Leadership in Action (LIA) Reflective Impact Report

Leopard Conservation at Mpala Research Centre, Kenya

Project Overview

I undertook my Leadership in Action (LIA) placement at Mpala Research Centre (MRC) in Laikipia Country, Kenya. Uhifadhi wa Chui, meaning ‘leopard conservation’ in Kiswahili, is a long-term research initiative investigating the leopard population across Mpala and Loisaba conservancies. The project aims to understand leopard population status while contributing to strategies that reduce human-wildlife conflict and support coexistence.

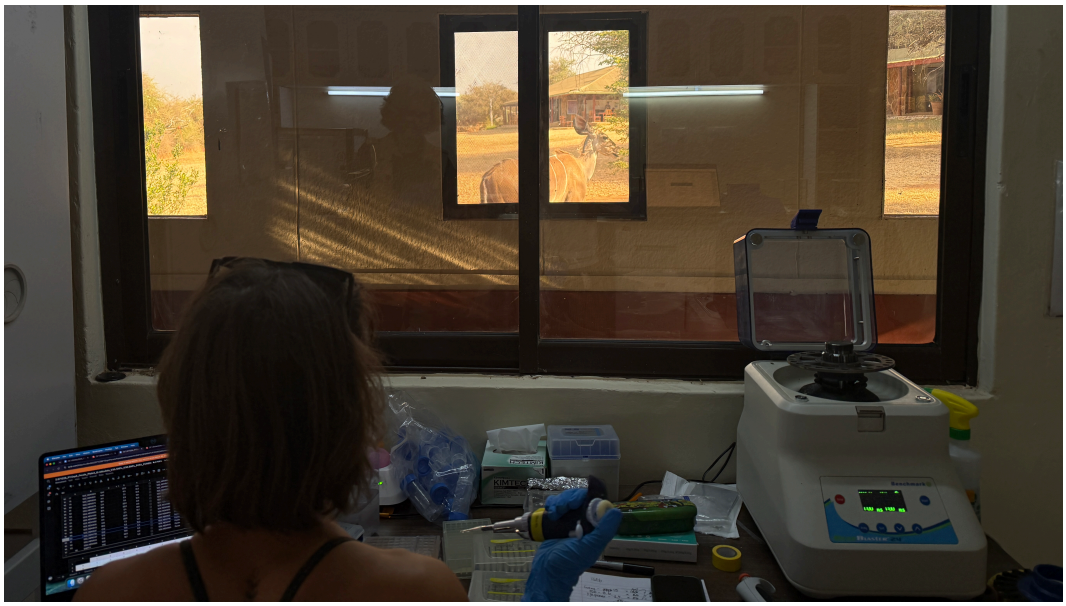
During my placement, I contributed to several aspects of this research, including camera trap deployment and maintenance, collecting and processing camera trap data, conducting wildlife surveys through the Giraffe Guardian project, and assisting with the deployment of GPS collars for movement and behaviour monitoring. Alongside this fieldwork, I completed a two-week molecular biology and conservation genomics placement with the San Diego Zoo Wildlife Alliance (SDZWA), working with leopard hair, blood, and faecal samples and giraffe faecal samples towards developing non-invasive methods of population monitoring. This placement involved DNA extraction and quantification, PCR, gel electrophoresis, sample pooling and Oxford Nanopore sequencing workflows.



Systems Thinking & Complexities

Conservation is shaped by interconnected factors - wildlife movements, livestock husbandry, land use, livelihoods, community perceptions, education, policy, and environmental change. As a consequence, human-wildlife conflict cannot be addressed through a single intervention; ecological monitoring, community engagement, livestock protection, technology, and evidence-based management must work together.

Uhifadhi wa Chui operates across multiple scales, combining field ecology, molecular biology, technology, community engagement, and international collaboration - demonstrating how conservation is not solely an ecological problem, but a complex social-ecological challenge requiring different forms of knowledge and expertise. An important component of my placement was understanding the human dimension of conservation, engaging with the research centre and team to learn about the initiatives in place to support communities living alongside wildlife. This interdisciplinary approach is crucial for effective conservation - requiring an understanding of both wildlife populations and the social and ecological systems in which they exist. By combining long-term ecological datasets, emerging genomic approaches and community perspectives, research initiatives such as Uhifadhi wa Chui can generate comprehensive evidence to support conservation and human-wildlife coexistence.



Project Impact & Importance

The work undertaken within Uhifadhi wa Chui is particularly important in a landscape where people and wildlife live in close proximity - with significant pressures placed on co-existence due to livestock predation and habitat encroachment. Understanding leopard populations and their movements provides the evidence needed to inform effective, long-term conservation techniques - particularly where populations may be vulnerable to habitat change, persecution and other pressures. Mitigating human-wildlife conflict is essential for maintaining local support for conservation. Livestock losses can have significant consequences for pastoralist and farming communities, and conservation approaches must therefore recognise and address the costs borne by people living alongside wildlife.

By combining long-term camera-trap monitoring, GPS collaring, genomic research and community engagement, Uhifadhi wa Chui contributes to the building of a comprehensive understanding of leopard populations and the factors influencing their survival. This evidence supports approaches that protect wildlife while recognising the costs experienced by communities and providing knowledge that supports longer-term coexistence - such as through the deployment of ‘predator-proof’ bomas.

Systemic Barriers, Constraints & Leverage Points

My experience highlighted that there is rarely a single solution to conservation challenges. Protecting wildlife without considering the impacts on livelihoods risks reducing community support for conservation, while addressing conflict without understanding leopard ecology may overlook longer-term ecological consequences.

Several potential leverage points operate within this system. Initiatives such as community wildlife reporting networks can improve understanding of conflict; improved livestock protection can reduce losses; GPS collaring and long-term monitoring can strengthen evidence for management; and community-led initiatives such as the Chui Mamas Centre can connect conservation with livelihoods and community wellbeing. These approaches demonstrate how change can occur through interventions at different points within the wider social-ecological system.

Associated Stakeholders

Uhifadhi wa Chui involves a diverse network of stakeholders: local communities, pastoralists, farmers, livestock owners and community wildlife reporters are central to understanding and addressing human-wildlife conflict. The Chui Mamas Centre - a community-led resource hub supporting women's livelihoods, education and conservation initiatives - provides an example of community-led engagement linking women's livelihoods, education and conservation. MRC is closely linked with local schools, providing opportunities to engage younger generations with conservation and build understanding of the wildlife and ecosystems around them. Engaging students can help develop positive attitudes towards wildlife from an early age and strengthen longer-term community participation in conservation.



Researchers from Kenya and international institutions contribute different areas of expertise, enabling collaboration across ecology, molecular biology, technology and social science. MRC provides the research and educational infrastructure supporting long-term ecological monitoring and conservation, while the Kenya Wildlife Service (KWS) contributes expertise in wildlife management, veterinary care, conflict response and GPS collaring, and SDZWA contributes

conservation genomics expertise, sequencing capacity and the development of non-invasive sampling approaches. Ultimately, the wildlife itself is central to this interconnected system: understanding leopards, giraffes and other species alongside livestock and their interactions is essential for understanding the wider ecological and social landscape.

The diversity of these stakeholders reflects the interconnected Sustainable Development Goals (SDGs) underpinning this project: *SDG 15: Life on Land* - wildlife population monitoring and biodiversity conservation; *SDG 1: No Poverty* - where livestock losses affect pastoralist and farming communities; *SDG 16: Peace, Justice & Strong Institutions* - community participation and local engagement; *SDG 17: Partnership for the Goals* - collaboration between MRC, Kenyan conservation teams and SDZWA. Together, these stakeholders demonstrate that effective conservation depends on collaboration between scientists, conservation authorities, communities and other people living within and supporting the landscape.



Leadership Learnings & SMART Goal Evaluation

Goal 1 - develop confidence in unfamiliar environments

One of my main goals before beginning my LIA was to develop my confidence in unfamiliar environments. Despite having travelled independently before university, it had been a few years since I had undertaken long-distance travel alone, and I had never lived or worked in a remote research environment. Arriving in Kenya therefore required me to adapt quickly to a new environment, culture, and way of working. Living at MRC, working alongside the experienced field team, and navigating unfamiliar conditions gradually strengthened my confidence. I learnt that this does not necessarily come from preparedness, but from *willingness* to face unfamiliar challenges, learn from mistakes, and adapt.

Goal 2 - develop interdisciplinary research skills

Perhaps the driving force of my desire to self-define my LIA was to ensure I found a placement in which I would meaningfully develop my interdisciplinary research skills, while gaining hands on experience in the field. I can wholeheartedly say I was able to fulfil this desire - achieved through

the combination of camera trapping, wildlife surveys, working with KWS in deploying GPS collars, community engagement and genomic research. Being able to work the same conservation challenge through ecological, molecular, technological and social perspectives fundamentally changed my understanding of what conservation research can involve.

Goal 3 - develop leadership and initiative

I went into my LIA wanting to develop my leadership through taking greater initiative and responsibility, I became increasingly comfortable working independently, supporting data extraction and contributing to laboratory workflows. Representing the University of Leeds within an international research environment encouraged me to take responsibility for how I communicated and contributed to the teams around me. Leadership during my placement often involved taking initiative in unfamiliar situations, supporting wider project goals and contributing reliably to established teams. Rather than viewing leadership as directing others, I increasingly understood it as listening, learning from people with different expertise and making meaningful contributions within collaborative environments.

Cross-Goal Reflection

These goals became increasingly interconnected throughout my placement. Developing confidence enabled me to take greater initiative, while working across ecology, genomics and community engagement required adaptability, communication and collaboration. Progress in one area supported my development in others - this demonstrated to me how leadership is not a collection of isolated skills but an interconnected set of attributes that develop through experience.

Global Citizenship & Capacity Development

My LIA tested and developed my character through courage, curiosity, responsibility and adaptability - particularly when working independently in an unfamiliar environment. Working in Kenya highlighted the responsibility involved in international research - particularly when working within communities whose experiences of human-wildlife conflict differ from my own. International collaboration should not assume knowledge flows in one direction. Working within an established conservation team was key to this understanding - effective leadership in complex systems requires listening, collaboration and recognising different forms of expertise. Cultural knowledge, and lived experience are equally important. Approaching international work requires humility, mutual respect, and openness. Effective change-making requires balancing these values rather than prioritising one over another.

The 3Cs were fundamental in developing my abilities to work across ecological, molecular, and cultural contexts

Curiosity - I developed curiosity by asking questions across ecological and molecular disciplines, learning about Kenyan conservation approaches and making an effort to learn Kiswahili and engage with local communities.

Collaboration - Collaboration was central to my work with the Mpala field team, KWS, SDZWA, community members and international researchers. I learned to contribute my own skills while recognising the expertise of others.

Communication - My LIA strengthened my communication across scientific, cultural and professional contexts. I became more confident discussing research, listening actively and adapting how I communicated across field, laboratory and community environments.

An area I still need to develop is communication and participation across diverse stakeholder groups over longer timescales. My community engagement during the placement was limited, and I would like to develop a deeper understanding of participatory research and how community perspectives can be incorporated into conservation decision-making over sustained periods.

Project Impact & Sustainability

Uhifahdi wa Chui has been ongoing since 2017, consequently, my LIA work forms part of an established long-term programme rather than a standalone project. This project is sustained through the continued work of teams across Mpala and Loisaba, collaboration with SDZWA, external funding and research partnerships. Longitudinal ecological and genomic datasets can provide increasingly valuable evidence for understanding leopard population status, movement, genetic diversity and connectivity. My skills and contributions supported the maintenance and collection of camera trap datasets, field monitoring, and laboratory-based genomic work with SDZWA for the development of non-invasive sampling techniques.

I recognise that my contribution formed one small component of a much larger and well-established conservation programme. I did not independently shape conservation outcomes; rather, my role was to support ongoing fieldwork, datasets, laboratory workflows and community engagement activities. The value of my contribution therefore lies not in claiming individual impact, but in contributing reliably to long-term collaborative research while developing skills that I hope to apply in future conservation work.



Personally, I intend to sustain my own impact beyond the placement through promotion of my experience using the Laidlaw Scholars Network. I hope to share what I have learned through the Laidlaw Foundation, such as through campfire LIA sessions at the annual Laidlaw Conference for the benefit of new cohorts, as well as in incorporating my research experience and takeaways into my postgraduate studies and future work. My LIA has created opportunities for continued collaboration with researchers at Mpala and SDZWA, including publication following my contribution to the team. The relationships, scientific skills, and conservation experience I have gained has extended beyond my placement itself, contributing to my future research and career.

Lessons from Cultural Immersion

One of the most valuable aspects of my LIA was the immersion into an environment and community very different from my own. Living and working at MRC in rural Kenya required me to adapt to a different pace of life and to question assumptions about research, conservation and daily life. Working closely with the Uhifadhi wa Chui team - a group of four from around Kenya - was central to this experience. I was struck by the warmth and hospitality with which I was welcomed, and developed a great appreciation for the importance of this in creating an effective team and research environment. Days spent being tossed around like a salad in the back of a Toyota land cruiser were brightened by sharing knowledge of our homes and being taught some Swahili. Although my vocabulary remains limited, making an effort to participate in the culture around me was a very important goal for me. My experiences having the culture of different tribes shared with me - such as taking part in traditional songs and dances during community and school events - provided a wonderful insight into the importance of culture, identity and community in everyday life.



One of the greatest takeaways for me was appreciating the nuances of the landscape and gaining understanding that could not be gained through scientific research alone - appreciating the factors and years of knowledge developed through generations of interacting with the environment going into choosing something as simple as a camera trap location. Entering a new environment, and

one that is so far from anything experienced before, with the assumption that scientific knowledge is he only form of expertise can create barriers rather than solutions. Effective conservation requires shared understanding and working alongside communities.



Future Career & Educational Plans

My academic interests within my degree have been primarily centred on molecular biology and biomedical research. While these remain important to me have been fundamental in contributing to my strong scientific and technical skill set, I entered the Laidlaw Scholarship in Year 1 with some uncertainty around how I wanted to apply these skills in the future. One of the reasons why I was drawn to the Scholarship was the opportunity to explore disciplines beyond STEM and to develop a broader understanding of global issues, particularly those relating to sustainability, policy, ethics, and society. The Laidlaw Foundation and my experience undertaking my Year 1 research project - bringing me to self-defining my LIA - have been fundamental in helping me understand how these interests can intersect.

My research project in Year 1, exploring animal welfare legislation and policy across Africa, was an important starting point - allowing me to move beyond the scientific aspects of animal research and consider the wider ethical, political, and societal frameworks within research and conservation operate. At the time, I was particularly interested in expanding my base of knowledge beyond just science towards animal welfare and global policy - having struggled to reconcile my interests in the humanities and sciences when choosing my degree. This experience showed me that I didn't need to choose between these interests, rather, there was potential to build a career around the spaces where they overlap.

This realisation is what pushed me to self-define my LIA, a decision for which I am very grateful as my placement at MRC has developed this idea considerably further. Contributing to both ecological monitoring and laboratory-based genomics research through collaboration with SDZWA has cemented my interest in applying molecular techniques beyond their more traditional biomedical applications. Experiencing first-hand how genomic approaches can contribute to wildlife

monitoring, population assessment and conservation decision-making has spurred my interest in the space between molecular ecology, wildlife health, animal research ethics and human-wildlife coexistence.

My experience at Mpala demonstrated that complex conservation challenges cannot be addressed through a single discipline, strengthening my ambition to pursue research that bridges laboratory-based science with field conservation and the wider social and ecological systems in which conservation takes place. Working at Mpala strengthened my desire to gain experience working internationally. Living and working within an unfamiliar environment, collaborating with Kenyan researchers and field staff, engaging with local communities and working alongside international research partners has developed my confidence and desire to continue navigating different cultural and professional contexts.

Looking ahead, I hope to undertake postgraduate study in Social-Ecological Resilience at Stockholm University, with the longer-term aim of developing a career in interdisciplinary conservation research. The programme's focus on understanding the interactions between social and ecological dynamics, particularly in the context of change and uncertainty, closely reflects the perspective I have developed throughout my Laidlaw experience. My experiences have reinforced my aspiration to contribute to conservation research through international collaboration, potentially through research institutes such as the Stockholm Resilience Centre - which conducts interdisciplinary research into the complex interactions between people, ecosystems and the wider social-ecological systems on which they depend - governments, and NGOs.

Ultimately, my experience as a Laidlaw Scholar has shifted my career aspirations from seeing Biomedical Sciences as a pathway primarily towards conventional research to recognising how the scientific skills I have developed can contribute to much broader global challenges. I am looking forward to bringing together my interests through conservation genomics, molecular ecology, and interdisciplinary environmental research. The Laidlaw Scholarship has been paramount in giving me the opportunity to explore this intersection in ways I could not have experienced through my degree alone.



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Project Leader

Please comment on your scholar's LIA period, what you consider to be your scholar's strengths and which leadership attributes (please refer to the leadership attributes below) you feel your scholar has demonstrated and is particularly skilled in. You could also identify areas which the scholar can develop further.

Signature of Scholar _____ Date:

Signature of Project Leader _____ Date: ____/____/____