

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	Sabina Koirala
Project title	Empirical Study and Community Awareness on Four-Horned Antelope (FHA) in Banke National Park and its Buffer Zones.
RSG reference	20908-1
Reporting period	December 2016- February 2018
Amount of grant	£5000.
Your email address	sabina.koirala2@gmail.com
Date of this report	February 2018

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
Collect baseline information on the distribution, habitat preference, conservation threats and human-FHA conflict by plot analysis on the national park and buffer zones.				Baseline information on the distribution, habitat preference, conservation threats and human-FHA conflict was collected using plot analysis and semi-structured questionnaire. Distribution and Habitat Suitability maps were developed.
Build capacity of local people and park staffs and evolve them as citizen scientists on surveying, monitoring and conserving the species.				Capacity development training was given to 22 participants; local people (representing buffer zone management committees) and park staff.
Overcome existing conservation threats of FHA by increasing local people's knowledge about the importance of conserving FHA in BaNP and its buffer zones by performing school outreach and community awareness programs.				14 conservation education classes for community people in different VDCs, 14 art and essay competitions in different schools were conducted in coordination with national park, buffer zone management committee and local people. During the events published conservation education materials were distributed too.
Aware vehicle drivers about the ecological importance of wild mammals including FHA to reduce the potential road killing of the animals.				Awareness programme for vehicle drivers were conducted in collaboration with National Park Authority and Nepal Army (which is responsible for patrolling of the national park). Published 1000 stickers and other published conservation education materials were also distributed for drivers.

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

Some difficulties were faced during the interaction with communities. While conducting the semi-structured questionnaires, the research team realised the local people have negative perception about the wildlife and their conservation because of some problematic animals like leopard, wild elephant, rhesus macaques etc., as well as the crop loss caused especially by wild boar and spotted deer. Some local people assumed the research team as national park authority and presented aggressively during the questionnaire survey and awareness programmes. So, research team prepared Powerpoint presentation about controlling the loss from problematic animals. During the presentation, some traditional and modern ideas that are being adopted to control (without any harm to the animal) the economic loss by problematic animals in Nepal and other countries were shared. The research team hopes that those shared knowledge are being somehow helpful for the local people.

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

The three most important outcomes of the projects are:

i. Baseline information on the distribution, habitat preference, conservation threats and human-FHA conflict.

This project collected the baseline information on distribution and habitat preference of FHA in Banke National Park (BaNP) and its buffer zone area. From habitat suitability modelling, it is found that 38% of the habitat is unsuitable for FHA in BaNP and its buffer zones. Likewise, 36% is highly suitable, 18% is medium suitable and 8% is low suitable area. Mixed forest is the most favoured habitat for FHA followed by *Shorea robusta* forest. But, presence of FHA is recorded from grassland and shrubland too.

Regarding the conservation threats, forest fire is the most prominent threat; we recorded fire in 70% of the assessed plots with the presence of FHA. Livestock grazing is next major threat for FHA in national park and buffer zone area.

From questionnaire survey, we found that there is no noticeable conflict between FHA and local people and 94% of the respondents recorded that FHA is not involved in Crop- raiding.

ii. Capacity Building of local people and park staffs

This research strengthened the capacity of local community (buffer zone management committee members) and park staff on FHA conservation and research through training and involving them in FHA conservation and research activities as local assistants. Some participants were not able to recognise them as FHA before the training. After the training, the buffer zone management committee members are interested to include FHA conservation plan on their community forest operation plan to conserve FHA in a sustainable way. The advocacy with stakeholder, awareness

and skill they earned from the training and participation as research assistants triggers the community initiative to save the threatened antelope species. Also, they will utilise their knowledge and experience for the conservation of other ungulate species like barking deer, spotted deer, sambar and wild boar found in the park and buffer zone area.

- iii. Conservation awareness to local community, school children and vehicle drivers

Various FHA conservation awareness activities made the local people, school children, school teachers, and vehicle drivers aware and increased their knowledge about the importance of this species and the biodiversity. As all the awareness activities were of first kind, local people, school teachers, students, vehicle drivers and overall society was interested to learn about the species and their conservation. The distribution of posters, stickers and leaflets to government officials, public and students were found effective in conservation.

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

Local community people who are working as national park staff and who are involved in buffer zone management committee were hired by the project as local field assistants for different project activities like field work, community and vehicle drivers awareness programmes and activities conducted at schools. Also, numbers of local community people including students, teachers and vehicle drivers were actively involved in the conservation awareness camps and school programmes as participants. They were able to learn various FHA related information like importance of FHA, local threats to FHA and their role to conserve FHA and other ungulates. Although, most of the local people have seen FHA in their surrounding forest but were unaware about the importance of this threatened and important species around. So, when they came to know about the FHA they were excited to know more and interested to conserve too. Similarly, school children and school teachers also got new knowledge about the FHA and its conservation.

5. Are there any plans to continue this work?

Yes, firstly, we will continue FHA surveys and conservation projects in other range habitat of Nepal where FHA studies and conservation activities have not reached yet. Recently, some new records for presence of FHA outside the projected areas of Nepal have been documented. Vulnerable species outside the protected areas need more effort for their conservation. So, such area will be also in focus for the conservation awareness activities.

Secondly, talking about the Banke National Park, major conservation threat for the conservation of FHA and other ungulates is forest fire and grazing which is a serious conservation challenge for the park authority too. So, minimising the mentioned threats by launching different activities are in our priority as continuation of this work in the case of same conservation area.

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

For the result dissemination, one workshop is already organised at Banke National Park Office, on 8th August 2017. Result obtained from the field survey for distribution, preferred habitat, and existing threats and semi-structured questionnaire survey was disseminated to the Banke National Park staff, buffer zone management committee members, related NGOs and INGOs representatives and journalists. Also, printed project reports were disseminated.

Presentations regarding the outcomes and activities of the project will be conducted during invited lectures, National seminars organised by SMCRF and international conferences in the near future. Similarly, activities of the project will be mentioned in annual report of Small Mammals Conservation and Research Foundation (SMCRF) and will be distributed and uploaded in SMCRF's website (www.smcrf.org). Also, using popular social media like Facebook, the awareness related materials and research and conservation activities were shared. The result will be published in any relevant journal.

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 RSG fund was used for 12 months from February 2017 to January 2018, which is equal to the proposed length of project. However, majority of the grants was used till August 2017 mainly for the research and conservation activities of FHA.

Various programmes and their respective budget were used at around the allocated time. Conservation awareness activities are planned to at September 2017, but the research team was able to finish that activity at August 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
1. Food and accommodation	1960	1605	-355	The living cost was little lower than expected
2. Transportation	447	368	-79	National Park Authority provided their vehicle for the research and conservation activity for most of the days.
3. Equipment, stationary and communication for field visit	249	249	0	

4. Capacity development training	168	168	0	
5. Poster and leaflet printing	160	192	+32	Printing and designing cost were more than expected
6. Hoarding Board Print and Install	340	218	-122	Instead of Hoarding Board print and installation, stickers were printed, so less amount was used.
7. Community Awareness and School awareness activity	1064	829	-235	School Classrooms, Hall of Buffer Zone Committee Offices were used for community Programs, which they provided for free.
8. Awareness Program for Vehicle Drivers	168	168	0	
9. Health Insurance and first-aid Kit	90	90	0	
10. Expert Fee (GIS export and data analyst)	200	100	-100	Team member helped for the GIS related work without charge.
11. Report preparation and dissemination	154	173	+19	Result research sharing workshop was added beyond the plan.
12. Local field Staff Stipend	0	840	+840	Stipend was provided for the local assistant @ £12 per day.
Total	5,000	5,000	0	

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

The important next steps are to minimise the threats to FHA because of forest fire and grazing. Only public awareness for the conservation is not enough to control those mentioned threats. Some alternative livelihood plan to control grazing and fire control mechanism is needed.

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 Rufford logo was used in all materials published in relation to this project, the materials are 100 posters, and 1000 leaflets. The logo was displayed during the community awareness workshop, school programmes, vehicle driver awareness programmes, capacity development training and result sharing workshop. In addition, the Rufford logo was used for the certificates printed for winners of art and essay competition and for the capacity building training. It receives great publicity because of the awareness related published materials. Furthermore, during the scientific article, we will acknowledge the foundation.

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

Full List of the project team members:

- i. **Prof. Karan Bahadur Shah**, Natural History Museum: Project Adviser

Prof. Karan Bahadur Shah gave different advises about the field design and data collection. Also, he supported the project team by helping in finalizing the materials for conservation awareness materials.

- ii. **Sabina Koirala**, SMCRF: Principal Investigator

Ms. Koirala, was actively involved in each activity of the project. She performed different activity like: field visit, preparing awareness materials, conducting awareness activities, conducting capacity development training and result sharing workshop, preparing reports, updating to referees and donors etc.

- iii. **Amar Kunwar**: Research Assistant

His role was as a research assistant for field work and awareness activities. Also, he worked for preparing data collection sheets, awareness materials and reports.

- iv. **Sabita Gurung**: Research Assistant

She worked for designing and preparing field activities, data collection sheets, awareness materials and reports. Also, her role was as a research assistant for field work and awareness activities. She performed many activities related to GIS.

- v. **Hari Basnet**

He helped for the data analysis and map production and during awareness material preparing.

- vi. **Bishnu Achami**

He helped for the designing of awareness related materials.

- vii. **Shahadev Tharu**: Local Field Assistant

He was very active and enthusiastic local assistant for field work. He guided PI and research assistants to visit various places during field data collection and conservation awareness activities. Also, he helped to identify different plants recorded in FHA habitat. On the other hand, he has learned many skills related to FHA research and conservation activities.

- viii. Local Assistants: Many other local people were involved during this project as local assistants.

12. Any other comments?

We are thankful to RF, for their kind grant support. The impact of the project to create awareness about the conservation importance of FHA among local community and the baseline data collected during the project cannot be underestimated. This will be further elaborated in future projects.