Final Evaluation Report

Your Details	
Full Name	Badri Baral
Project Title	Linking Citizen Science to Turn Paper Results into Red Panda Conservation Outputs in Jajarkot District, Karnali Province, Nepal.
Application ID	40517-B
Date of this Report	January 5 2025

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 train and deploy Community people as citizen scientists			✓	A total of nine Citizen scientists (*Proposed: six*) were trained from three different Local Government (Barekot Rural Municipality (RM), Kuse RM and Nalagad Municipality (based on Unemployed as per Prime Minister Self Employment Program, and experiences of forests and wildlife habitats)
To conduct a community outreach program.			✓	A total of ten event of awareness building workshops (*Proposed event: six community outreach workshops*) were organized to directly sensitize 206 local stakeholders for the conservation of Red Panda
To school outreach program			✓	A total of 379 school students of eight different schools (*Proposed: Four school events*) were directly sensitized via PSA presentation, group discussion and poster distribution.
To develop a Public Service Announcement (PSA) video.			✓	An e-story book had been drafted and based on same story book; animated PSA entitled "Habreko Gaun" was developed. A total of one female professional and two male professionals were deployed to draft design and produce story content, and sketch story characters and a total of additional six persons were deployed for voice over.

2. Describe the three most important outcomes of your project.

a) Different Species captured during camera trap survey in Jajarkot has been presented in Table 1. Camera Traps Placed at different locations in three different government's jurisdictions were successful in trapping Red Pandas images.

Table 1: Species recorded in the Camera traps in Barekot Rural Municipality and Kushe RM (Camera trap survey May 29 2024 to October 13 2024 (1027 Camera trap days) and Nalagad Municipality (camera trap survey November 2023- March 2024 (529 Camera trap day)

S.No.	English Name	Scientific Name	Redlist		CITES
			IUCN	National	
Order: Carnivora					
Family: Ailuridae					
1	Red Panda	*Ailurus fulgens*	EN	EN	I
Family Ursidae					
2	Asiatic Black Bear	*Ursus thibetanus*	VU	EN	I
Family: Felidae					
3	Leopard Cat	*Prionailurus bengalensis*	LC	VU	II
4	Asiatic Golden Cat	*Catopuma temminckii*	NT	DD	I
Family: Mustelidae					
5	Yellow-throated Marten	*Martes flavigula*	LC	LC	III
6	Siberian Weasel	*Mustela sibirica*	LC		
Order: Rodentia					
Family: Hystricidae					
7	Indian Crested Porcupine	*Hystrix indica*	LC	DD	
Order: Primates					
Family: Cercopithecidae					
8	Nepal Gray Langur	*Semnopithecus schistaceus*	LC	LC	I
9	Rhesus Monkey	*Macaca mulatta*	LC	LC	II
10	Assam Monkey	*Macaca assamensis*	NT	VU	II
Order: Artiodactyla					
Family: Moschidae					
11	Musk Deer	*Moschus sps*	EN	EN	I
Family: Suidae					
12	Eurasian Wild Boar	*Sus scrofa*	LC	LC	
Family:Cervidae					
13	Northern Red Muntjac	*Muntiacus vaginalis*	LC	VU	
Family: Bovidae					
14	Himalayan Serow	*Capricornis thar*	NT	DD	I
15	Himalayan Goral	*Naemorhedus goral*	NT	NT	I
16	Himalayan Tahr	*Hemitragus jemlahicus*	NT		

Red Panda fecal pellets

Red Panda fecal pellets

Few Photographs of Species captured in camera traps

Red Panda *(Ailurus fulgens)*

Red Panda *(Ailurus fulgens)*

Red Panda *(Ailurus fulgens)*

Red Panda *(Ailurus fulgens)*

Red Panda *(Ailurus fulgens)*

Red Panda *(Ailurus fulgens)*

Musk Deer *(Moschus Sps)*

Musk Deer *(Moschus Sps)*

Musk Deer *(Moschus Sps)*

Himalayan Black Bear *(Ursus thibetanus)*

Himalayan Black Bear *(Ursus thibetanus)*

Asiatic golden cat *(Catopuma temminckii)*

Leopard Cat *(Prionailurus bengalensis)*

Leopard Cat *(Prionailurus bengalensis)* holding its prey

Siberian Weasel *(Mustela sibirica)*

Siberian Weasel *(Mustela sibirica)*

Yellow Throated Marten *(Martes flavigula)*

Barking Deer *(Muntiacus vaginalis)*

Himalayan Serow *(Capricornis thar)*

Himalayan Serow *(Capricornis thar)*

Himalayan tahr *(Hemitragus jemlahicus)*

Himalayan tahr *(Hemitragus jemlahicus)*

Himalayan Ghoral *(Naemorhedus goral)*

Himalayan Ghoral *(Naemorhedus goral)*

Nepal Gray Langur *(Semnopithecus schistaceus*

Nepal Gray Langur *(Semnopithecus schistaceus)*

Nepal Gray Langur *(Semnopithecus schistaceus*

Eurasian Wild Boar *(Sus scrofa)*

Indian Crested Porcupine (Hystrix indica)

Indian Crested Porcupine (Hystrix indica)

Male Blood Pheasant *(Ithaginis cruentus)*

Blood Pheasant (Male & Female) *(Ithaginis cruentus)*

Male Daphe *(Lophophorus impejanus)*

Female Daphe *(Lophophorus impejanus)*

b) We presented novel evidence of Asiatic Golden Cat in Jajarkot, Nepal from temperate mixed deciduous forests with bamboo understory obtained through camera trap images during the red panda survey 2024. From a stack of 59228 photographs obtained with an effort of 1027 trap days nights from May 29 2024 to October 13 2024 in Barekot Rural Municipality, Jajarkot, a single photograph of the cat was obtained from a location in the national

forest. The record of Asiatic Golden Cat on the camera trap indicates that its westernmost global range occur in Nepal and provide distribution updates for the Asiatic Golden Cat and opens a new avenue for wildcat conservation and research in Nepal.

c) An undeniable request from Community people to get trained for red panda habitat monitoring and Camera Trap survey mandate us to accommodate nine trainees instead of proposed six trainees.

Table 2: Citizen Scientist Mobilization after wildlife habitat monitoring training

Citizen Scientist Jay Bahadur Singh operating Camera trap in prime red panda habitat

Citizen Scientists Jagriti Shahi installing Camera trap after red panda monitoring training

Citizen Scientist Rajendra Singh operating Camera trap in prime red panda habitat

Citizen Scientists Kiran Bahadur Singh and Rajendra Singh installing Camera trap

Citizen Scientists Janak Bahadur Singh with Jeevan Rai in red panda habitat

Citizen Scientists Dhirendra Dhyar in red panda habitat

d) An animated PSA entitled "Habreko Gaun" including e-story book had been developed and published for wider Audience

Figure 1: Title Page of Habreko Gaun

Figure 2: Conservation Outreach IEC

Table 3: Some Glimpses of Story book entitled "Habreko Gaun"

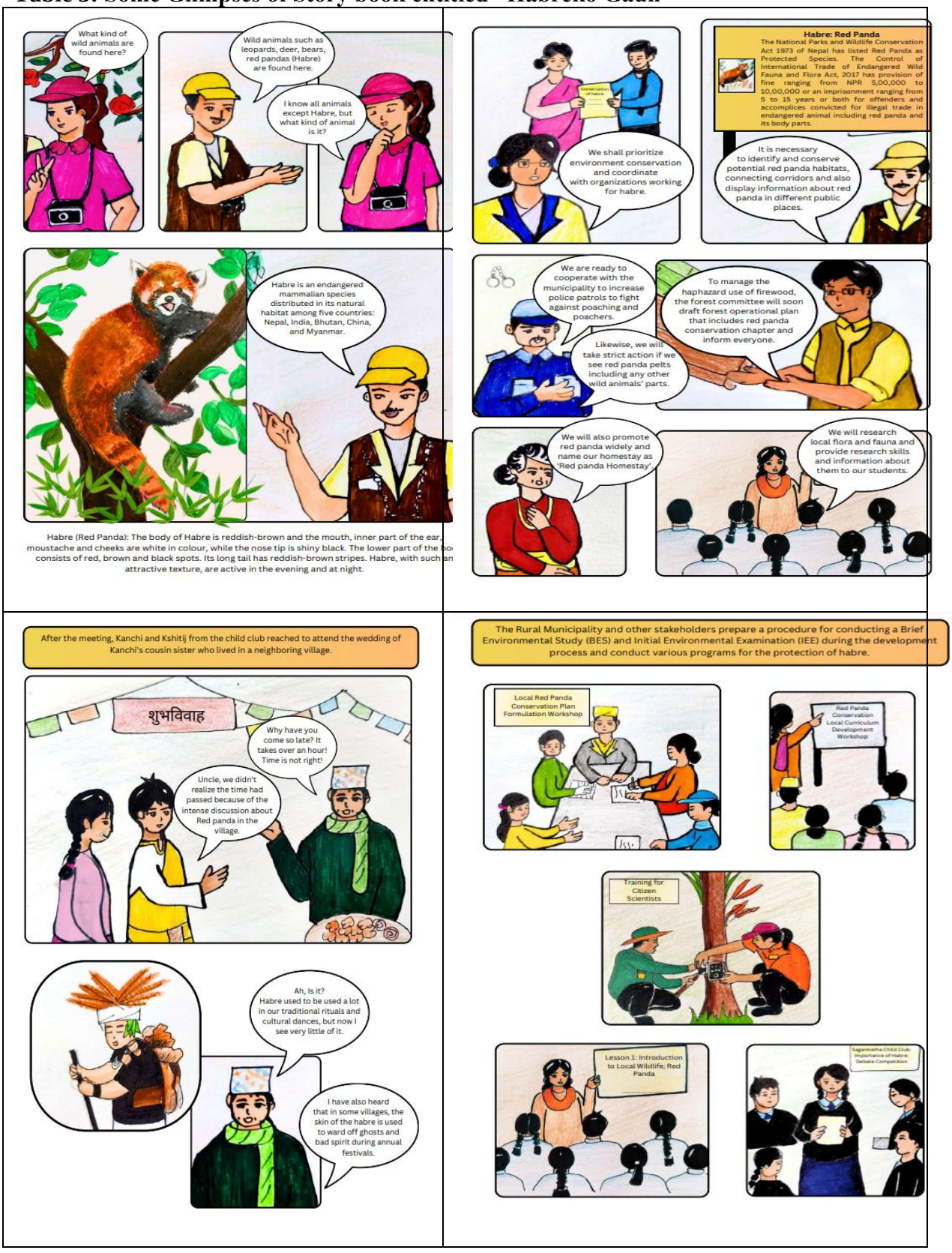

Table 4: Glimpses of School outreach activities

Photo after School Outreach at Bhagawati Sec School, Jiri, Barekot RM

PSA Habreko Gaun Showcasing at School

School outreach activity's Participant in Saraswati Sec School, Rijapahade, Kuse

Group Photo in Durga Sec School, Bharma, Kuse RM

Participants with Pretest at Malutakura Sec School, Tamti, Kuse RM-04

Group discussion about red panda in open field due to earthquake damaged structures of Durga Sec School, Bharma, Kuse RM

Citizen Scientist Kiran Bahadur Singh with Students afrer School outreach activity at Shree Himalayan Basic School, Gothgaun, Barekot-04

Showcasing PSA "Habreko Gaun"

Citizen Scientist Dhirendra Dhyar with Participants in Shree Himalayan Sec. School, Tallubagar, Nalagad

Citizen Scientist Dhirendra Dhyar with Participants in Shree Tapobhumi Sec. School, Dhyargaun, Nalagad

Table 5: Glimpses of stakeholders' meetings and community outreach activities

Group photo after Community outreach program at Bharma in Kuse RM

Group photo after Community outreach program at Lagna in Barekot RM

Community outreach program with hoteliers and herders at Dhottachaur

Red Panda Conservation awareness program at Daha, Barekot-04

Citizen Scientist Kiran Raj Singh sharing his experiences encountering and taking photographs and video of red pandas with herders/ hoteliers after conservation awareness at Dhottachaur

Photo shoot with herders/ hoteliers after conservation awareness at Dhottachaur

Showcasing PSA "Habreko gaun" to community People at Tharpu in Kuse RM

Showcasing PSA "Habreko gaun" to community People at Social Development Office, jajarkot

Discussion during Red Panda Conservation awareness program at Bharma, Kuse

Discussion during Red Panda Conservation awareness program at Dhyargaun, Nalagad

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Although not directly part of the goals or objectives of this project, On 3rd November at 23:47 NPT, a powerful ML6.4 earthquake struck Nepal with its epicenter in Jajarkot, a remote hilly district, the proposed prime habitat of red pandas for the project. More than 150 deaths have been reported and several hundred injured due to the direct effect of the earthquake.

Destruction from the earthquake left many people without homes and shelter during freezing overnight temperatures. Some of our citizen scientists' houses were damaged by the earthquake. The project Linking Citizen Science to Turn Paper Results into Red Panda Conservation Outputs in Jajarkot District, Karnali Province, Nepal has been approved by the Social Welfare Council; however, the proposed activities failed to get accomplished in proposed time frame as schools got devastated, houses of citizen scientists got damaged.

With this regards' we requested Rufford Foundation for the consideration and requested a project extension. Despite the Earthquake, we accomplished few works in Nalagad Municipality; But yet not satisfied with our own approaches. Hence, we later on conducted field work later in the month of April-October in Barekot and Kushe Rural Municipality with enhanced number of citizen scientists after approval from the local government. The camera traps were installed in the red panda habitats.

Due to unforeseen difficulties that arose due to earthquake during the project; We added few new faces in the team to accomplish the project activities. In doing so, Dipak Raj Basnet, an MSc, Upama Tamla Rai and Ramesh Kathariya, an MSc with strong background in the high-altitude Himalayas Fauna and stirring experiences working in mammalogical survey in-field sign tracking and camera trapping survey and PSA development were added.

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

Yes, a total of nine citizen scientists were trained and deployed for the installation of Camera trap in Barekot Rural Municipality and in Kushe RM (Camera trap survey May 29 2024 to October 13 2024 (1027 Camera trap days), and Nalagad Municipality (camera trap survey November 2023- March 2024 (529 Camera trap day) and have acquainted knowledge on wildlife and its habitat survey using camera traps. They have gained stirring experiences working in mammalogical survey in-field sign tracking and camera trapping survey and aftermaths developed their leadership in delivering conservation people in their respective communities and have been paid honorium as per their involvement days. These project expenditures in their local communities were illustrated as an income for them due to presence of red panda in their forests.

Figure 3: A pair of red panda cubs in Karainchuli region, Barekot RM Photo Courtsey: Kiran Bahadur Singh (Citizen Scientist).

Local level participatory consultation, workshops and PSA screening helped disenfranchised groups like herders and herb collectors about different stakeholders with respective conservation role and responsibilities. Citizen scientists' deployment has ability to teach skills which last far beyond the planning process, and can help to improve the community on the long term. Citizen Scientists learnt to run meetings, construct strategic plans - in short, to become community resources and leaders for red panda conservation. It brought together and established ties among community members who might normally had no contact with red panda conservation issues in their communities. Such relationships could break down barriers in the community. With its underpinnings of collaboration, inclusiveness, and empowerment, a participatory approach embodies the ideals that form the foundations of most grass roots and community-based red panda conservation initiations by local community people.

The involvement of numerous stakeholders in the implementation of the local conservation action plans has also helped to ensure long term sustainability of the plans, as it will ensure that the implementation of the plan is not dangerously reliant on a few individuals who may move away or cease their involvement for whatever reason.

5. Are there any plans to continue this work?

There are few plans to continue this works. Yes, there is plan to conduct conservation efforts in multidisciplinary approach incorporating scientific research on red panda, community engagement, and conservation education for its conservation to meet five objectives set in local red panda conservation action plan 2021-2025 as mentioned herewith

- Enhance understanding and knowledge on conservation status, ecology and habitat dynamics of red panda.
- Curb poaching and illicit trade of red panda.
- Protect and manage the red panda habitats.
- Strengthen and extend community based red panda conservation initiative.
- Strengthen cooperation and coordination on red panda conservation at national, provincial and local level.

These findings will increase the research team and citizen scientists' capacity to implement coordinated wildlife monitoring at unprecedented scales.

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

We have shared a part of the findings of this project about "First photographic evidence of Asiatic Golden Cat *Catopuma temminckii* Vigors & Horsfield, 1827 (Mammalia: Carnivora: Felidae) to affirm its westernmost global distribution range in Jajarkot, Nepal" in 'Sharing and Learning Meeting' in Nepal, hosted by the Clouded Leopard Working Group and Rusty-spotted Cat Working Group, from 3-7 December 2024. And we have submitted a short note on westernmost global range extension of Asiatic Golden Cat in Cat News.

We have planned different material output for different audiences like scientific communities, policy makers, and general audiences. We planned to provide a final report to Rufford foundation, national, governmental and non-governmental organizations, scientific research groups, conservation institutions, educational institutions, and development practitioners as basis for their future plans accordingly. Likewise, we plan to submit at least one manuscript to peer review journal publications such as Diversity and Distributions, Journal of Biogeography, Biological Conservation. Likewise, we plan to communicate project findings through report, policy brief, social media campaign (via Facebook, Twitter and Blog). Regular project updates and reports had been presented in community meeting. IEC materials like posters, and PSA have been developed and shared.

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

Looking ahead, the project once again identified collaborative community participation is one promising foundation strategy to capitalize on the unique knowledge of local residents, leverage the power of local networks and collective sense of ownership and a progression to attract new collaborations for scientific research and funding for red panda conservation as a flagship species in Jajarkot via scholarity publication.

The way forward to publish the findings to highlight Jajarkot as priority areas for biodiversity conservation and conduct activities proposed in local red panda conservation action plan 2021-2025 for Jajarkot has been felt the important next step for fundings, partnership and collaboration. Citizen Scientists are excited for follow up skill transfer program as research team failed to find any top predators in the region

8. 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, we use The Rufford Foundation logo in the materials that we have produced in relation to this project. Of course, the Foundation received publicity during the course of our work

9. Provide a full list of all the members of your team and their role in the project.

Bishok Dangol, Ganesh Bahadur Magar, Jeevan Rai, Dipak Raj Basnet, Ramesh Kathariya, Govinda Bahadur Singh and Upama Tamla Rai had strong background in the high-altitude Himalayas Fauna and Outreach program. Mr. Dangol actively involved in team building and as coinvestigator. Mr. Rai, Mr. Basnet, Mr. Kathariya and Singh deployed themselves for a mammalogical survey in-field sign tracking and camera trapping survey. They have been actively transforming Community Forest user group members as citizen scientists and deploying them for habitat monitoring. Hence, Mr. Magar and Upama Tamla Rai, with their stirring experiences working for red panda conservation, outreach materials like PSA development, and poster development: made them well-suited for the PSA development.

10. Any other comments?

It is likely that a further plan will be developed following similar methods for the Musk Deer *Moschus spp*, also an endangered species, Himalayan Black Bear, Ursus thibetanus, also a vulnerable species that co-occurs with the Red panda. Similarly, Asiatic Golden Cat from its new westernmost global range could be of interests to work on it the region. Hence, there is an opportunity to have collaboration with funding agencies to develop and implement small Felids conservation project in the region which will obviously aid in red panda conservation in the region with global recognition