

Research Title: Improving the Resilience of Human-Elephant Coexistence Interventions in the Face of Rapid Social-Ecological Changes

The African Savannah Elephant (*Loxodonta africana*) has recently been listed as Endangered by the International Union for Conservation of Nature (IUCN). This listing is due to increased species decline predominantly caused by poaching and human-elephant conflict. Managing human-elephant conflict and achieving coexistence is difficult. These conflicts occur within a dynamic social-ecological system that is always in flux, simultaneously influencing human and elephant behaviour and constantly changing the nature of the conflict. While conservation interventions seek to address ever-changing human-elephant conflicts, our understanding of ways to sustain coexistence between humans and wildlife and increase the robustness of conservation interventions addressing conflicts amidst rapidly changing social-ecological contexts remains limited. To achieve socially just and resilient human-wildlife coexistence, it is vital to incorporate different perspectives of what coexistence means to various stakeholders, including community members who share their landscape with wildlife. Focusing on conservation efforts to achieve coexistence between humans and elephants in Kenya, this research will use a case-study approach to analyse the broader, deep-rooted social processes and issues that contribute to human-wildlife conflict and affect the resilience of human-elephant coexistence effort in Sagalla, Kenya.

Research Aims and Objectives

This project aims to contribute a new scientific understanding of factors that influence the resilience of human-elephant coexistence initiatives within a changing social-ecological context. Social-ecological resilience is defined as the capacity to adapt or transform in the face of changes in the social-ecological system, mainly when unexpected changes occur, in ways that continue to support human wellbeing (Folke *et al.*, 2016). This project will provide evidence-based research to inform conservation management on designing and implementing robust interventions adaptable to changing social-ecological contexts. The project will also add to emotional political ecology literature by contributing an understanding of the relationship between socio-politics, emotions, human-wildlife conflict and resilient conservation interventions.

The objectives of this research include:

1. Analyse socio-political processes that influence the resilience of human-elephant coexistence.
2. Explore how emotions influence how community members navigate social-ecological changes, conservation politics, affective relationships with each other and their environment, and their interaction with elephants and elephant conservation projects.

These research objectives represent the three empirical research chapters of my thesis.

Fieldwork January 2022- April 2022 Funded by the Jana Robeyst Trust Fund

Fieldwork Summary

I conducted my fieldwork from 24th January – 28th March 2022. I received research permits and approval from the National Commission for Science, Technology and Innovation (NACOSTI) and the Kenya Wildlife Service. I sought the verbal consent of the County Minister in charge of Education, The area chief, two sub-chiefs and the Council of Elders in all three villages; Mwakoma, Mwambiti and Kajire.

I conducted unstructured interviews with 13 individuals, 28 semi-structured interviews and 21 Focus group discussions with a capacity between 10-15 individuals. In total, I interviewed 304 individuals.

As of January 2023, I have finished the transcription of all interview data, which I conducted manually and produced complete transcripts whose data will inform the first and second chapters of my PhD thesis. I used the funding offered to pay a daily stipend to my three field assistants, all young people from each village. Two women and one gentleman. I also provided tea and bread to everyone attending my focus groups and also provided transport for them. My accommodation was covered by the stipend I receive from the University of Edinburgh.

Findings from preliminary data collected

Socio-political processes influencing Human-Elephant Conflict

1. Intensifying and frequent periods of drought

Data collected shows that the community has been experiencing frequent and intensifying periods of drought since 2017. Community members reported that since the 2017/2018 drought, it has become difficult to predict when the rains will be coming since the seasons' timings have changed. In 2022, while conducting my fieldwork, the community missed the October- December rains, which they rely on to grow maize. They reported that rains only fell for about two weeks, enough to help the crops sprout, but then they abruptly ended. The water pans in the area filled up, and people with water tanks collected rainwater. However, the feelings towards elephants during the fieldwork time were very unfavourable because after the rains stopped, large herds of elephants came into the community and crop-raided crops that were in the field, which would have served as feed for livestock and vegetables for humans, especially pigeon peas whose leaves can be eaten as vegetables if the seeds do not germinate.

Additionally, elephants finished all the water collected in the community water pans meant for livestock and human household use. By March, there was no expectation for the April-June rains, and there were general hunger and food insecurity conditions. Elephants were perceived as exacerbating the already vulnerable condition of the community, and attention to them by conservationists only served to anger the community, further worsening the tensions between them and the elephant conservationists and the elephants themselves.

2. Politics and Corruption

2022 was an election year in Kenya, and while there, I saw many politicians coming to seek votes from them. One of the key promises they would use to try and woo the community was promising to get rid of elephants from the community lands. However, these are promises said many times over the last many years, and the community believes that the politicians intentionally allow elephants to eat their crops so that they can use elephants as their election tools to win their votes. Many say politicians benefit from their suffering and would like to keep them in poverty so they can always secure their votes. From my research, I find that using elephants as political tools only

worsens the relationship between the community members and elephants because they are always poised as the community's enemies that hinder their progress.

3. Increased household poverty

From the data collected, the community relying mainly on agriculture is being pushed to extreme poverty because of the frequent periods of drought. Most of the casual labour available in the community is tied in with agriculture, and when agriculture fails, many people lose their jobs. An increase in crime was reported as one of the growing challenges in the community, as people are stealing from each other to make ends meet. There was also a surge in tree cutting for the charcoal business, which seems to be the only available income source in the community. The community reported that they are aware that the more they cut down trees, the more it contributes to the loss of rain and increases elephant presence in the community areas because their habitat is disrupted. However, they feel they have no other option because they still need to buy food and water and pay fees, and there is no external help from the government or any other non-governmental organisation.

4. Clash of conservation values and community values

During my fieldwork, an organisation showed a film about Tsavo elephants, and their goal was to emphasise the importance of human-elephant coexistence. But this was not received well by the community, as I learned in the focus group discussions because the community reported that they barely ate or had water because elephants finished the little they had managed to store up for themselves at the end of last year. Moreover, an elephant broke into people's houses in February and took off with their stored grains. The community expressed their displeasure with this organisation and found them insensitive to their prevailing situation. They reported the organisation coming in with six land cruisers and expensive equipment to show videos of elephants in the park, while all they could relate to was elephants in their farms that have contributed to their present food insecurity and poverty.

Emotions, Socio-ecological changes and their influence to human-elephant interactions

It was a difficult fieldwork for me because I sympathised deeply with the community that was suffering. There were instances when I could not drink my bottle of water in

front of them because I knew they did not have water and were visibly thirsty. I provided tea and bread during all my meetings as I was informed that most of the people attending were starving. I also am a conservationist, and my goal is to ensure the protection of elephants, so even though I was sad elephants were pushing the community to survive barely, I also appreciated that elephants were struggling because of the drought and needed to survive. In short, I was torn and faced with the complex reality of achieving human-elephant coexistence in a rapidly changing environment.

As I am still analysing the emotional element of the data collected, I can report that more negative emotions are related to elephants than positive ones. I believe the present context of drought, food insecurity, and lack of income are making the community less tolerant towards elephants. Emotions are integral in shaping how people interact with their environment and with each other, and they express the nature of the conflicts. Understanding the emotional geography of the human-elephant conflict will better inform conservationists about how people position themselves in relation to conservation efforts (subjectivity), how that influences their interaction with conservation efforts and elephants, why they make certain decisions over others and how they are adapting to the social-ecological changes. I hope by the end of the year, as I continue to collect data and analyse, I will be able to verify these connections empirically and publish them in academic journals.

Next Steps

- Continue analysing the data collected and explore the emotions and political themes
- Develop a descriptive analysis of data collected before the second fieldwork intended for May-June 2023.
- For the last chapter, collect data on future scenario building through serious games in May-June 2023.
- Report research findings to the community and relevant conservation stakeholders in Sagalla March 2024 through workshops and community meetings.
- Develop a Management Decision-Framework for Conservation organisations working in the region.

Conferences

I will be presenting the preliminary findings of my research at the following conferences this year.

1. International Human-Wildlife Conference – Oxford – 30th March – 1st April 2023.
Abstract accepted
2. Climate Justice and Emotions conference – Online – 27th-28th April – Abstract accepted
3. Political Ecology Network (POLLEN) conference 2023- Durban 27th – 29th June 2023 – Abstract accepted – uncertain if online or in-person, depends on funding.
4. International Congress for Conservation Biology – 2023 conference- Rwanda, 23rd – 27th July – Waiting for abstract feedback