

The Rufford Foundation Final Report

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.

Thank you for your help.

Josh Cole, Grants Director

Your name	Agnes Sirima
Project title	Does traditional local knowledge contribute to conservation of the Serengeti-Mara ecosystem?
RSG reference	15433-1
Reporting period	June 2014 - May 2015
Amount of grant	£3719
Your email address	asirima@g.clemson.edu
Date of this report	20/05/2015

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
Assessing the contribution of traditional ecological knowledge in conservation of Loliondo II forest (Currently known as Enguserosambu Community Forest)			X	Group semi-structured interviews were conducted to customary elders and famous people within Enguserosambu community in order to understand the strategies for knowledge generation, accumulation and sharing among different community members. Through this technique I found three key strategies used by customary elders to share knowledge with others in the community. Customary elders have also identified management practices that helped to protect the forest from destruction. However, population increase and increase in agriculture activities were mentioned as the key threats to community efforts to conservation.
Mapping land use and land cover change of the area			X	Satellite data were used to as a verification strategy to compare with the oral ecological history narrated by communities. Satellite images with a spatial resolution of 30 m were acquired from LANDSAT (Landsat 7 ETM and Landsat 8 OLI) and used for analysis. February 2000 and February 2015 were chosen. Attention was given to selecting imagery within a narrow date range to avoid seasonality effect. Photographic map of the area, Google Earth, in conjunction with visual interpretation techniques were used to classify forest land cover. Five land cover classes were identified and change analysis performed between the two selected periods.

Raise conservation awareness among the local community			X	One training session was held with community conservation trust members. Eight out of 10 trust members participated in the discussion. Preliminary observations from field work related to forest use and change were also discussed.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Ongoing land use tension in Loliondo area was one of the drawback during fieldwork. Although there was no conflicts where I conducted field work, it was within reach of most of the villages where fieldwork was conducted. This made some research assistants hesitant to take me to the field hence missing some fieldwork days. All the missed days were compensated by extending the fieldwork.

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

Documenting indigenous knowledge that is used by Enguserosambu communities to protect the forest and surrounding range lands. The Enguserosambu Community Forest is a water catchment forest, a source of rivers and streams running through Serengeti National Park and Lake Natron. Being the first community managed/owned forest to receive legal status from the government, communities and their respective local institutions were happy to see their knowledge documented. Also the opportunity to discuss issues in groups during field work provided them with collective ideas of meanings and values associated with their forest. Interviews were conducted by customary elders and famous people within the community in order to get insights of the knowledge accumulation and sharing mechanisms as well as forest management practices. Overall, culture and forest is one and the same by Enguserosambu communities. Three key mechanisms were used by customary elders to transfer knowledge to communities including age-group meetings, traditional celebrations and traditional bomas. All the traditional celebrations took place in the forest which signify the importance of the forest to the culture and traditions of the Maasai communities. Traditional celebrations were also used as a rite of passage to full adult society member. Fencing off water catchment areas, land use zoning and enforcement of traditional laws were also used as forest management practices.

Conservation awareness – Conservation session and discussion with community conservation trust was well received by all members. It provided them with an opportunity to share what works and what do not. They were also very keen on seeking advice on ways to better their forest conservation practices. Within Enguserosambu community, community conservation trust has the role to share the knowledge as well as conduct capacity trainings to other communities' members on

issues related to forest management practices. Hence given an opportunity to be part of the discussion was well received as a step towards improved forest management practices in their communities.

Mapping forest land cover change and description of the change pattern - The mapping piece provided a clear visual interpretation of what communities narrated during interviews. Satellite imagery analysis showed a parallel between communities' histories of the forest protection and challenges associated with it to the changes portrayed on land cover change maps produced. Although I cannot statistically claim causal relationship between land cover changes observed and communities' management practices, association can be made. Land cover change maps were also used as a verification strategy for communities' knowledge and practices on forest protection activities.

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

Communities were at the forefront of the project. They were the key informants. To a large extent, majority appreciated the role of elders and their efforts to preserve culture and traditions which are key to forest protection. They were willing to share their opinion, values and they were ready to listen for advice. Furthermore, forest user groups and other local institutions in the area showed interest in having a full report once the study is completed. I will present the report to the local institutions and selected community members in July, 2015.

5. Are there any plans to continue this work?

During fieldwork and data analysis some of the issues were observed that require more field investigation. The second phase of data collection is therefore proposed in order to provide a comprehensive and detailed analysis of conservation and management practices so that to: (1) Ensure the long term sustainability of community-forest conservation practices; (2) Introduce alternative livelihood sources to reduce forest dependency; and, (3) Draw necessary policy implications. Therefore, I would like to carry out a second phase of the study focusing on:

1. Household survey to community members on ecosystem services in order to quantify their forest dependency. Population has largely increased in the area, so is the number of cattle. Increased population necessitate land for settlement, agriculture, grazing and frequent visits to the forest for livelihood resources. The household survey is geared towards obtaining the number of people per household and their forest consumption. This will: (a) provide a quantification of forest resources used by household members for livelihood support; (b) project the future forest cover changes based on current consumptions and management practices; and (c) Recommend better forest utilization approach based on current indicators of forest consumption.

2. Mapping and comparing forest cover changes between the community managed versus government managed forest. During field work communities repeatedly mentioned of the destruction of Loliondo Forest I. Loliondo Forest I is a government owned and managed forest. Hence, conducting a land cover change analysis that will compare community vs. government approaches to forest conservation will help draw necessary policy recommendations since the two forest are located within the same ecosystem. The two forests (Loliondo I & II) were once a one continuous forest before the change in forest tenure which happened during the British colonial regime that divided the forest into two.

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

1. Copy of the report will be sent to the community conservation trust in Enguserosambu, a copy to Pastoral Livelihood Support and Empowerment Programme (PALISEP) and Ngorongoro NGO Network (NGONET). These are local institutions that work with communities to conserve the forest.
2. Copy of the report will also be shared with the Ngorongoro District Forest Office.
3. Manuscripts will be prepared for publication in form of journal articles to share with other scholar's worldwide.
4. Three presentations in terms of oral presentations and poster sessions on conferences and seminars were given in different places within the United States.

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 project was carried out within the time frame proposed.

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.

Funding of 3719 was received with an exchange rate of 1 GBP = 2698 TZS

Item	Budgeted Amount	Actual Amount	Difference	Comments
Voice recorder	48.00	48.00		Thank you, I get to keep the recorder 😊
Stationery & training booklets	369.00	369.00		
2 Research assistants	532.00	532.00		Sometimes i used both at the same time but

				most of the time i worked with one research assistant at a time
Fuel to and from study site	881.00	881.00		
Transport during field work	669.00	669.00		
Accommodation during field work	608.00	608.00		
Food	456.00	456.00		
Accommodation to and from field station	156.00	156.00		
Total	3719	3719		

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

There is a need to strengthen the capacity of local communities in order for their forest protection efforts to be realized in the long term. The following were recommended:

1. Alternative livelihood source to reduce pressure on forest resources (e.g. efficiency cooking stoves, beekeeping activities, improved in cattle breeds).
2. Increasing capacity building in land use zoning and better land use practices.
3. Harmonise the current forest by-laws with their cultural practices, country forest policies and regulations as well as other existing community resource management rules/regulations at the local level. This might help to reduce existing conflict among local institutions over power on forest resource management and law enforcement.

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

Rufford logo was used in several occasions:

1. I presented preliminary result of the work in a poster session during the George Wright Society Conference that was held in Oakland, California March 29 - 3 April, 2015. Rufford logo was used and funding support acknowledged.
2. A second presentation was conducted at Clemson University on College of Health Education and Human Development (HEHD) alumni day (March 27th, 2015). Acknowledgement for funding support was provided and Rufford logo was used.

3. A third presentation was conducted during the HEHD Research Forum on April 23rd 2015 where a poster session was presented and Rufford support was acknowledged on the poster.
4. Since the research was part of my PhD dissertation, acknowledgement was clearly made on the report.

11. Any other comments?

I am very grateful to have received the grant to support this research. The flexibility on update submission and final report allowed time to conduct a thorough analysis and provided the ability to draw a plausible conclusion. The Enguserosambu community were happy to see that their knowledge is documented, and they are looking forward to reading the final report and recommendations.