

Final Project Evaluation Report

Your Details	
Full Name	Letro
Project Title	Assessing structural Connectivity of a Biological Corridor No. 8 for Wildlife Movement Between National Parks in Bhutan
Application ID	25170-2
Grant Amount	£5000
Email Address	fr.lethro81@gmail.com
Date of this Report	2019.02.05

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 determine the occurrence of herbivores in the corridor in relation to its biophysical and anthropogenic covariates.				The occupancies of three primary prey species were ascertained through single season occupancy modelling.
To assess human-wildlife interactions and understand people's perception on BC and wildlife conservation.				Nature of human-tiger conflict through livestock depredation by tiger was ascertained through questionnaire survey. Survey also tested people's perception towards conservation
To identify the threats of concerns caused by infrastructural development and other anthropogenic pressure and rank them for mitigation.				
To determine the suitability of habitat for the movement of wildlife between the two national parks through the corridor				
100% of the communities near BC 8 sensitized on the importance of biological corridors and tiger conservation.				

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

Bhutan had its third Parliamentary Elections between May and October 2018, and during that duration, public gathering for meeting was restricted. Because of that I had to perform the conservation awareness programme towards the end of 2018. However, that timing proved to be more convenient in reaching the conservation messages and results from the research findings, which helped educate the general public better.

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

My project looked into both ecological and social aspects of conservation, and the project site being a critical landscape, had many interesting outcomes.

- a) Occupancy pattern of prey species ascertained: I could map the occupancy map for three important tiger prey species in the region, wild boar, sambar and barking deer. The prey occupancy pattern indicates it would enable safe migratory corridor for predators like tiger between the two national parks, Jigme Singye Wangchuck National Park and Wangchuck Centennial National Park.
- b) High incidences of Predation by Tiger: We know that tiger often cause havoc to the farmers through depredation of livestock in Bhutan. This study also revealed that tiger makes substantial domestic kills in the region which might heighten retaliation if not tackled. It also calls for alternative measures to address this issues, be it through intensive study of predation pattern or through integrated conservation and development programmes.
- c) Educated around 180 households from the communities around the biological corridors on the need for biological corridor management and wildlife conservation. The social aspect of the research found that not many people were aware of the concept of biological corridors. Through household surveys and community awareness programmes, I could reach to more than 180 households from 12 villages around the biological corridor. In the face of high depredation incidences, education them is expected to reduce adverse attitude of people towards carnivores.
- d) Framework for biological corridor management plan in place. Since my study covered both social and ecological aspects of the biological corridor, I set out conservation recommendations based on the findings of my research, which will serve as basis for developing management plan for the biological corridor number 8.
- e) Improved collaboration: My study area was outside the protected area. Through this project, I could collaborate with different conservation agencies such as Nature Conservation Division at the department headquarters, the territorial divisions of Wangdue and Bumthang since the area falls in their jurisdiction, the Jigme Singye Wangchuck National Park, as I availed most of the support for fieldwork from there and also being my parent agency, and the Ugyen Wangchuck Institute for Conservation and Environmental Research from where I sought the technical guidance. I also communicated with local leaders to save my camera traps in the forests and for organising the awareness meeting gatherings.

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

Local communities were integral part of my project though the communities didn't benefit a lot from the project in terms of economic incentives. During the social survey, my respondents were mostly the yak herders, who have most of their pastures grounds inside the biological corridors. I have interviewed over 90 individuals and educated them about the concept of biological corridors, their management needs and other aspects of wildlife conservation. I could establish strong bond with the communities my sharing my concerns on the losses they incur through livestock depredation and they willingly shared their opinions without hesitation, because of which I could deduce stronger conservation recommendations from my research. Most of the questionnaire surveys were conducted from the herders' camp where they are actually interacting with nature and people appreciated my effort of reaching them where they actually lived. Some herders' camps require at least a 2-day walk from the nearest settlement.

I also organised a conservation awareness meeting with the local communities and presented to them why conservation is important for a small Bhutan. In general sense, people support conservation derived from strong religious and spiritual values but it is vital that people are educated on regular basis on the conservation policies, rules and regulations, and incentives they get from conservation. Close to 200 households attended the conservation education programmes. Efforts were also made to reach the conservation message to the schoolkids.

Through these initiatives, it is expected that people will develop stronger stewardship for conservation. My research also showed that regular conservation awareness programmes have impacted in developing positive attitude of peoples towards conservation.

5. Are there any plans to continue this work?

Yes. Fortunately I am glad to be placed at the Nature Conservation Division (NCD) now, the division within the department which is responsible for coordinating the management of biological corridors of Bhutan. At the NCD, we have planned to frame conservation management plan for the Biological Corridor No. 8 at the earliest, and the work executed through this project has a big contribution. Therefore, I am glad that I can take the works forward in continuity.

Further, I have plans to replicate the same work for other biological corridors that are not yet surveyed and frame conservation management plan for them in the future.

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

We shared the results from our work with relevant conservation agencies in the Department of Forests such as Wangdue Forest Division, Bumthang Forests Division, Jigme Singye Wangchuck National Park, Nature Conservation Division and the Ugyen Wangchuck Institute for Conservation and Environmental Research (UWICER).

I also had the privilege of presenting my work during the Bhutan Ecological Society Symposium and have plans to present it during the National Wildlife Research Symposium which will be organised by UWICER.

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

We used the Rufford Foundation grant in the first 3 months of the project, and later in the last 4 months of the project. In between, I was engaged in the university, performing the data analysis and writing of reports. Since the work was well planned, there weren't much issues in executing the work and using the funds.

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
Awareness education for community	1,050	1,260	-210	Exceeded the target of 150 HHs.
Food during the field work	1,200	1150	+50	
Travel and mobility for field work	1,000	980	+20	
Daily subsistence allowance for research assistants	1,440	1320	+120	3 Research assistants for 55 days
Purchase of stationary, medical aids, and printing of teaching aids, communications	310	290	+20	
Total	5,000.00	5,000.00		

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

The important next steps are to formulate the conservation management plan for the biological corridor, which will address the issues of human-wildlife conflict, improving the habitat and mitigating threats due to infrastructure development, and regularly conduct conservation awareness programmes for the people. The management plan should cover integrated conservation and development programmes to build community stewardship towards conservation. The BC8 should be secured to enable safe migratory corridor for wildlife particularly the tiger.

Similar works should be initiated for other seven biological corridors.

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, we used the Rufford Foundation logo in banners, survey questionnaire forms, and on the presentation slides. Rufford was also mentioned in my blog posts and social networks like Facebook, twitter and Instagram and when I shared images and other updates. The Rufford Foundation received publicity during the course of our work.

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

The project management committee selected as follows:

Letro - managed the project (Project Coordinator), designed the study, conducted the field work and wrote the reports.

Dorji Duba - coordinated the field works like camera trapping and sign survey.

Wangchuk Dorji - coordinated the social survey and assisted in the camera trapping works.

Tshering Dorji - assisted in camera trapping and social survey works.

All of us were involved in awareness education programmes.