

### Final Project Evaluation Report

Your Details					
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Project Title	Threshold of species loss in the Cerrado Hotspot				
Application ID	23683-1				
Grant Amount	£4,286				
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Date of this Report	23/12/2019				



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 know the state of the art in terms of threshold studies.				I made a literature review of threshold studies worldwide and published a paper in the Journal of Field Ornithology of threshold of species loss using birds. It reviewed the methods, level of analysis and identified knowledge gaps.
To assess the threshold of species loss in the Brazilian Cerrado, specifically at the Bodoquena plateau.				The threshold was successfully assessed, and the I am in the process of finalising my PhD thesis.
To assess how stakeholders perceive key aspects of conservation, including the threshold concept.				I am in the final steps of the writing process of my PhD.
To divulgate the results among different stakeholders				Given the logistics of my fieldwork, I was able to return to fieldwork after finishing the camera trapping phase. This was an excellent opportunity to one-to-one divulgation activities. I also presented my work to different audiences and stakeholders such as the eco-guides.

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

Given the Brazilian economic and political status during the last years, the budget for research was reduced while I was doing my project. That meant that I had to search for additional funding for doing fieldwork. The Rufford Foundation gave me the opportunity not only to successfully finish my fieldwork activities, but also to strength the social aspect of my research, and to widen the divulgation among local stakeholders.

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

a) This is the first study that estimates threshold of species loss using mammals and birds in the Brazilian Cerrado. We estimated such threshold for the area and



interpolated the results by modelling the land use change between 2030 and 2050.

- b) We also assessed local perception of landholders and improved our understanding about how such perception changes depending on the land use.
- c) According to our literature review, we found that there is a difference in threshold values between tropics and temperate regions. We hypothesised that this may be due to historic climate changes.

### 4. Briefly describe the involvement of local communities and how they have benefitted from the project.

After each interview, I had the opportunity to involve landowners by discussing the preliminary results of the project, and they were informed about the PELD programme. At the end of the project, they will receive a USB with information with the key PhD results, and some of the pictures of the species that were registered in their properties, with the intention of not informing them about the project but also about the importance of the birds and mammals inside their properties.

By involving the ecoguides in the workshop, they were informed about the project, and they showed interested in incorporating information presented during that day in their daily activities as guides. They also were empowered and encouraged to formulate they own projects. During the workshop they presented ideas such as monitoring fauna that cross the roads, and involving local school children in nature walks

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

The project belongs to a long-term research programme that will continue involving PhD students. Besides, the camera trapping generated a databased of mammals and bird's species that can be used in other projects.

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

I have and will continue presenting my results to different audiences. During the last workshop, I made contact with environmental government officer from Campo Grande (the capital city of region whew my study took place). She is very interested in repeating this kind of workshops in environmental gatherings during next year. I plan to submit at least two more scientific publications about the project.

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

The grant was used from the end of 2017 to the end of 2019. However, my PhD deadline is May 2020. That is why some publication are not submitted yet.



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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Printed material	74	247	+173	I printed more posters that I have initially planned, and I also paid for the poster design.
USB for results distribution among stakeholders	246	308	+62	The cost was higher than initially though.
External drives	124	156	+32	The cost was higher than initially though
AA batteries	275	313	+38	The cost was higher than initially though
Food for fieldwork	1551	1542	+9	
Fuel	2016	1519	-497	I could share transportation in some occasions
Non-planned		80	+80	I had unforeseen expenses, such as a broken car during fieldwork
Total	4286	4165	-121	

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

Divulgation wise, next important steps is to present the work to environmental NGOs and policy makers.

# 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 used the Rufford logo in all the presentations and printed material (i.e. poster, flyer, workshop certificates) Besides, I gave the credits in the acknowledge session of the papers and will continue doing so in next publications.

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

Professor, Dr. **Fabio de Oliveira Roque**. Professor at the Ecology and Conservation Programme form the UFMS is the main supervisor of my PhD.

Dr. Jose Manuel Ochoa. He is coordinator of the Biodiversity Evaluation and Monitory Programme of the Biological Research Institute Alexander von Humboldt in



Colombia. He acted as co-supervisor of my project, and his most direct contribution to this project is related with methodological and analytical aspects, given his experience with thresholds and modelling.

Dr. **Diego Lizcano**. A senior researcher at TNC and acted as co-supervisor of my PhD. He is experience with camera trapping and species occupation modeling was key to the development of the species models

MSc. **Cyntia Cavalcante Santos**. Mammal taxonomy expert. She is co-author of the Mamíferos não voadores do Pantanal e entorno (Natureza em foco, 2015. 224pp). Currently was a PhD student of the same programme and contributed with the species identification from the pictures, contacts with stakeholders and landowners in the region.

Renata Reinoso Rocha and Fabio Bolzano participated in fieldwork activities.

Celso Dias was my fieldguide during some of the the fieldwork.

### 12. Any other comments?

I would like to thank the Rufford Foundation for allowing me to finish my PhD and strengthening its social and divulgation component.