

## The Rufford Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to [jane@rufford.org](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
Your name	Michael Honorati Kimaro
Project title	Exploring pastoralists' resettlement history and its impacts to African lion ( <i>Panthera leo</i> ) conservation in rural Tanzania, with a focus in Ruaha landscape
RSG reference	27156-1
Reporting period	February 2019 – February 2020
Amount of grant	£4688
Your email address	kimarorcp@gmail.com
Date of this report	26 <sup>th</sup> June 2020

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Explore resettlement history and conservation patterns in Ruaha landscape of Tanzania, with respect to 14 focal villages and pastoral tribal groups within Ruaha landscape				The resettlement history and conservation pattern of focal pastoral groups from Masai, Barabaig, and Sukuma tribes have been explored in 14 villages found in Ruaha landscape adjacent to Ruaha National Park in Tanzania. Demographic data regarding their gender, age, marital status, family size, livelihood activities, and education level of focal pastoral groups have been investigated. Additional data of where they were born, tribe history, reason of living in Ruaha landscape, and who made the decision were collected. A total of 140 respondents from 14 villages, of which 10 from each village have been interviewed.
Explore the relationship of resettlement to lion conservation, NGOs and government; and in particular trends or patterns of human-lion conflict				Perceptions and experiences of focal pastoral groups to lion conservation, NGOs and government have been investigated. We focused on understanding their relationship with other tribes, land use patterns, human-lion interactions, and how resettlement and lion conservation has potentially impacted their lives and relationship with lions, conservation NGOs, and government management of lions in the Ruaha landscape.
Explore costs and benefits of resettlement and lion conservation, and to whom (who bears the greatest of each)				If the focal pastoral group were resettled by the government or by someone else decisions, we investigated their experiences after such incidence, costs incurred, how they handled such costs, and how such costs impacted their family.

				Benefits of resettlement, and how did they benefit have been explored. How resettlement impacted their relationship with lions, lion conservation and government management of lions have been investigated.
Explore role of NGO's and government in lion conservation and resettlement (drivers, impacts of changes or problems)				Governance of land use and lion conservation have been investigated, specifically between focal pastoral groups with NGOs and government officials like wildlife conservation authority staff. This included exploring their knowledge about lion management, conservation NGOs and government policy; their experiences or involvement in decision making for land use and lion conservation; and their interest of future governance.

**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

Interviewing respondents by recording their voices was a bit challenging as some declined to be interviewed, and I had to go locate additional participants. Masai tribe respondents were very happy to be interviewed and recorded, but Barabaig and Sukuma tribe respondents were a bit shy, and many declined. Transcription of data took longer than planned because the language used for interviewing was Swahili, and transcription to English language from the audio files was tedious to ensure data integrity. In the middle of project implementation, I received a scholarship for an MSc in Ecology and Conservation at the University of Groningen, Netherlands, and as a result had to prioritise my course exams and studies, leaving data transcription during only my few free hours. I handled this by writing to the Grants Director, and explained my circumstances, requesting an extension of the study period until the end of April 2020 (which was granted). Additionally, the Covid-19 pandemic hit and made working difficult overall, and I requested another extension until the end of June 2020 which was granted too.

**3. Briefly describe the three most important outcomes of your project.**

Analysis of the first-hand accounts from interviewing 140 participants across 14 different villages revealed that personal choice, largely from a male figure, including family patriarch was a primary reason for resettlement to the Ruaha area. In large part, this was a livelihood choice, and perhaps government promise of opportunity to access livestock grazing land and relatedly improving a pastoralists' herd size and health given vaccination programs due to government and Ruaha Carnivore Project efforts, livestock protections from lion depredation, opportunity for land

tenure and related autonomy, formal education, training and job opportunities, and increased food security through crop production. Other reasons for relocating included proximity to family (e.g., children, siblings, etc.) and/or loneliness due to family or spouse death, as well as some reporting forcible resettlement due to previous government policy. Linked to forcible resettlement were perceptions of persecution by some participants, which appear to suggest they are attributed to farmers' tribal affiliation or cultural heritage (e.g., Masai), and relatedly, governments' reported bias towards farming type (crop over livestock). Subsequently, farmers reported perceptions of unfair or unnecessary fines and penalties imposed on them, particularly livestock farmers, as indicated by one individual: "[government staff] use pastoralists as a source of income...as they imposed unfair fines". Moreover, there was dissatisfaction reported in what appears to be broken promises by government to pastoralists with regards to reuse or tenure over Lunda-Mkwambi Game Controlled Area for livestock grazing.

Proximity to the Ruaha National Park boundary, as well as the MBOMPIA Wildlife Management Area and Lunda-Mkwambi Game Controlled Area, were suggested to increase livestock depredation risk, though hyenas, elephants, bush pigs and yellow baboons were commonly reported as being more problematic due to large livestock depredation and crop raiding. This impacts income, subsistence (food security), and human safety. While pastoralists reported observing, or more commonly, hearing lions in the area, and some reports of killing lions either in retaliation or prevention (which remains unclear), many acknowledged that they share the landscape with lions and that the efforts of the Ruaha Carnivore Project and government help address lion risks. This included use of wire fence enclosures and land use planning, as well as other benefits such as education and employment opportunities as indicated above.

However, there was mention of dissatisfaction of depredation compensation schemes, which may be due to lack of presence, available funding or lack of awareness of such programming, as well as an increasing human population and corresponding competition for livestock grazing land and water access, resulting in human-human conflict. Further, while possible employment as a Lion Defender was noted as a benefit, there was risk involved, with some citing the dangers of now protecting lions, as indicated by one farmer: "I now have a lot of enemies". Additionally, while there appeared to be recognition that lion conservation efforts can have tourism benefits, one farmer noted that "lion conservation is not a balanced agenda", with communities or individuals not receiving the direct benefits let alone recognition of their values or needs from their participation.

Our results indicate the governance, identity and policy challenges of lion conservation efforts, as well as the need to address other human-wildlife interactions and conflict, for future work.

**4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).**

This project entirely targeted local communities, specifically dominant pastoral tribes that rely on livestock keeping as their main source of income, and the impact to their family they faced due to presence of lions in their village land. I spent at least an hour to complete interview for one respondent. During the interviews we talked about their demography, land use, livelihood and resettlement, perceptions and experiences with lions in Ruaha landscape, governance of land use and lion conservation. Each respondent explained how they think lions should be managed in the Ruaha landscape, and who should be responsible. In addition, during the field work I used village large carnivore conflict officer who guided as to the pastoralist households.

**5. Are there any plans to continue this work?**

This project was based on exploring the first-hand accounts of the people expected to live with lions and lion conservation policy and actions, within a landscape and context that has undergone resettlement and changing land use practices and governance. Using the data collected and insights gained from this project, it would be worthwhile to implement interventions that improve lion conservation and local peoples' livelihood in the Ruaha landscape. I plan to continue with this work in two phases:

1. To collaborate with other conservation projects, NGOs, and government to highlight the most potential village land that have high human-lion interactions, and formulate community-informed (i.e., participatory methods) conservation plans in these areas. This includes expansion of the Ruaha Carnivore Project work (i.e., conflict mitigations, livelihood supports) in other villages where the project has not yet been implemented.
2. Many respondents complained about a shortage of pasture, especially during the dry season due to the increase in lands under protected areas assignment, combined with the increased number of pastoralists and livestock in the area. A report from Tanzania Wildlife Research Institute (TAWIRI) in 2019 showed the remarkable increase in number of livestock in Ruaha landscape over the past 10 years. These findings call for an impact assessment of the increased number of livestock to Ruaha National Park, Lunda-Mkwambi Game Controlled Area, Wildlife Management Areas, and Rungwa Game Reserves. Recent studies from Serengeti show how resettlement and increased livestock grazing in the surrounding Serengeti ecosystem threaten ecological stability. I will attempt to address this need by assessing the impacts of increased livestock grazing in the Ruaha landscape and discuss possible restoration and mitigation techniques. This will also necessarily include working with pastoralists, conservation NGOs and government.

**6. How do you plan to share the results of your work with others?**

A manuscript for peer-reviewed publication is in progress in addition to my research partner Dr Courtney Hughes and I preparing posters and social media content to share, as well as attendance at relevant meetings and conferences to present our findings. These can include but are not limited to conferences organised by Rufford Foundation, Ruaha Round Table meetings, TAWIRI annual conference, etc. For the local community I will prepare a meeting with all targeted focal pastoral groups in each village and explain what we have found after analysis and the next steps (as with phased approach above).

**7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?**

The grant was used in the planned length of the project from February 2019 to February 2020, however, I aimed to submit report and manuscript by August 2019, but due to interference with studies, I had to prioritize on logistics and exams, and delayed to submit report on time. In addition, 28 days was planned for data collection in the field, but, we took 35 days to accomplish interviewing all respondents we planned because some of respondents denied their voices been recorded, so we had to go to other households which took more of our time, and data transcription took longer than days we planned.

**8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Accommodation for Principal Investigator for 35 days	239	183	-56	Amount used for accommodation was lower than planned. Each room was £5.24
Accommodation for Research Assistant for 35 days	225	183	-42	
Food for Principal Investigator for 66 days	464	681	+217	Days in the field increased from 28 to 35 days, and it took 31 days to finish data transcription, coding, analysis, and report writing.
Food for Research Assistant for 35 days	289	361	+72	Days in the field increased from 28 to 35 days
Transport (Hired vehicle) for 35 days	3472	3303	-169	Hiring vehicle was a bit less expensive than the planned

				amount, but was a bit affected by the increased number of days in the field from 28 to 35 days.
<b>Total</b>	<b>4688</b>	<b>4711</b>	<b>+23</b>	<b>Exchange rate: £1 = 2861.2 Tanzania shillings</b>

**9. Looking ahead, what do you feel are the important next steps?**

See above in planned phased approach to work with local villages in developing conservation action plans and an impact assessment on livestock grazing and restoration/mitigations in the area.

**10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?**

We will be seeking permission for use of the logo and recognition in all publications, including peer-reviewed acknowledgement of funding and support, posters, social media content, and conferences or other speaking engagements. However, we created a Facebook page named "Ruaha people and lions" that we shared the Rufford support to other people.

**11. Please provide a full list of all the members of your team and briefly what was their role in the project.**

**Mr Michael Honorati Kimaro**, MSc Candidate in Ecology and Evolution-as PI, involved in all stages of this project.

**Dr Courtney Hughes**, PhD – conservation social science lead, supporting the project scope and research design, data collection and analysis, PI guidance, and writing of reports, manuscripts, and other communication materials.

**Mrs Joflet Lyakurwa** (ordinary diploma in computer science and mathematics), **Hillary Mrosso** (BSc in Wildlife Management), and **Fenrick Msigwa** (BSc in Tourism) – helped on data collection and data transcription.

**12. Any other comments?**

I would like to thank The Rufford Foundation for funding this project. I also thank Dr Amy Dickman, Dr Agnes Sirima, and Mr Patroba Matiku for their recommendations to Rufford Foundation during proposal submission stage. I will send separately photos taken during the projects' data collection period.