

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	Dereje Tesfaye Delkaso
<b>Project Title</b>	Conservation threats of <i>Colobus guereza gallarum</i> in south-eastern parts of its ranges in Ethiopia
<b>Application ID</b>	23632-2
<b>Grant Amount</b>	£5000
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<b>Date of this Report</b>	18.03.2019

**1. 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
To investigate main conservation threats of the guereza				The main threat was the conversion of the remaining forest areas into subsistence farming for increasing land demand by the growing human population in the country. As a result, many groups of guereza are found occupying forest fragments, patchy habitats and riverine forests surrounded by agriculture and human settlements, which has increased the human-wildlife interaction.
To examine human-guereza conflict and the illegal killing of guereza				I gathered enough evidence that guereza was killed mainly for their beautiful pelt and tail parts which can be sold on black markets and also used for cultural ceremonies. Guereza in the fragments was subjected to the killing by farmers to protect their crops from damage. This was the main causes of human-guereza conflicts in the study areas.
Population density estimates between continuous forest and patchy habitat				I carried out the population density estimation of guereza in the continuous forest and fragmented and patchy habitats. The group size in fragments and patchy habitats considerably larger than group size in continuous forest.
Land use/cover change study				It was a big challenge to obtain high resolution and complete Landsat data set for the whole study area, because I did not have budget for it. But, land use/cover changes study was carried out in some part of my study area (in Munessa) by kindu et al, 2013. I will work on it in the future when I can have complete high resolution images.

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

The problems I and my field assistance encountered were the shyness and the secretive nature of the respondents during our interview and discussions we had with the local communities. We used different techniques such as unmatched count

technique (UCT) to find out their interaction with the study species during our interviews. Another problem was the political unrest in some parts of the country during the period of data collection hindered us to follow the planned schedule. I rearranged our timetable to do the field works when the situations became calm and also employed locals for data collection.

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

- a) I have found that the conversion of remnant forest to an agricultural field and the anthropogenic pressure on forest fragments and patchy habitats occupied by guereza were the conservation challenges in the study areas. The threats are more common in most parts of the country where the forest areas are converted to settlements and subsistence farming. The anthropogenic pressure on the fragments was higher due to the higher demand for fuelwoods and cattle foraging areas by the subsistence farming communities. This finding has consistency with the report that fuelwood harvesting in developing countries is so important that it rivals other sources of industrial energy such as electricity, principally among poor people in rural areas (FAO, 2011). Fuelwood is the main source of energy, which it contributes 58% of the supply to the rural areas of Africa and is one of the potential sources of ecosystem disturbance (Salim and Ullsten, 1999).
- b) I examined the human-primate conflicts in both continuous forest and forest fragments. The conflict between human and guereza was higher particularly with groups occupying disturbed and fragmented habitats at the proximity of farmlands and human settlements. I have found the evidence on the illegal killing of guereza for their body parts such as pelts and tail parts that can be sold at black markets and also used for different traditional ceremonies.
- c) I estimated the population densities of guereza in the continuous forest and forest fragments by using the line transect and total count methods, respectively. Fragments and some patchy habitats contained considerably larger group sizes than the continuous forest. Our result will give direction for conservationists to give more emphasis to the conservation and protection of forest fragments and patchy habitats, which harbors more guerezas than other species.

**4. Briefly describe the involvement of local communities and how they have benefited from the project.**

This study involved the local communities from the beginning during the survey period until the end of the data collection. During the survey period, I discussed with the communities about the coexistence of human with wildlife and the opinion they have to guereza and other primates at their proximity. We discussed the damage caused by primates in their farm and what techniques they use to protect their crops. We also shared ideas and knowledge on how to use less lethal methods to reduce crops loss by primates. The field guides, translators and assistances were hired during the fieldwork, which can have an economic impact on them.

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

This study has found that guereza faced higher conservation threats mainly from conversion remnant forest to subsistence farm and fragmentations, illegal killing for its body parts and conflict with farmers. During our discussion, I have found that the local communities had very little knowledge and awareness about the ecological, economic, and cultural importance of the wildlife. My next work will be to create awareness and promote conservation of the species and its habitats – main focus on schools, community gatherings, and peasant associations/local communities. I will also carry out additional distribution survey to complete the range mapping for the study species in the country.

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

My works will be presented to the public in seminars and workshops and also published in the peer-reviewed international scientific journals. The result will be delivered to the Ethiopian Wildlife Conservation Authority (EWCA), Oromia Forest and Wildlife Enterprise and Southern Nations Nationalities and Peoples' Region Cultural and Tourism Bureau, which are responsible for the conservation and management of wildlife in the study areas.

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

This study was carried out between February 2018 - January 2019.

**8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion. Exchange rate 1 £ = 36.32ETB (2018)**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Horse rent to travel remote areas and for field equipment transport to remote, inaccessible areas by roads	710	450	-260	We used horses mainly for material transport and to travel few remote locations.
GPS battery for 12 months	150	90	-60	
Four field assistances per diem	2,940	3,250	+310	Additional days required to be spent in the field works than the planned time.
For principal investigator per diem	1,200	1,200		
<b>Total</b>	<b>5,000</b>	<b>4,990</b>	<b>-10</b>	

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

The next important step is to promote the conservation of guereza and its habitats particularly – the riverine forest, degraded fragments and patchy habitats, which are the suitable habitat for guereza. *Colobus guereza* is one of the species which is highly adaptable to fragmented and patchy habitats than many other primate species. During our study, most of the guereza under threats was the one which inhabiting degraded fragments, patchy habitats, and riverine forests. More threat to wildlife in Ethiopia comes from poor awareness on the ecological, economic and cultural importance of wildlife; for both animals and plants. The restoration of severely degraded habitats is also crucial to secure suitable habitat for the study species. To achieve this, the awareness creation and mobilization of local communities should be done starting from lower schools and communities level. Conservation education and awareness creation programmes encourage children and local community's engagement with the natural environment in which they live, and assist them in understanding the advantages of living alongside and conserving local wildlife, habitat, and ecosystems. Planning workshops and discussions with the governmental and non-governmental conservation organizations should be carried out to mitigate the threats through legal frameworks in parallel with awareness creation.

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

Yes, I have used the Rufford Foundation logo during my project progress reports during the presentations.

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

**Prof. Nils Christian Stenseth** and **Dr. Peter J. Fashing** are my supervisors who guided me during the periods of project design and implementation.

**Adure Korosu, Kebede Alemu, Abraham Mengistu** and **Gemechu Korosu** were my field assistances worked during the study period.

**12. Any other comments?**

I am grateful to the Rufford Foundation for funding this project. From the start, this project wouldn't be realized without your support. Your support is crucial to students, conservationists, and researchers from developing countries, which their work can have very large impacts on nature conservation.