Premium payments for this cover were designed to come from farmers via community-based organisation funds established by the ESCAMP project, which would then be transferred to the insurance company, SANASA.

c) Where policyholders cannot afford premiums, there is a need to **source financing**:
   • Develop a financing strategy to identify longer-term and sustainable financing, which may come from government, development partners or tourism enterprises.
Step 5. Design insurance product and market structure

a) Identify insurers and reinsurers:
   - Agree criteria for engaging with relevant companies, based on their experience with penetration into the rural market and handling similar claims (such as weather and climate insurance), as well as their sustained interest in the issue and willingness to engage in a pilot. These might include insurance consultants, insurance and reinsurance companies, and insurance brokers.
   - Facilitate an insurance product design based on insurance research data.

b) Agree coverage types:
   - What kind of loss and damage will be insured against, for example:
     - Human deaths and injuries sustained directly from wildlife and indirectly, such as when fleeing threatening animals
     - Crop losses (all, perennial, annual and so on)
     - Livestock injury or loss, including coverage types, depending on age of animals, and
     - Damage to property, such as fences, granaries and water installations.
   - Agree what wildlife damages will be insured against – for example, schemes may cover damages from one species (such as elephants) or from several different species (for example, rodents, birds, elephants and large carnivores).
   - Clearly define the conditions of cover, including those to ensure HWC mitigation efforts are being implemented to reduce moral hazard.

c) Agree pricing and profit margins:
   - Determine the premium costs using actuarial calculations based on HWC data. For example, 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, adjusted to reflect changed losses and exposures. To this is added a management/administration fee, commission and a risk margin, to arrive at the gross premium.17
   - Set the premium payment cycle – for example, annual or seasonal payments.
   - Set limits of liability to determine maximum payouts for each item covered under the policy.

d) Design technology and applications for claims processing, verification and payments:
   - Design or use existing applications to record damages or upload photographs using smartphones, depending on their availability and the degree of connectivity in rural areas. The use of more sophisticated technology could include drones to take images of HWC incidents.
   - Test and provide training on how to use mobile phones, or smartphones and other applications.
   - Schemes should consider leveraging existing technologies and applications in the marketplace to improve the efficiency of the process.
   - Schemes should also consider adopting simple mobile payment systems for claim pay-outs, such as a single simple claims number across different mobile phone providers (note that this may need telecoms regulatory support).
   - Those involved in claims verification may include community members, NGOs, wildlife authorities and insurance companies.18

e) Liaise with national insurance regulators to seek:
   - Formal approval from relevant national authorities for any regulatory changes that may be required, keeping these to a minimum as legal changes take time, and
   - Insurance regulatory approval as needed.

f) Develop, negotiate and sign contracts with insurance companies and other service providers.
CLAIMS VERIFICATION TECHNOLOGY IN KENYA

In Kenya, AB Consultants worked with an IT company to develop a software platform for HWC claims notification and verification that can be used by farmers and pastoralists. Research showed that timely payments were more important to potential claimants than their monetary value, so the software platform was designed to notify insurance companies in real-time once a claim had been verified.15

It tested a prototype in two pilot sites in Kajiado and Taita Taveta, with over 160 community members participating (40% of whom were women) across 16 areas. The aim was to understand their willingness to use the platform and the ease of use. Feedback showed that communities are willing to use it, but they also expressed the need for training in the future.

The platform is designed as an end-to-end system. When an HWC incident occurs, claimants can dial an Unstructured Supplementary Service Data (USSD) code, which triggers a notification to a centralised hub, informing a nearby claims verification officer (CVO), local KWS officers and the insurance company. Recruited from local communities, CVOs are responsible for visiting the claimant’s location to verify the validity of the claim. Once at the location, they can upload photos and testimonials from the claimant, other witnesses and local KWS officers to the centralised hub. The insurance company then uses this information to assess the claim and decide whether to make a payment.15
Figure 1. Claims process for livestock, crop, and property damage

Source: Ministry of Tourism and Wildlife, Kenya
Step 6. Pilot the insurance scheme and monitor effectiveness

a) Agree criteria and identify areas for piloting:
   • Using HWC data, map hotspots and areas where local farmers and pastoralists are most vulnerable as priority areas for piloting the approach.
   • Determine what the minimum viable area would be for a pilot scheme to avoid future issues with economies of scale.

b) Develop a consumer education and marketing workplan to create awareness about the insurance scheme:
   • Design and develop advertising and communications materials in relevant languages, including a name and taglines that will resonate with the local farmers and pastoralists.
   • Conduct public education sessions for local farmers and pastoralists, especially in HWC hotspot areas. This ensures they get maximum benefit from the scheme while also fostering ownership and buy-in. This is particularly important in countries with a low trust of insurance, such as Kenya, and where conflict has significant impacts on local people.
c) Undertake communications and engagement strategies for key stakeholders:

- Engage prospective clients, ensuring messaging is explicit about how the scheme can reduce the costs of living with wildlife for farmers and pastoralists.
- Engage key experts and practitioners working in conservation and insurance, ensuring messaging is explicit about why involvement is in the commercial interest of insurance companies.
- Messaging should also focus on why the scheme is beneficial for wildlife.

d) Process claims:

- Assess the nature and seriousness of insurance claims made to understand if they are genuine, under- or over-reported, or fraudulent.
- Process genuine claims efficiently, with payouts made within a set timeframe.
- Provide claims data, such as claims made and paid, as part of monitoring and evaluation activities.

e) Monitor pilot effectiveness through independent third-party organisations:

- Monitor implementation, uptake and effectiveness of reducing retaliatory killing of wildlife due to HWC, and poverty alleviation through compensation for damage and loss from HWC.
- Assess enrolled farmers’ and pastoralists’ perceptions of the scheme.
- Gather monitoring data to understand strengths and weaknesses of the scheme via household surveys, claimant interviews and focus group discussions with insurance companies.
- Share lessons learned on a continual basis and write up experiences and recommendations in support of national roll-outs.

**PILOTING THE SCHEME IN KENYA AND SRI LANKA**

The Insurance Regulatory Authority formally approved the scheme in Kenya in February 2021. In May 2023, the Kenyan government announced that it had allocated 800 million Kenyan shillings (around US$5.7 million) to pilot the insurance scheme, which will follow an open tender process to select insurance partners. Funding will cover subsidies for insurance premiums for those joining the scheme, with implementation expected in late 2023 in six HWC hotspot counties: Taita Taveta, Narok, Kajiado, Garissa, Meru and Makueni. Claimants will follow the verification process outlined under Step 5, with legitimate claims paid after a maximum of three months. AB Consultants have so far played a key role in raising awareness, providing training sessions and holding community meetings to address a lack of trust and knowledge on how the scheme works.

In Sri Lanka, SANASA insurance company remains committed to piloting the insurance scheme, which will provide cover for farmers for crop damage, hospitalisation and grain store damage due to HEC. The pilot scheme aims to cover at least 1,000 farmers, with premiums designed to be affordable at 3,253 rupees (around US$16) per year.
Step 7. Roll out the insurance scheme nationally

a) Adjust insurance scheme based on learning from the pilot, considering factors such as:
   • Financing of the scheme, including funding viability in areas with high tourism income, donor appeal, and so on
   • Support from farmers and pastoralists
   • Premium pricing, and
   • Claims processing and pay-outs.

b) Ensure financial sustainability, in terms of funding for premiums:
   • Need to move beyond short-term donor financing.

c) Ensure buy-in from communities for long-term sustainability:
   • Hold regular consultations to listen to community perspectives and feedback on the scheme
   • Incorporate community recommendations into future iterations, and
   • Establish a formal grievance mechanism for community members to raise potential issues.

d) Ensure open procurement of insurance services:
   • Once a pilot has proved to be successful, other insurance companies may want to apply to run the national scheme, so it is important to have an open and transparent procurement process to avoid future legal challenges.

e) Appoint insurance companies and carry out third-party monitoring of the scheme’s effectiveness in reducing livelihood impacts and biodiversity loss:
   • Carry out annual monitoring to determine the scheme’s effectiveness and to understand where adjustments might be necessary.
References

1. IUCN SSC. Human-Wildlife Conflict & Coexistence. www.hwctf.org/about
4. IUCN. The IUCN Red List of Threatened Species. www.iucnredlist.org
8. WWF. Battles over ever decreasing land. https://tinyurl.com/nnb6hwdf
15. FAO and IUCN SSC HWCCSG (2023) Developing an insurance scheme to mitigate the impacts caused by wildlife, www.hwctf.org/case-studies
Additional resources


SGP. Mitigating Human-Elephant Conflict Through Livelihood Insurance for Elephant (LIFE) in Sabah, Malaysia Borneo. https://tinyurl.com/55m9ayhm

IIED (July 2019) Livelihoods Insurance from Elephants (LIFE): consultative forum interviews (video). www.youtube.com/watch?v=OAhtncxrgA

IIED (July 2022) Conservation of wildlife: how can insurance help? (video). www.youtube.com/watch?v=V0VltvKQL4g


IIED (May 2023) Insurance and human-wildlife conflict: in conversation with Silvia Museiya (video). www.youtube.com/watch?v=P29oJKbAvY

This guide is for governments, conservationist practitioners and insurers to design and introduce insurance schemes to reduce human-wildlife conflict (HWC) and promote human-wildlife coexistence. Certain species, such as elephants, are major causes of HWC across Africa and Asia. They trample or eat crops, predate livestock, damage property and can cause human injury and death. This leads to a cycle of biodiversity loss, as wildlife are killed directly by local farmers or pastoralists, or indirectly through outsiders’ support for poaching. This HWC problem will likely grow as 30x30 targets for conservation are implemented. This guide draws on experiences in Kenya, Malaysia and Sri Lanka to identify seven steps to introduce commercial insurance scheme to promote human-wildlife coexistence.