Final Project Evaluation Report

Your Details	
Full Name	Prashant Ghimire
Project Title	Understanding Nesting Ecology and Conservation of Asian Woollyneck (Ciconia episcopus) in the Mid-hills of Nepal
Application ID	24781-2
Grant Amount	£4991
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Date of this Report	March 28, 2019

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 identify and study Nesting habitat			■	We Visited four districts (Pyuthan, Arghakhanchhi, Salyan and Dhading) of mid hills of Nepal to explore nesting habitat and study ecology of Asian Woollyneck. Moreover, 3 Nests of Rupandehi (Previous RSG funded project site) were closely monitored throughout the year. Beside, studying habitat parameters of nesting sites we spent 8-12 hours observing activities on Nests. It will take 4-5 months for data analysis after which we are determined to publish it in
To inculcate nesting habitat conservation through conservation awareness programs.		■		"Science and Community" Campaign was conducted in 15 communities and community led conservation activities were discussed. School teaching programs were also conducted around nesting vicinity. Oral and poster presentations were made in various part of the country.
Documentation on Asian Woollyneck distribution through Photo bank Campaign		■		After discussion with senior ornithologists, researchers, conservationists, and bird watchers, Photo bank campaign was initiated in

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

There were no such obstructing difficulties as we were familiar to our project site earlier. Through our preliminary survey in 2017, we had made good local contacts for efficient implementation of project. But, still we faced few unforeseen difficulties underway.

Roads and trails of the area were quite unreliable due to landslides and poor road condition. This obstructed our observation during monsoon.

Figure 1: Road condition of study site

Study area is in mid – hill of the country where emigration is sharp. Youths are moving to cities and abroad while the villages are left with school children and old aged people. This has limited active conservation intervention around nesting locality. Thus, Active conservation efforts is limited. To broaden our impact, we conducted our conservation campaigns with local women's group, local cooperatives organizations, and small farmers groups.

Nesting trees of Asian Woollyneck are tall which are difficult to monitor. As the terrain is hilly, with minimum disturbance to the nest, we searched for suitable location. In some cases we were unable to find proper vantage point. Thus, number of eggs in the Nest could not be observed.

Figure 2: Group photo after discussion with local

Our Spotting scope and tripod were broken during monitoring in winter.

Figure 3: Spotting scope (supported by Idea Wild Foundation)

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

- Exploration of Nesting habitat and study of behaviour

Nesting habitat was explored following the road transect in three different districts i.e. Pyuthan, Arghakhanchi and Salyan. Road Transect along the river line was followed to identify nesting sites. Including Rupandehi, we identified 14 Nesting sites of which only 9 are active.

Most preferred tree species is Bombax ceiba (n = 4) followed by Shorea robusta (n = 3), Pinus roxburghii (n = 2) and Magnifera indica (n = 1) with tree height (41>30.06>19 m, SE = ±2.14), diameter at breast height (135 > 99.31>56 cm, SE= ±8.09) and Nest height (37 > 24.60>15 m SE= ±2.15). Nesting trees were found very close to settlements and road which added negative impacts as shown on table below.

S.N	Parameters	Average distance from Nest (m)
1.	Agricultural Field	46.46
2.	Wetlands	87.80
3.	Settlements	66.31
4.	Road	155

Figure 4 Mean distance from Nest

14 chicks were observed successfully fledging from those active nests. At least one and up to three chicks fledged from active nests inferring that there was no 100% nesting failure. We monitored each nest for 8-12 hours each to study its behavior.

Threats to Nest:

Nesting of Asian Woollyneck is observed close to human settlements and road. Anthropogenic impacts on nesting are increasing rapidly. One Nesting tree in Pyuthan had been cut down while road extension, luckily it was non- breeding season and nest was totally detached. Road extension in mid- hills of Nepal is undergoing rapidly which may impact other nesting trees also.

Moreover, being close to human settlements, disturbance is maximum. Hunting of fledging chicks and stealing of eggs are significant threat known through our discussions with locals. One nest of Rupandehi district was abandoned due to high level of disturbance as it was on picnic spot. In addition to this, natural causes such as strong wind causing nest detachment, felling nesting branch and predation by Yellow throated martin were known to be prevailing threat.

- Conservation Campaigns

Leaflet (n = 2000), Banners (n = 20), Photo bank campaign information card (n = 1000) copies were printed for awareness activities.

A. Home Visit

Home visit was made only in nest vicinity. More than100 households around 500 m from the nest sites were visited and familiarized regarding our project. Their

perception on Asian Woollyneck and its nest was understood through informal discussion.

B. Science and Community Campaign

Science and community campaign was conducted with 15 different social groups. These groups included Local clubs, Women group, Small Farmers group, cooperatives and other community based groups.

Published literature on Community led conservation activities and their success were discussed with local people. Ecological role of bird's specially Asian Woollyneck locality was highlighted among villagers. Objectives of our project and methods used to achieve them were elaborated. Discussions were made on their role in conserving nesting habitat. People were almost unknown about the importance of such vulnerable stork. Intensive discussion and poster distribution was made.

C. Educating Future Managers

Students are future managers of nature. School teaching campaign was carried out in 25 schools of Pyuthan and Arghakhanchhi. Audio-visuals tools were used to familiarize student's with bird conservation. Discussions was made with school teachers regarding role of academic institution in conserving local biodiversity. Competitive approach such as quiz and speech competition was conducted.

Additionally, Posters were distributed in school's library.

D. Social Media Campaign

Additionally, we developed social media profile of our project to reach Facebook (https://www.facebook.com/Asianwoollyneck/) and Instagram (https://www.instagram.com/awnstork/?hl=en) profile have reached 2000 and 273 followers respectively. We are posting awareness content on daily basis. Our posts in social media includes updates of our ongoing project, threats, facts and attention seeking post on Asian Woollyneck, discussion, poll and online quizzes. Our posters, only 2000 hard copies of which were published, reached 5000 people through Facebook post.

Social media have been complimentary tools for creating awareness.

- Asian Woollyneck photobank

Asian Woollyneck photobank was established as an online bank to collect information regarding Asian Woollyneck from different part of the country after discussion with stakeholders through personal meetings. Presentation was made on how photo bank campaign will run and how information collected would aid in national data base of Asian Woollyneck during Bird identification training organized by Bird Conservation Nepal, Pokhara branch.

An email with photo bank manual (https://www.rufford.org/files/24781-2%20Asian%20Woollyneck%20Photobank%20Campaign.pdf) was sent to 130 key personals including NGO/INGO's head, Researcher, Conservationist, Photographers, citizen scientists, Government officials and community based environmental organizations. Social Medias like Facebook

(https://www.facebook.com/Asianwoollyneck/) and Instagram (https://www.instagram.com/awnstork/?hl=en) were used as complementary tool to reach audiences in larger scale. The Post about photobank campaign reached 13000 people in Facebook. Altogether 62 depositions from 22 districts have been made in last six months as shown in chart below.

Information from previously unrecorded sites have been received which is helping to study its distribution range properly.

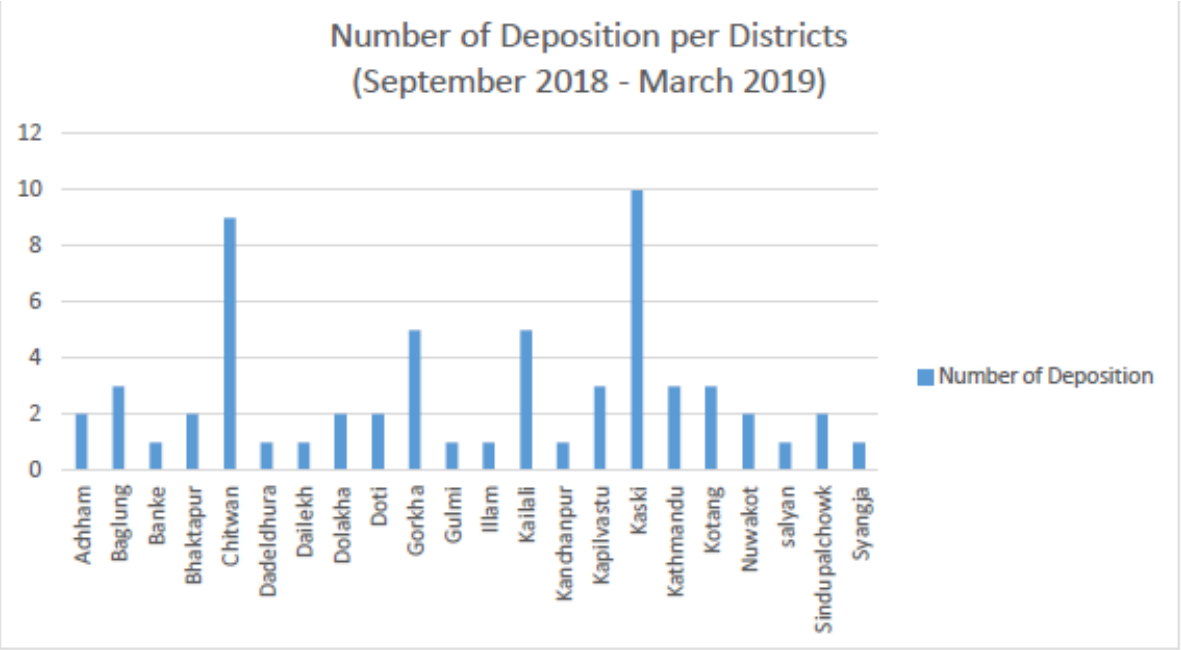


Figure 5: District wise deposition of photographs

- Other Achievements

i. Researcher: Participated in Wildlife Conservation Course 2018 organized by WILDCRU, Oxford University in Nottingham University, Malaysia. Researcher presented previous project outcomes among participants from different Asian Countries.
ii. Researcher: Oral presentation at RSG Nepal conference 2018, Kathmandu Nepal.
iii. Researcher: Oral Presentation at Bird watching and Identification Training 2018 at Institute of Forestry, Pokhara
iv. Researcher: Oral Presentation at art Competition and open seminar organized by Leo Club of Kathmandu, Nepal in March 2019
v. Assistant Researcher: Miss. Rojina Ghimire: Oral presentation on conference "Building Capacity for Holistic Conservation" at
vi. National Trust for Nature Conservation, Kathmandu Zoo, 27th April 2018
vii. Assistant Researcher: Mr. Nabin Pandey: Poster Presentation at Nepal Owl Festival 2018, Jiri, Dolakha.
viii. Assistant Researcher: Mr. Nabin Pandey: Oral presentation at "Shaping conservationists for better future" a workshop organized by Nature conservation and Development Network, March 2019.

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

Involvement of local communities throughout the project was encouraging. As our main focus was to encourage local people for conservation intervention, we have been very close to those communities. Discussion was made with local government officials to increase people's participation in our proposed programs. Including home visits, Science and community campaign and informal discussions more than 1000 people were benefitted from the project. It was really important to know what knowledge the local people and community people already have, and what new information could be added to increase their understanding. Through informal discussions, we understood how they perceive Asian Woollyneck and its nests in their locality. Then, we conducted Science and community campaign in 15 different communities to let them know how science works in conserving species and ecosystem. Our equipment's such as binoculars, spotting scope, GPS, Abney's level, diameter tape etc. were used to show our ways of collecting data. Moreover, people also shared their experiences and knowledge regarding birds in their locality.

Negative believes regarding birds prevailing in communities were clarified with scientific information which has certainly brought positivity. Local youths were mobilized to monitor nesting status where they learnt about scientific practices. Our posters and leaflets also benefitted people for understanding Asian Woollyneck in detail.

Figure 6. Displaying research instrument and discussing with locals

5. Are there any plans to continue this work?

Yes, only handful of information have been collected from small region of Nepal. Asian Woollyneck certainly deserves more conservation attention. The output of this project suggests to conduct conservation activities in other part of the country to assure nesting safety. We are hoping to work in eastern and central part of Nepal in near future.

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

We are currently working to write scientific paper based on our study, which will be shared through peer reviewed journal. Reports will be submitted Department of National parks and Wildlife Conservation (DNPWC), Department of Forest (DOF), Bird Conservation Nepal (BCN) and other several governmental and non-governmental organizations. Results will be shared through national and international conferences, workshops and meeting. Social media profile of our project and blogs will publish contents regarding our outcomes. And for common understanding, it will be generalized an aired through Televisions, radio stations & published in local and national newspapers.

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

The grant was used in two phase: Monitoring and Awareness campaign. Grant is used more or less equally throughout the project.

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
Travel	160	300	-140	Road condition was very poor and nesting localities were in remote areas.
Publication Cost	796	796		Leaflets, Information cards and Banners were printed.
Stationary	145	250	+105	Though we visited same number of schools as proposed but more students of class 6-10 at secondary level and grade 11, 12 and bachelor students were also

Photo bank Campaign	300	250	-50	Prize has not been distributed to contributors which minimized the cost
Field subsistence	1850	2000	+150	Expensive cost in mid-hills.
Snacks for participants	1125	600	-525	Snacks were distributed to only influential peoples.
Allowance for local resource person	120	510	+390	It was very difficult to find local resource person. Different resource person for different locality costs
Photo exhibition cost	345		-345	As it has been just 6 month of campaign, so we decided to make exhibition after a year comprising depositions from more districts.
Report preparation and submission	85	85		
Miscellaneous	65	200	+135	Maintenance cost of tripod and spotting scope.
TOTAL	**4991**	**4991**		**Exchange rate: £1 = NRs. 138.21**

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

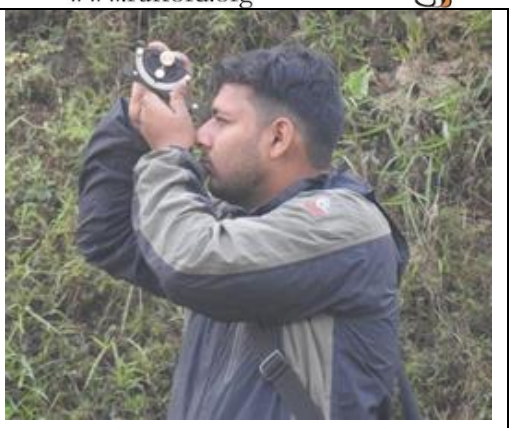
- To continue nesting exploration in other part of country.
- To make Photo bank campaign more participatory and inclusive through online platform using software and websites.
- Nesting sites of Asian Woollyneck are very close to human settlement and road which increased threat to nests. Minimizing disturbances around nest vicinity could prevent abandonment and aid nesting success. Thus conservation awareness activities to encourage local initiation in conserving nest sites is necessary in other part of the country.
- Regular monitoring of already identified nest sites could help to understand nesting ecology and success more intensively.

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, Rufford Foundation logo was used in brochures, Banners, information cards, Posters, presentation, trainings and awareness campaigns. 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.

Project members list and their roles are described below:

Mr. Nabin Pandey	Research Assistant Mr. Pandey assisted throughout the implementation of the project. He is Forestry student who have ample knowledge in field monitoring of birds. He is working with us since 2016. His role was to assist in road survey and monitoring nesting behaviour.	 Mr. Navin Pandey, measuring nest height using abney's level
Ms. Rojina Ghimire	Research Assistant Ms. Ghimire is master's student of Environment science at Tribhuwan University, Kathmandu Nepal. She conducted a survey of Asian Woollyneck in Dhading district of Nepal. Her prior experience on Asian woollyneck research was helpful for us. She assisted us particularly on Dhading district on exploring nesting habitat and monitoring.	 Miss Rojina Ghimire with Range finder and GPS
Ms. Bindu Poudel	Conservation Assistant Ms. Poudel is forestry undergraduate who have been involved in various awareness raising activities. She is also resident of Arghakhanchhi district. She assisted to conduct conservation awareness activities in schools.	 Miss Bindu Paudel during school teaching

Mr. Dinesh Bhusal	Conservation Assistant Mr. Bhusal resident of Arghakhanchi, is also forestry undergraduate. He together with Ms. Bindu conducted school teaching program.	 Mr. Dinesh Bhusal interacting with students

We hope this project has also benefitted our team members through research and conservation opportunities.

Project would not have been initiated without official permission from Department of Forest, Babarmahal Kathmandu. Bird Conservation Nepal (BCN) have been our supervisor. Pokhara Bird Society (PBS) technically helped us throughout the project. Idea Wild Foundation deserves credit for providing Spotting scope and GPS.

Figure 7: A pair of Asian Woollyneck in Nest © Prashant Ghimire

Figure 8: Asian Woollyneck incubating eggs (And farmers sitting nearby)