



Final Evaluation Report

Your Details	
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Project Title	Assessing Distribution, Habitat, and Threats to Chinese Pangolin in Kamala River Basin, Central Nepal
Application ID	28325-1
Grant Amount	4950
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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
Assessment of distribution, habitat, and threats to the Chinese pangolin				A habitat survey was carried out in four districts of the Kamala River Basin: Sindhuli, Udayapur, Dhanusha, and Siraha. A block transect method was applied to collect various data about pangolin distribution, habitat, and threats. Moreover, schedule surveys ($n=44$) and key informant interviews ($n=8$) were also carried out with the locals of the study area to understand their knowledge and perception towards the pangolin.
Capacitate local people and stakeholders in its conservation				Conservation camps ($n=5$) to make people aware of the ecological importance, associated legal concerns, and the economic benefits that the pangolins could provide were shared among the local people. Moreover, to assure the ownership of local people in conservation local pangolins, a conservation committee was formed in Lekhani Municipality of Udayapur on the occasion of World Pangolin Day, 2020.
Sensitizing young minds in conservation activities				To motivate local young people, various conservation activities like art ($n=1$) and quiz ($n=2$) competitions were done. Furthermore, with the support of the school authority and the DFO, a biodiversity conservation club was also formed with students at Janaki Secondary School.

Coordination collaboration sustainability and for				To maintain the sustainability of the work, the coordination and the collaboration has been done with the local governments, DFOs, and local clubs/groups. All the activities were carried in coordination with the concerned stakeholders. For example, World Pangolin Day, 2020 was celebrated with the proper coordination and support of the local entities.
Mass awareness about the pangolin to local and the general public				To reach and sensitise the maximum number of people about the pangolin, a mass awareness strategy was also applied during the project. For this, a couple of op-eds were published in a national daily. Moreover, stickers/posters (n=250) with messages about the conservation, status, importance, and legal concern associated with them were pasted in different strategic locations like public places, parks, DFOs, local government offices, schools, and community buildings.
Publications				A detailed report of the project will be shared with concerned stakeholders which includes local governments, DFOs, CFUGs, and others. Moreover, the manuscript on its habit, habitat, and threats is in preparation to share the results with scientific communities.

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

Some of the places were very remote; it was hard to travel in such places. The weather conditions mostly during the monsoon made it even harder. In the latter half of the project, we planned our field trip during better weather conditions and took a better route.

In some places, people were very reluctant to share the information about the pangolin, mostly related to hunting/poaching. After few interactions, they shared with us what they knew.

The COVID 19 pandemic erupted while we were at the very end of the project. Our

country went in lockdown for about 6 months which resulted in the travel restriction. Thus, to tackle this, a time extension with the Rufford Foundation was requested (thankfully granted). And soon after the travel restriction was eased, we completed our remaining fieldwork.

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

Understanding of ecological behavior of pangolin: Fieldwork in the areas of the Kamala river basin was carried out which helped us to understand habits (burrowing), habitat (bio-physiochemical conditions of the burrow), and threats (anthropogenic and natural) to Chinese pangolin in Kamala river basin. We believe this study to be the first one to assess the habitat of the pangolins at the river basin level.

Sensitisation: More than 400 people were directly sensitised through the conservation camps ($n=5$) and they're now motivated to conserve pangolin in their area. The first of the five conservation camps were done in Janata Secondary School of Ranibas, Sindhuli. The second one was done in Shree Secondary School of Patnabhanjyang, Katari-8, Udayapur. While the third was done in Dudhauuli of Sindhuli. The fourth was done conducted on the occasion of World Pangolin Day 2020 in the Lekhani Municipality of Udayapur. The final workshop was conducted in Chisapani, Ghanesthan Charnath Municipality of Dhanusha district. Moreover, thousands of people were indirectly educated about the ecological importance, legal concern, economic benefits of pangolin through various awareness activities including pasting stickers/posters ($n=250$), publications of opted articles ($n=2$), art competitions ($n=1$), and quiz ($n=2$).

Formation of local pangolin conservation committee and biodiversity conservation club: A local pangolin conservation committee was formed in the Lekhani Municipality of Udayapur on the occasion of World Pangolin Day, 2020. The committee is the first of its kind in the districts which consisted of 11 members from local government, police, school, social workers, CFUGs, a local businessman, and youth. The committee members committed to work for the conservation of pangolin at the local level. Similarly, a biodiversity conservation club was formed with the students at Janata Secondary School, Ranibas, Sindhuli. This is believed to encourage the young generation in conservation and pave the way for future conservation leaders. Both these efforts are expected to motivate local people in conservation and thus achieve long term goals conservation goals of pangolin.

Publications: A couple of opinion editorial articles were published in the national daily by two of our members during the project. Ms. Sabitri Rai wrote about her experience in pangolin conservation during the project in the article entitled Save the pangolins on Kantipur daily (dated: 15 Feb, 2020). Whereas Mr. Regan Sapkota talked about the pangolin conservation during the COVID pandemic on Setopati (dated: 28 Sept 2020). Moreover, the manuscript for the publication of the journal article is also underway.

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

Local people were involved from the planning phase to the implementation phase of this study. More specifically, local people guided us to select the proper site for the conservation camps, supported in the coordination with the local stakeholders as well. Moreover, they also guided us to collect the ecological data from the field, those were also financially befitted for their support during the fieldwork. We believe after our collaboration they are now sensitised about the importance of conservation and how it can help to enhance their livelihood options. This has further discouraged the local people from hunting/poaching.

5. Are there any plans to continue this work?

This study was able to study the habit, habitat, threats to Chinese pangolin in the Kamala river basin. Also, through different awareness approaches it was also able to capacitate local people about its conservation importance. But limiting this work to only this area is not enough to conserve the world's most trafficked mammal species, thus upscaling of work this kind is very essential.

We believe coordination with local to the national entity is very essential for the conservation of such elusive species. Thus, we have planned to work further with the local government, Division Forest Office (DFO), Community Forestry User Groups (CFUGs) to upscale the efforts. The plan is to expand the local pangolin conservation committee in other places as well and also work to delineate a pangolin conservation area at the local level for its long-term conservation.

Moreover, the behavior of the Chinese pangolin is not well understood. Thus, the application of various techniques like camera trap methods has been planned to understand the behaviour of this species in the future. It is also very difficult differentiating the habits and habitat of Chinese pangolin from the Indian pangolin, further work on that is also planned.

Moreover, the limiting of our work in only the Kamala river basin won't help in its overall conservation. Thus, we have planned to expand our work outside the Kamala River Basin.

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

- Via articles and blogs. Two op-ed articles about the pangolin and this study have been already published in the national daily of Nepal. The continuation of this will be done in further articles and blogs.
- A detailed report will be shared with the concerned authorities like local government, CFUGs, DFOs, relevant organisations, and interested individuals.
- The results of this work will be shared in the various local, national, and international workshops, seminars, and conferences.
- A manuscript will be prepared and be submitted for publication to mainstream the conservation of this species.

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

This timescale was largely affected by the lockdown and the travel restriction (about 6 months) caused by the COVID 19 pandemic. Due to this, the project took a bit longer time than expected. The start date of the project was 10 July 2019, and the end date was 15 December 2020.

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
Report printing and stationery	150	196	+46	Printing of the materials like field documents and stickers cost us more than anticipated.
Field Gears	150	199	+49	Due to unforeseen weather events, we were obliged to buy some field gear like raincoats, boats, and others which weren't planned previously.
Food and accommodations for the team during field research and data collections & Food and accommodations for the team during conservation camps	2750	2395	-355	We were able to save some amount with food and accommodation by sharing rooms sometimes. Further DFO Sindhuli also helped us in one of our conservation camps.
Lunch, tea, and snacks for Roundtable on Pangolin	150	135	-15	The cost was below the anticipated cost.
Lunch, tea and snacks for conservation camps	500	531	+31	The number of the participants was more than anticipated.
Stationery and printings for the Roundtable on Pangolin	150	180	+30	Various unforeseen costs like expenses during art competition and the prize distribution increased the anticipated cost.

Stationery and printing for the conservation camps	400	534	+134	The cost of the stickers was higher than the anticipated cost.
Local Travel	200	151	-49	We also used motorbikes for travel which helped to reduce the local travel cost.
Field travel	500	644	+144	The days of travel in the hired vehicle were more than the anticipated days thus it increased the cost.
Total	4950	4965	+15	The remaining costs were bear by Greenhood Nepal and some personally. A few unmentioned costs like the DSA payment (around 500) to the field helper were also managed through Greenhood Nepal and personally. Moreover, field gear cost was reduced due to equipment (GPS & Laptop) support from the IDEAWILD.

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

We have to regularly monitor and support (technically and financially) the local communities and the newly formed pangolin conservation committee for the long-term conservation of this species. Plus, the local government and the entity directly involved in the conservation like DFO should be encouraged to prioritise their work on the conservation of the species like pangolins. Moreover, work of this kind to one or few areas is not enough thus we have to reach other areas as well for effective conservation of this critically endangered species.

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, the Rufford Foundation logo and the name were used wherever possible. For example, it was mentioned in the stickers/posters, banner of the programme, presentations, certificates, articles. It does gain a huge amount of publicity at the local to the national level. Many local people thanked the Rufford Foundation for making it possible to reach their places. Few young researchers were also motivated by the support it has been providing, some of them have also started to build up their project to enhance local conservation.

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

Mr. Regan Sapkota was the principal investigator and lead the team. His role was the overall management, coordination, logistical management, fieldworks, data collection, analysis, and report writing.

Mr. Nabin Bhandari exercised his previous involvement in pangolin's research for designing the project to make it scientific. Being a resident of Sindhuli, he helped in local coordination and fieldwork as well.

Ms. Sabitri Rai brought her experience to design the awareness packages. She also supported the team in the fieldwork and report finalization.

Ms. Priyanka Pandey played a significant role in data collection, logistic management, carrying out conservation camps. She also assisted the team in report finalization.

Mr. Sanjay Paudel helped us in designing reports, data collection, and managing the conservation awareness campaigns.

12. Any other comments?

We would like to thank the Rufford Foundation for the support provided to carry out this work. We also express our gratitude for granting us the extension of the deadline of this study by considering the trouble we faced due to COVID 19 restrictions. We further look for a similar kind of support in the future.





