

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

Grant Recipient Details	
Your name	Martial KIKI
Project title	Human-carnivore conflict mitigation strategy in Benin: Modelling the influence of people, livestock and prey on large carnivores
RSG reference	18797-1
Reporting period	January 2016 - April 2017
Amount of grant	£5000
Your email address	martialkiki@gmail.com
Date of this report	07 April 2017

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
The Questionnaire interviews to collect data on the local perception and attitudes of local communities towards large carnivores				This objective was fully achieved. We conducted semi - structured questionnaires surveys with local pastoralists to investigate the human-carnivore relationship. Through this survey, we assessed people's perceptions of carnivores, quantified depredation levels and other causes of livestock mortality, and test levels of knowledge on large carnivores in the W NP.
Camera trapping				<p>I planned to start camera trapping activity in January 2016 for approximately 5 months, but camera trap deployment was postponed to the following dry season in February 2017. This was due to the late arrival of camera traps and in the beginning of the rainy season which was not my planned camera traps season. Secondly, regarding the relatively low number of camera traps, I wanted to combine them with camera traps from another project in the same area using the same data collection protocol to cover a vast extent of the study area at once.</p> <p>The final protocol used was a joint approach with another researcher implementing camera traps on the side of W Burkina-Faso and W Niger. This will allow us to collect wildlife data and specifically lion data simultaneously on the whole W complex and during the same period/season and enable for participatory data analysis. At this stage, this activity is still ongoing as traps are mounted in the field and we are planning to retrieve them in early May and start analysing the data obtained.</p>

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

The protocol used was a more traditional, systematic grid approach which was to set traps into 10x10 km grids, pre-designed across the W complex using GIS. Within each grid is a centroid point with known geographic coordinates. We allowed a 4 km radius around each centroid to look for a very appropriate site to set traps. By appropriate site we mean, areas with high animal activity, trails to increase carnivore and prey detection by the traps, etc. Once a suitable site was found, we would stop to set the trap and record additional information. One of the issues encountered regarding this technique was that in areas devoid of remnant water points which are known to attract wildlife during the dry season, it is usually difficult to find appropriate sites to set traps, even sometimes after completing the 4 km walk of searching in both direction of the centroids.

Camera traps deployment had been very hard to implement in areas lacking accessible roads forcing us to camp in the bush and trying to reach nearby pre-designed camera traps centroids with motorbikes on the following days. Despite this measure, we could not access all grids as it was hard to drive in the bush having to deal with several flat tyres events and the north side of the park full of succeeding hills. Only one trap is placed in each grid. But in grids with marshes, we mounted a pair of traps in different locations to increase our chance to detect large carnivores and have a second option if one trap was to be stolen. We used Spy Point Force-10 and Primos Proof Cam 02 with security case and cable to avoid/ reduce camera traps robbery.

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

The main goal of the questionnaire interview was to assess the perception of large carnivores by herders around the W National Park in Benin. We used semi-structured interviews to investigate our research question on 61 respondents mainly involved in livestock farming. We investigated their knowledge and behavior on perceived problems of wildlife, the probable causes of depredation and other causes of livestock loss. Our findings revealed that most of the respondents have good knowledge of wildlife despite confusion made on certain species by few people. It also emerged that 96.72% of respondents gave awareness on perceived problem with wildlife in general and with large carnivores in particular. This drives people to consider large carnivores as problematic because they are known to the public as wild animals that can attack both livestock and human. However, depredation does not appear to be the primary cause of livestock losses, regarding its proportion of 3.03% just behind diseases that caused 3.88% loss. These causes are followed by the dearth of forage and water in the dry season (2.85%) by slaughtering of cattle roaming illegally inside the park by forest guards (2.14%) and theft (0.52%). Despite the negative perceptions of large carnivores, people still adhered to the conservation of large carnivores in the park.

Recently, the wildlife staff of W NP recorded a carcass of a lion that was killed in January 2017 following recent livestock attacks in a village adjacent to the border of

the park. This evidence showed that human-lion conflict is still a major concern in the area and can cause the decline of lions and loss of livestock.

From February to March 2017 we started and completed the first ever camera trap deployment to cover about 80 % of the W National Park. For this purpose, three teams of two individuals each were made using lion guards of a Big Cats Initiative (BCI) led-carnivore conservation project (Lion Guard Project) and two local trackers and a field assistant to speed up camera traps deployment in the area. A short training was given to both lion guards on how to set/mount traps and collect data. In total, we positioned 48 camera traps covering most of the area. At the moment, camera traps are still operating in the area and are expected to be retrieved in early may before the start of the rainy season.

We hope they will generate data needed to analyse factors influencing the distribution and abundance of lions and other carnivores in the W NP, and assess co-occurrence patterns of carnivores, prey and livestock.

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

Lion guards and trackers that were involved during camera traps setting were from the local community. We have provided them with hands-on technical training and assistance such as the use of camera traps, the use of GPS and GIS techniques and database organisation for carnivore survey methodology. We plan community sensitisation and more intensive local monitoring for the following year of this project.

5. Are there any plans to continue this work?

This is the first phase of this work. There will be another phase next year. We plan to have at least 3-5 years of camera traps data from which our models can infer better prediction of lion use of habitat and co-occurrence patterns with other species, including human.

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

We plan to publish the findings of this work in international peer reviewed journals, to share the lessons learned from HCC mitigation and lion ecology in Benin with the international scientific/conservation community.

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 Rufford Foundation grant was used during the questionnaire interviews from May to July 2016 and during camera trapping from February 2017 - ongoing. The grant was needed to support food, transport and accommodation of field assistants and rangers to assist during camera trapping and questionnaire interviews. The grant was also essential to purchase camera traps.

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
Camera traps	1800	2390	590	Cost of camera trap has slightly increased.
Vehicle and fuel for field staff	840	940	100	Cost of fuel has slightly increased.
Field assistants and rangers to assist during camera trapping and questionnaire interviews	1200	1200	0	
Personal	800	800	0	
Miscellaneous	360	360	0	
Total	5000	5690	690	

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

After all camera traps data is collected, we plan to start analysing them, write up a full report and start writing a scientific article for publication.

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?

We plan to use The Rufford Foundation logo on presentation during conferences and on all printed materials pertaining to this project.

11. Any other comments?

I would like to sincerely thank The Rufford Foundation for funding this project. The Rufford Foundation support was essential for the success of this project.

