

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	Kezang Dema
Project title	Identifying Potential Ecotourism Sites Among the Hotspots of Livestock Kills by Major Predator Species in Bhutan
RSG reference	19112-1
Reporting period	One year
Amount of grant	£5000
Your email address	kezangde@gmail.com or kezangdema@moa.gov.bt
Date of this report	15 th May, 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
Objective 1: To determine hotspots of each group species in gewogs located within or sharing boundaries with one of protected areas of Bhutan				Secondary data was maintained at Department of Forest and Part Services for compensation payment to livestock kills by protected wild animals like tiger, snow leopard, Himalayan black bear and common leopard. Based on total number of kills by each of these species, top three kill sites based on total number of kills over the period of 13 years was identified. Thus due to unavailability of data the hotspots for other animals like dhole, elephant, deer, boars and primates were not identified.
Objective 2: To identify potential ecotourism sites for each group species				Top three identified hotspot sites for tiger, snow leopard, Himalayan black bear and common leopard were evaluated for potential ecotourism sites. The most potential site for promotion of ecotourism was recommended for further development.

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

Acquiring secondary data from the Department of Forest and Park Services took longer than expected because there were too many government protocols to be followed while acquiring the data. The data was finally shared with the researcher with the condition that any scientific publication of the results should be appropriately communicated with the department.

The secondary data maintained at the department was in MS excel format and also there was no uniform database. Every year the data was maintained in different format, thus it took long time to process the data and entering in statistical software package of SPSS.

Ad hoc government related activities has often recalled the field rangers to attend to their normal duties and sometimes that has led to postponement of the site visit.

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

- Most of the human-wildlife conflict hotspots lies within or nearby the protected areas network of Bhutan, highlighting the needs for the department of forest and park services to step focus human-wildlife mitigation strategies in these areas
- Most of the hotspot kills sites of the focused species like tiger, snow leopard, common leopard and Himalayan black bear has some kind of rudimentary ecotourism related facilities. Enhancing focus of the ecotourism stakeholders on expansion and reinforcing attention on improvement of these places would yield better outcomes rather than starting fresh start in other places.
- The map showing the top three kill sites for focused species based on 13 years (2012 to 2015) data was one of the major outcomes of the project.

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

There weren't any substantial direct benefits to the local communities. Only in certain cases the researchers stayed at their residence and paid the rental charge. However, in long run we hope that results of the study would be able to influence park management planning processes target the hotspots as priority sites for implementing any developmental activities related to ecotourism or any human-wildlife conflict mitigation activities.

The principle investigator and local rangers interacted with local community members while making a list of attraction inventory for a particular site. They also participated in focus group discussion to endorse the ecotourism potential ratings of the hotspot kill sites.

5. Are there any plans to continue this work?

One of the main limitations of the study was not considering the livestock density in each chiwogs (lowest administrative units in Bhutan) while analysing the hotpot kill sites. Thus in the next round of the study we would like to calculate the hotspot kill site incorporating the livestock density.

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

As per the terms of reference for using secondary data maintained by department of forest and park services, the report that was uploaded on Rufford website has ben already shared with them.

The manuscript of the research is currently being prepared for submission to Bhutan Journal of Research and Development (BJRD) to be published towards end of year 2017.

All the research assistants have been also given a printed copy of the final report that has been shared with the department of forest and park services.

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 completion period was 13 months. However it took 15 months mainly due to delay in acquiring the secondary data and then data cleaning as the data for every year was almost in a different format. The manuscript is being prepared for publication (uploaded copy on Rufford website), but it would take more time as it has to go through reviewing process and if accepted we need to wait for the publication. Thus publication will only be completed by the end of the year, 2017.

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
Travel expenses for principle investigator	891	1500	609	After analysing the secondary data the hotspots sites were scattered across the country. This required principle investigator to travel all over the country and additional fund requirement has been met through use of publication fee & budget for miscellaneous. Sometimes cost cutting was made by carrying out the research activities while travelling in those areas for normal daily duties as required by the employer, Department of Forest and Park Services.
Travel expenses for research assistants	2495	2495	-	This was an agreed amount by the park rangers so it was just shared among them to carryout the activities under the supervision of the principle investigator.
Communication	231	231	-	Often used communication lines of Department of Forest and Park Services thus the budget allocated was enough.

Printing	150	150	-	Mostly used office facilities except in binding the worksheets.
Accommodation expenses	889	1500	611	Most of the hotspot kill sites turned out to be in remote location often away from Range offices of Department of Forest and Park Services. Thus we carried out the activity while on official duty in conducting patrolling and used the per diem payment by the employer to pay for the accommodation at farmers' residences.
Miscellaneous	150	150	-	Used for travel payment of principle investigator
Publication fee	200	200	-	Used for travel payment of principle investigator. Principle investigator will look for publication fee from the department of forest and park services once the manuscript gets accepted in any peer-reviewed journal.
Total	5006			

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

There will be value addition on the paper prepared by incorporation the livestock density to calculate the hotspot kill sites and reorganise research findings.

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

The logo has been printed on all materials like field worksheets, communication with research assistants and application letters to Department of Forest and Park Services.

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

Sl. No.	Name	Role
1	Tshering Dawa, Ranger, Bumdeling Wildlife Sanctuary, Department of Forests and Park Services	Field coordinator at Shingphel
2	Phub Gyem, Ranger, Jigme Dorji National Park, Department of Forests and Park Services	Field coordinator at Tokko and Pashi
3	Dawa Zangpo, Forestry Officer, Zhemgang	Field coordinator at Nabji,

	Territorial Division, Department of Forests and Park Services	Korphu and Edi
4	Tshering Pem, Forestry Officer, Nature Conservation Division, Department of Forests and Park Services	Field coordinator for Buli, Khoma and Shingneer
5	Tshering Choki, Tourism Officer, Royal Society for Protection for Nature	Reviewer for the research report and also acted as advisor and trainer for the field assistants
6	Wangdi Drukpa, Deputy Chief, Nature Recreation and Ecotourism Division, Department of Forests and Park Services	Advisory role
7	Kuenzang Tshering, Professor, Royal Thimphu College, Bhutan	Reviewer and advised on research designs
8	Karma Yuden, Human Resource of Department of Forests and Park Services	Helped in arranging logistics in study sites located under jurisdictions of Department of Forests and Park Services

12. Any other comments?