

The Rufford Small Grants Foundation

Final Report

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

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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

Grant Recipient Details	
Your name	Michael Musgrave
Project title	The decline of the Baikiaea plurijuga forests of western Zambia and the implications for biodiversity, conservation and sustainable forest management
RSG reference	11834-1
Reporting period	2012
Amount of grant	£6000
Your email address	mkm4@st-andrews.ac.uk
Date of this report	19 July 2013

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
Maps of forest extent			Yes	Produced the first detailed maps for 30 years showing changes in forest extent
Maps and quantification of carbon resource			Yes	We now have actual measurements of carbon loss from the area due to forest degradation
Relative forest phenology mapped			Yes	Difference in phenology of forest types can now be monitored using MODIS data
Soil carbon measured and mapped		Yes		Soil analysis is underway and will be completed in a few months. This will then be mapped.
Social surveys Zimbabwe and Zambia			Yes	The data was collected as planned during the field seasons. Analysis is underway.
Mobile phone data collection	Yes			We did not receive enough donations of old mobile phones to implement the planned monitoring of forest phenology

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

The field expeditions were mostly a huge success. The only problem encountered was in Zimbabwe. With elections scheduled for 31st July 2013 there was a tense atmosphere in the country which limited the extent of the social survey's we could conduct. Nevertheless we managed to interview enough people to collect the data we needed for the study.

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

- The maps of forest change show in a graphic and dramatic way the extent of forest degradation in the region and are the only maps which have been produced in 30 years.
- The carbon measurements are the only accurate assessment of carbon in this region which has ever been conducted over such a wide area and show clear potential for possible carbon sequestration projects.
- The social surveys which are an attempt to link institutional structures to forest condition in the two countries constitute valuable data for making a comparison of how forests are influenced by the institutions on the ground.

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

Numerous copies of all of our maps were printed and distributed to the local community, forestry department, wildlife department, NGO's and traditional authorities. They were received with huge appreciation. These are the first maps any individual or organisation has seen of the area for 30 years and they show clearly what has happened to the forests in the intervening period.

A short report was compiled for all of the above individuals and organisations summarising our findings.

5. Are there any plans to continue this work?

We are currently writing a proposal to the Leverhulme Trust for a postdoctoral position and research funding to continue the project for the next 3 years.

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

Although the focus at the moment is getting the data analysis done a PhD thesis written up, several scientific research publications are in preparation. In addition we have an article scheduled for a regional newspaper (*The Zambezi Traveller*) which highlights conservation issues and is widely read. All maps and pertinent research findings will continue to be distributed to local individuals and organisations in Zambia.

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

The RSG was used over the same time scale as was indicated in the proposal, except that the second field trip was rescheduled to June instead of February to accommodate another researcher who won a Royal Geographic Society grant and could only travel in June. Other than this change the field work was conducted on exactly the same time schedule as was 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
Vehicle Hire	1800	1800	0	GBP1=ZMK8000 Airfares increased between budget and booking.
Airfare Edinburgh Bulawayo	850	890	40	
Fuel	1200	1500	300	
Food, camping equipment, subsistence	850	850		Fuel prices were increased in Zambia
Hiring local field assistants, translators	500	400	-100	Fewer staff were hired to compensate for fuel increase
Thuraya satellite phone	100	100	0	
GPS purchase	300	300	0	Budget was slightly too low for required equipment
Batteries, solar panel memory cards, misc equipment	340	380	40	
TOTAL	5940	6220	280	

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

Disseminating information locally about forest degradation and the dangers posed by fires is vital. We plan to produce an educational comic book which will be distributed at schools in order to start the educational process.

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

The RSGF logo was included on all the maps which were printed for distribution in Zambia and the short report which was published. The RSGF is therefore firmly linked to the research and the publicity which comes from being associated with having a logo appear on maps which are now in widespread use by government, NGO's and individuals in the study area in Zambia. The newspaper article in *The Zambezi Traveller* will also include mention of the RSGF. All further publications will include an acknowledgement of the support received for fieldwork.

11. Any other comments?

It's difficult to fund such interdisciplinary research but the research must be interdisciplinary if we are to fully understand the problems associated with deforestation. Thanks to the RSG for having the vision that many other funding organisations do not. This has provided us with the basis to build this into a more comprehensive research project.