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	Ritika Prasai
Project title	Monitoring grassland habitat condition and counting total population of Bengal florican (*Houbaropsis bengalensis*) at Koshi-Tappu Wildlife Reserve, Nepal
RSG reference	20736-1
Reporting period	12 months from January 2017-January 2018
Amount of grant	£ 4551
Your email address	Prasai.ritika@yahoo.com
Date of this report	3rd 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
To monitor the grassland habitat condition of Bengal-florican at Koshi-Tappu Wildlife Reserve, Sunsari, Nepal				1 km line transects were established in each block (total 30 blocks) of 1 sq km at each 10 different locations of outside protected area (OPA), buffer zone (BZ), and core area respectively of Koshi-Tappu Wildlife Reserve, Sunsari, Nepal . Blocks were chosen from the previous data records and local group information obtained from preliminary survey in the area. Then six plots at every 200 m interval (of 1 km transect) within each block were established. Then habitat condition was monitored by using Rebell Poll and Suward Stick method. Pellet count was done by making 30*2 m stop line to know the association of other species with the Bengal florican. This process was done every 2 months starting from March– October. More emphasis was given during the breeding season of Bengal florican. Our study analysis showed that protected area is the best habitat condition for the Bengal florican rather than outside protected area.
To count the total population of Bengal florican at Koshi-Tappu Wildlife Reserve, Sunsari, Nepal				Sweep count and display count method was adopted for this purpose. We could record 38 floricans. Survey was conducted at 30 blocks chosen for the habitat monitoring.
Stakeholder analysis				Stakeholder survey was conducted through semi-structured interviews. Perception of stakeholders towards conservation of the site was recorded.
Conservation awareness programs				Altogether, three workshops were conducted at Sunsari, Sauraha and Kathmandu, Nepal respectively to promote the florican conservation activities. Brochures were distributed

				to the participants. t-shirts and token of love were distributed to the trainers and eco-clubs members. Two radio programmes were done to spread the conservation messages.
Eco-club formation				Two eco-clubs have been formed, one at Sunsari who were engaged in data collection during the field survey, and next at Kathmandu to carry out conservation awareness programmes on Bengal florican conservation.

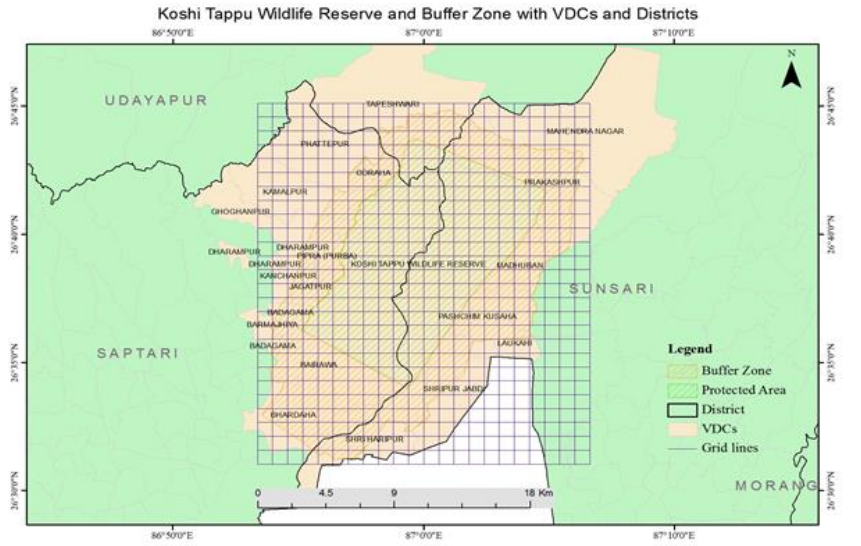
2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

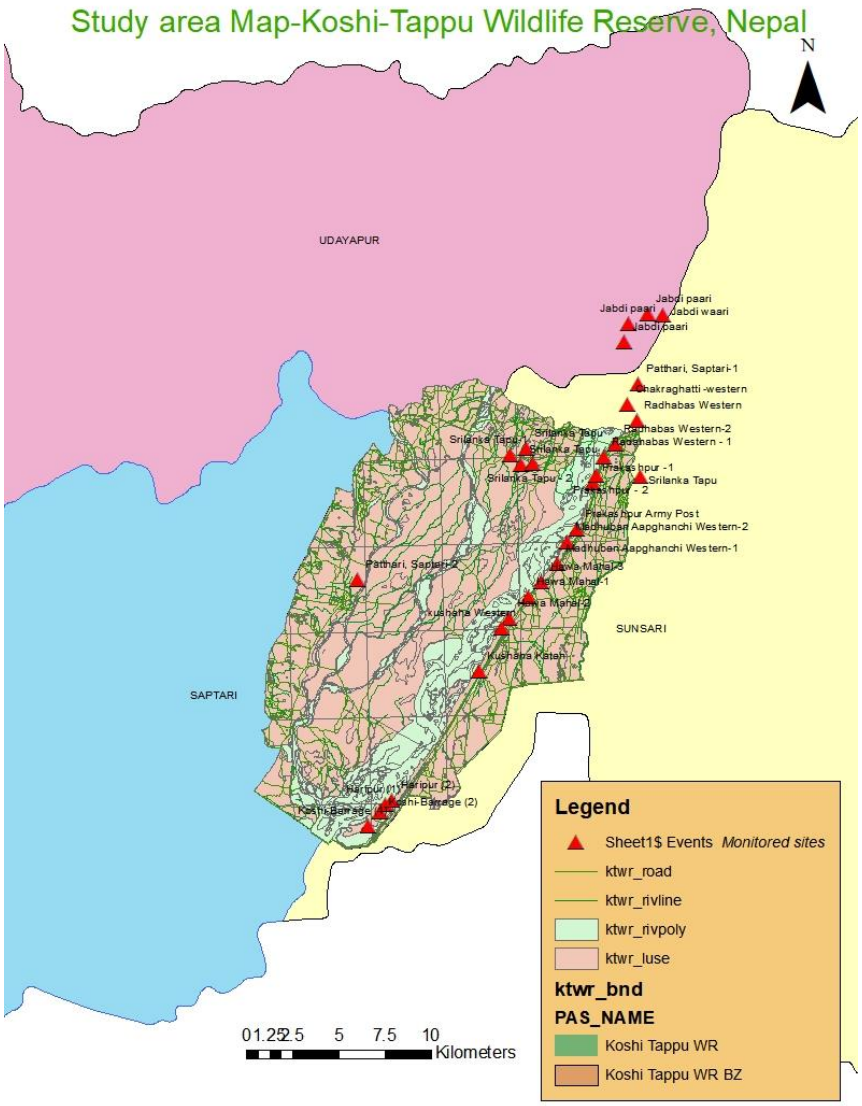
To demonstrate survey techniques among local groups was difficult but was tackled by providing training on data collection procedure. Heavy monsoon and frequent floods in the area made research further challenging one. However objectives were achieved by extending time period of the data collection.

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

3.1. One-year data on habitat condition of Bengal-florican was recorded.

This was done by making 10-10-10 blocks each of 1 sq.km at –Outside Protected Area, Core Area and Buffer zone respectively of Koshi-Tappu Wildlife Reserve, Nepal. Blocks were established from the past data records and local group information obtained from preliminary survey of the area. 1 km transects were established at 30 blocks and six plots at every 200 m interval within each block were established. Habitat condition was recorded using the Rebell Poll method and Suward Stick Method in each plot. Pellet count was also done making a (30*2) m stop line to know the association of other species with the Bengal florican.





Findings:

Data was recorded from March-October, 2017 which showed that the protected area hold the best habitat conditions for the florican presence with 22 floricans in core area (CA) , seven in buffer zone (BZ) and nine in outside protected area (OPA). Impacts of various variables such as grass height, number of trees and status of conservation area (outside protected area-OPA, core area-CA and buffer zone) on the florican presence was analysed using the logistic regression models which showed that number of trees present in the site and grass height do not hold significant influence on the Bengal florican distribution while conservation status (CA/BZ/OPA), of the site directly impacting the availability of these species in the site Pellet count analysis was done to see the association of the Bengal florican with other species present in the site. Wild Buffaloes were dominating species (60%) in CA along with other species such as hog deer (30%), elephant 5% (captive), rabbit (3%)

and livestock (2%). Similarly we recorded the greater influence of livestock in buffer zone (60%) and outside protected area (100 %) from the pellet study. Regarding grass species composition we found out that *Imperata cylindria, Saccharum spontaneum and banso* (local name) are major dominating grasses for the floricans habitat with *Imperata cylindrica* being the major dominating grasses in core area (CA). Improper livestock grazing was found as the major threat for the conservation of Bengal florican in the area.

3.2. Total florican population at the site was recorded.

Display count method and **s**weep count method was adopted for this objective. 38 floricans were recorded at 30 blocks designed for the habitat monitoring purpose. The recorded population has been compared to the past records and presented in a graph.

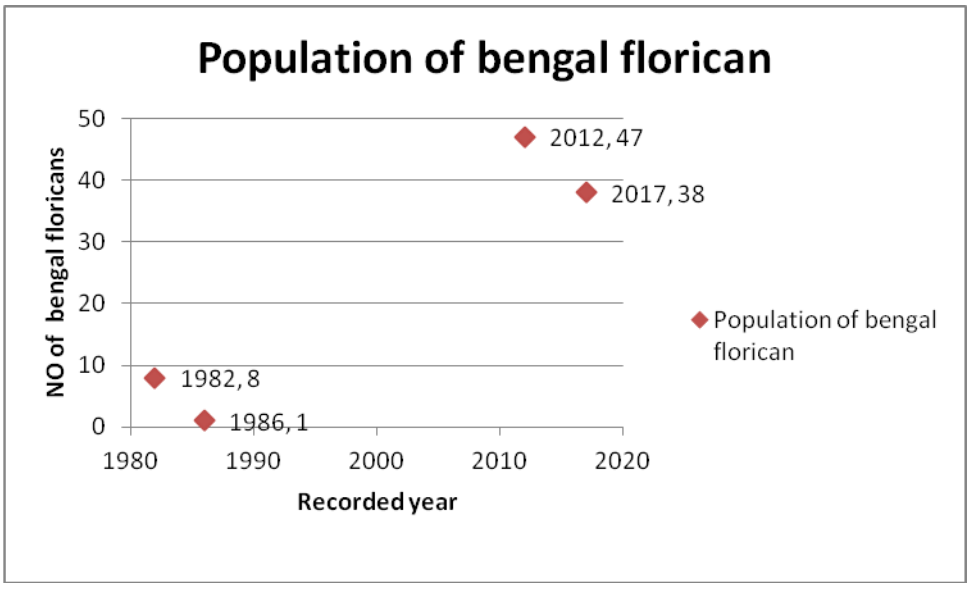


Figure : Recorded population of bengal florican (*Houbaropsis bengalensis*) in Koshi-Tappu Wildlife Reserve, Nepal

3.3. Two Eco-clubs formation at Sunsari and Kathmandu respectively.

Two eco-clubs have been formed at Sauraha and Kathmandu, respectively, to promote the Bengal florican conservation activities. Eco-club members were chosen from active local groups, representative from concerned local stakeholders, and students from grade 11 and 12. Instruments handling techniques such as GPS set up, using compass to set the direction and measuring tape to make the transects was taught to the members before the survey. Familiarization of pellet count method was done.

Eco-club members (Sunsari) were involved in data collection. Prem Adhikari, Dinesh Magar, Jyoti Budhathoki, Anish Timsina, representative from Koshi-Bird Society, were involved in the survey team. School children were trained for filing the data sheet.

Other outcomes:
Three workshops were conducted at three different places (Sunsari, Kathmandu and Sauraha). Powerpoint presentation, video recording and photographs of Bengal floricans were shown to the participants and brochures containing general information on Bengal florican were distributed to deliver the conservation messages to the participants. Two radio programmes were done to spread the conservation information. t-shirts and token of love was handed over to the trainers during the workshop and Birds of Nepal books have been donated to the eco-clubs to guide them towards conservation which was supported by Nepal Youth Council (PI-working as program-coordinator at Nepal Youth Council, Environment Department).

Website links:
http://www.radiosauraha.com/?p=4121

https://www.saurahaonline.com/2017/10/37562#.WeG1wx9QgRA.facebook

http://www.nationalyouthcouncil.org/the-team/

http://www.nationalyouthcouncil.org/wildlife-training-17-days-research-based-training-in-nepal/

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

Entire field work was accomplished with the support from the local communities and local staff. Local people were involved during the field survey and workshops during the project. Prem Adhikari, Dinesh Magar, Anish Timsina and Jyoti Budhathoki were the main field members from the local groups. Two eco-clubs have been formed at Kathmandu and Sunsari with the representatives from stakeholder group, local groups and students from grade 11 and 12. Technical skills in conducting the field survey and habitat monitoring knowledge have been taught to the local people and eco-club members. 'Birds of Nepal' book have been provided to each eco-club so that they can develop their bird identification techniques which can be linked to promoting tourism at the site.

Similarly, three students (Miss. Swosthi Thapa- Institute of Forestry, Hetauda , Miss Dibya Bhatta-Institute of Agriculture and Animal Science, Pakhlihawa, , Mr. Biraj Sherestha –Central Department of Geology, Tribhuvan University) were trained for the data collection and involved during the field work.

5. Are there any plans to continue this work?

Yes, there are further plans to continue this research project in future. Conservation programmes need continuity in order to meet expected outcome. Similarly habitat

monitoring needs continuous data recording for at least 5 years in order to come to a conclusion. This kind of research needs continuity in order to provide an authentic data for the policy makers and prepare some conservation guidelines on the Bengal florican conservation. Moreover, the site is being degraded due to encroachment through overgrazing and human's frequent movement which needs to be controlled through further awareness campaigning and programmes. Local people should be involved consistently in the field survey so that they can realise the importance of these creatures on the earth. Stakeholders need continuous pressure to be involved in conservation of the site. My work only provided the current scenario of the site which needs to be monitored for successive years for the conservation of this critically endangered species.

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

I have designed 17-day field-based training to the 10 selected participants in order to transfer my field based knowledge and habitat monitoring skills to the students. http://www.nationalyouthcouncil.org/wildlife-training-17-days-research-based-training-in-nepal/

Other mediums to share my result would be:

I am working on the data right now and I will publish the output of this project in a scientific peer reviewed journal. Results will be shared to wider conservation audience via conferences and workshops.

Moreover the result will be published on local newspapers, and media. Hard copies of the result will be disseminated to the concerned authority such as Department of National Parks and Wildlife Reserves (DNPWC), Koshi- Tappu Wildlife Reserve, Department of Forest, District Forest Office, Koshi-Bird Society, with recommended actions for future.

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

RSG budget was used throughout the project from preliminary survey to field data collection, eco-club formation, preparing conservation materials and report writing.

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
Food and Accommodation (30 days)				
(a). Principal	1040	1560	-520	We could not complete the field work

Investigator (PI)-(1*52*30)				in 20 days as decided before since the site was hit by frequent flooding during the research and altogether 30 days was required to complete the field survey due to which budget amount rose. Also the charge for food and accommodation rose due to political instability and strikes in the country.
(b). Field Assistant – (1*52*30)	1040	1560	-520	
(c). Local Guide – (1*52*30) + Field Allowance (1*213.87)	1253	1773	-520	
Transportation	300	350	-50	Transportation cost increased as the number of days spent in the field increased and rate of fuel increased due to frequent strikes and political instability in the country.
Materials				
a. GPS (3*99.81)	299	299	0	Two GPS has been handed over to the Eco club of Sauraha for the continuity in grassland condition monitoring.
Stationery				
Flex/ posters/ pamphlets/ leaflets	60	60	0	These stationery were used during the workshops and stakeholders analysis and distributed to the participants and stakeholders
1. Eco-club formation	60	60	0	Two Eco clubs have been formed at Sunsari and Kathmandu to involve local people and other students in conservation
2. T-shirts(20* 4.99)	-	99.8	-	T-shirts were bought with the financial assistance from Nepal Youth Council where I have been working as a program-coordinator at Environment Department.
Total amount	**4551**	**5761**	**1210**	Extra expense was supported by Nepal Youth Council-NYC and other local organizations

Notes to the budget: All the conversion has been done at the conversion rate of: 1 £ = 135.2879 Nepalese rupee. Decimal values has been neglected. All the extra expense has been supported by Nepal Youth Council (where I have been working as a program-coordinator at Environment Department-Volunteer http://www.nationalyouthcouncil.org/the-team/ and other local organizations of Nepal

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

Continuous habitat monitoring for at least 5 years in order to produce best conclusion on suitability of Bengal florican's habitat and prepare authentic conservation guidelines with the support from policy makers is the most required step in future. Moreover awareness campaigning and programmes at the site in order to

discourage the overgrazing and encroachment along with involvement of local people in the habitat monitoring and population count of floricans in order to make them realise the importance of these creatures on the earth is most essential. Linking these birds to the promotion of tourism at the site and continuity of trainings and workshops shall be the best future action plans.

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, Rufford Foundation logo was used in every conservation materials and activities conducted during the project. The logo was attached in each workshop conducted, brochures and t-shirts printed, notebooks, and also at the17-day field-based training to be conducted from 20th February, 2018. Rufford Foundation was acknowledged on the online news published during my work at the site and workshops.

Website links:
http://www.radiosauraha.com/?p=4121

https://www.saurahaonline.com/2017/10/37562#.WeG1wx9QgRA.facebook

http://www.nationalyouthcouncil.org/the-team/

http://www.nationalyouthcouncil.org/wildlife-training-17-days-research-based-training-in-nepal/

11. Any other comments?

Thank you Rufford Small Grants for Nature Conservation for supporting this project which is directly helping a lot in conservation of the Bengal florican at the site. Local people have been more careful and concerned on conservational issues. Stakeholders have shown deep interest in future programmes and plans. This project needs continuity in order to generate accurate outcomes and prepare conservation guidelines that could generate baseline information on Bengal florican conservation in Nepal. I am also thankful to Department of National Parks and Wildlife Reserves (DNPWC) and Koshi-Tappu Wildlife Reserve, Nepal for providing me the permission to conduct the survey at the site. I am sincerely thankful to eco-club members, local groups who were dedicated in the field survey. Thank you!

The Rufford Foundation
www.rufford.org