

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 | Sangay Wangmo |
| Project title | Evaluating Habitat and Human-Bear Conflict in Phobjikha Ramsar site, Bhutan. |
| RSG reference | 21278-1 |
| Reporting period | 07 th Jan 2017 to 07 th Jan 2018 |
| Amount of grant | £5000 |
| Your email address | Wangmos555@gmail.com |
| Date of this report | 08 th Jan 2018 |

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

| objectives | Not achieved | Partially Achieved | Fully achieved | Comments |
|--|--------------|--------------------|----------------|---|
| To investigate the status and distribution of bear in Phobjikha Ramsar site | | | | With the funding support from RSG, the investigation on distribution and details status of black bear have been completely documented through thorough field evidence survey and camera traps throughout the Ramsar site. There are seven potential adult bears with 95% confidence interval and 15%+ margin of error within Ramsar site. However all bears are not resident in the area. |
| To assess the root causes of human-bear conflict in Phobjikha Ramsar site | | | | The major reason for the conflict are: <ol style="list-style-type: none"> 1) Ramsar site is located along the biological corridor that connects JSWNP and JDNP through which bears and other animals migrate. 2) 95% of conflicts were recorded to be incidents around settlement during dry seasons where food is limited in wild. 3) Accidents with bears in the wild while herding and gathering wild vegetables are few. |
| Community awareness programme | | | | The awareness meeting was held village wise and engaged all the community in the project site including local leaders and schools. We urged the people to report any sort of human-wildlife conflict so that forestry division can plan better mitigation measures. The significant conservation importance of bear were also highlighted with its role in ecosystem. |
| To provide practical measures to address the human-bear conflict in the country. | | | | The project findings including community perception were successfully distributed to relevant agencies and government offices with mitigation measures and recommendations. |

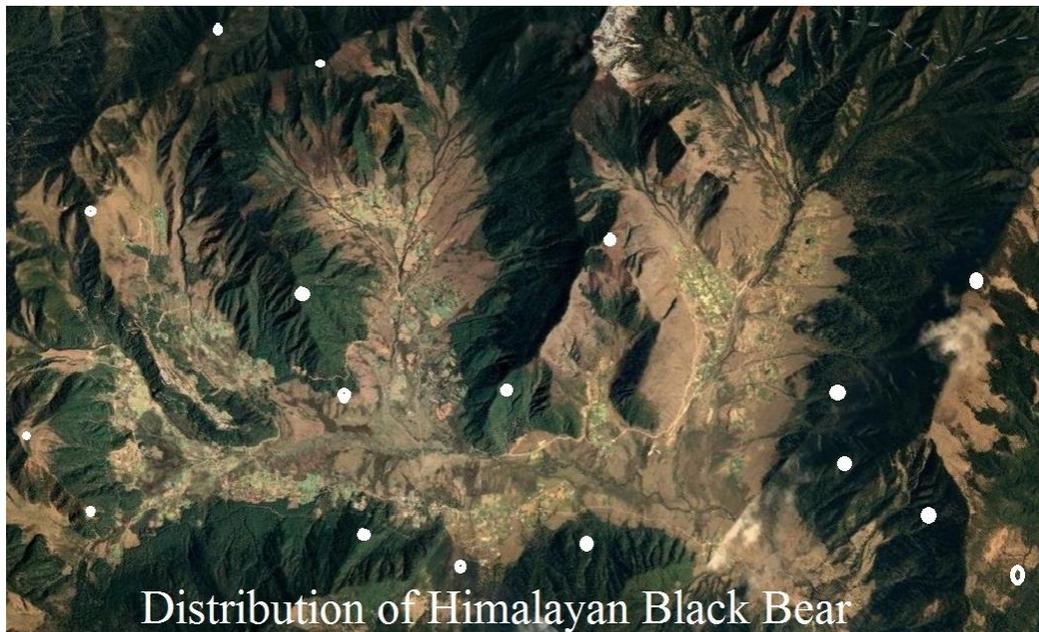
2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The few challenges for survey team were acclimatisation with cold weather during last month of the winter season, retrieving camera traps and few awareness programme left before. Other than this all the programmes were completed as per the master plan and proposal submitted to RSG committee. The official involved in project were glad that every individual within the community have attended the awareness programme and in the social survey.

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

1) Knew status, distribution and major conflict zone in Phobjikha Ramser site

Through camera trap images, a total of seven bears were estimated with 95% CI and 15%+₋ ME. The occurrence and their distribution was mapped based on evidence and sign survey carried by the survey team. According to the location reported by community on pervious conflict incident, red zone were mapped. The majority (95%) of conflicts were around the periphery of settlement and cattle shed. Beside attacks on human, the community also lost a majority of their calves and domestic animals to bears, especially during the winter season.



NB: The white dot shows the record of at least one black bear in camera trap setup within study area.

2) Reason behind the prominent conflict in Ramsar site.

Through this project we came to know the major reasons for conflict in project site. The reasons are;

- a) The project area falls along the biological corridor connecting JSW National Park and JD National Park where majority of wildlife migrations take place in all seasons. Among these, Himalayan black bear is one prominent animal that comes into conflict with the community there.
- b) The bear during winter looks for easy prey due to lack of wild food during dry, cold winter months. They mostly prey upon calves and weak livestock. In time, the community retaliate by laying snares and poisoning the carcass.
- c) For the past year community used to crop seasonal barley as the only source of income beside domesticating of animals, however due to attack of bears on barley and increasing conflict, the community have gave up cultivation of particular crop. Nowadays they mainly cultivate potatoes as main crops.



NB: Picture captured the rescuing mission of bear by forestry official and official of wildlife rescue division of department. The bear was reported to be trapped in snare laid by community.

3) **Community awareness programme**

Another major accomplishment was the mass awareness regarding the conservation importance of black bear to every village within the community. The importance of bear in food chain and its ecological role have been imparted to local communities and schools through power point presentation and group works, engaging every participant. Reducing collection of wild food that bear prefer the most and the most occurrence site in the area were also imparted to villager to refrain from encroaching the area and for protection of area by local community from illegal loggers and collection.





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

As per the tentative plan, the community were involved in social questionnaire survey (877 respondents) beside the village to village awareness campaign. They were made aware regarding the importance of conservation of bear, its main fooding and habitat. They were also made aware of country law towards retaliatory killing of bears and other precautionary measures.

The community were also given training on first aid medication beside remedial measure during the conflict. The participants were also provided practical activities beside theory class.

While people didn't have direct financial and economic benefits from the project, we educated them how conservation efforts from their end will help them with better incentives.

5. Are there any plans to continue this work?

With the generous support from Rufford, we could gather much knowledge and insight on this particular field. However due to limited time we couldn't go into much deeper studies like behavioral study of black bear and its home range coverage beside current project area. In near future we would be able to study these.

The current project have been just implemented and monitor but we haven't evaluated its effectiveness. The remedial measures and other precautionary measure imparted to community need to be evaluated for its effectiveness and its impact. Therefore the current project will be continually monitored and evaluated.

Some remedial measure to protect community crops and domestic animals such as electric and solar fencing techniques need additional funding and resources. Therefore to implement this measures we need to secure additional funds.

The adjoining area to current project site called Dangchu community also reported some serious conflict with black bear. There is possibilities that, the situation is much similar to current study, therefore if we could secure additional funds from our government and other donors, we are planning to replicate the same and in addition to this, we will be carrying out frequent rating of current project with the community for its effectiveness.

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

The preliminary results of the study are already being shared with concerned offices and functional division including local government with conservation recommendations. The

local government and functional division after reviewing the result would put forward policy recommendations to the department to curb human-bear conflict.

The finding and recommendation of this project are in process of reviewing in scientific publication as this publication would have larger and much wider impact to community around world.

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

I could complete the project within the stipulated time. However some deviations have occurred for conducting the different activities.

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 | Amount Budgeted | Actual Amount | Difference | Comments |
|--|-----------------|---------------|------------|---|
| Purchase/arrangement of field equipment's. | 258 | 300 | -42 | Most of equipment couldn't be borrowed and have to purchase. It was bit expensive beyond outlined budget. |
| Field staff training on survey method using data sheet, survey protocol and research objectives presentation | 700 | 700 | | |
| Daily subsistence allowance for field survey and conservation awareness | 1000 | 1000 | | |
| Daily subsistence allowance, food and lodging for selected CNR forestry graduates for field survey and awareness program | 800 | 800 | | |
| Conservation awareness programs of target communities and in schools | 1592 | 1592 | | |
| Design, production and printing of posters, pamphlets and models for Conservation awareness programs | 350 | 350 | | |

| | | | | |
|--|------|------|-----|---|
| Publication and printing of final report | 300 | 285 | +15 | Report printing was bit cheaper than actual cost. |
| Total | 5000 | 5027 | -27 | |

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

The next important step for current project is to monitor and evaluate the remedial measures recommended by current project imparted to local community against Himalayan black bear. However there are other important step forward to secure additional funding to execute some major remedial measures such as electric or solar fencing and other studies such as behavioural and home range of black bear. The other step would be imparting this information to other relevant agencies further beyond current project area.

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?

Yes, I did use The Rufford Foundation logo in the material printouts and during the presentation works. Owing to the generous support rendered by The Rufford Foundation in diversity of fieldwork which helped us gather baseline information, the Rufford Foundation has gained much popularity. This could be very reason why Rufford foundation received so many proposal from Bhutan and have to limit its opportunity to Bhutan. The Department of Forests and Park Service, Bhutan would remain indebted to Rufford Foundation for the funding.

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

| Name | Role |
|-------------------|--------------------------|
| Sangay Wangmo | Coordinator/ implementer |
| Dorji Duba | Social surveyor |
| Tshering Wangchuk | Social surveyor |
| Tobgay | Awareness campaigner |
| Sangay Tamang | Awareness campaigner |
| Quentsho | Awareness campaigner |
| Karma Lhundup | Awareness campaigner |
| Tshering | Field survey |
| Wangmo Sherpa | Field survey |
| Mon Bdr | Field survey |
| Dema Wangmo | Field survey |
| Meto Dema | Field survey |
| Sangay Wangchuk | Field survey |
| Karma Choden | Social surveyor |

| | |
|-----------------|----------------------|
| Sonam Wangmo | Social surveyor |
| Ngawang Dema | Social surveyor |
| Penjor Tobgay | Social surveyor |
| Rigzin Wangchuk | Social surveyor |
| Jigme Lhundup | Social surveyor |
| Sangay Dorji | Awareness campaigner |
| Sonam Dorji | Awareness campaigner |

12. Any other comments?

I the recipient of Rufford fund in the interest of community and nature would like to acknowledge Rufford Foundation for continuously helping Bhutan Government, in aiding conservation effort achievable and helping in maintaining 60% of our country under forest cover in all years to come. I am confident that this project have helped the community and will surely help in securing the wildlife in harmony with communities in future.