Final Evaluation Report

Your Details	
Full Name	Smritee Lama
Project Title	Assessing the Status, Distribution, and Conservation Threat of Dhole (*Cuon alpinus*) through Community Participation Program in Chitwan National Park, Nepal
Application ID	34457-1
Date of this Report	15th August 2023

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
Conservation Outreach Programs around the buffer zone of CNP				We organised 10 school programmes, three park frontline staff orientation programmes, four orientations for community conservationists, and four Dhole Conservation Workshops were organized in every four sectors of Chitwan National Park. Since the activities were designed and implemented through Buffer Zone Users Committee with prepared conservation materials (slides, photos, posters, and brochures), the representative participation from all conservation stakeholders was encouraging.
Identify threats against the conservation of Dhole.				Key informant interviews reveal threats, spatial-temporal interaction patterns, and community attitudes towards dhole and CNP wildlife. Initially unplanned, we conducted semi-structured household interviews to gather social evidence on the dhole's status near CNP. Using snowball sampling, we interviewed 220 individuals from the Chitwan National Park's buffer zone. Surprisingly, respondents were largely unaware of dhole threats, with only a few mentioning habitat losses (3%) and disease (1%). Preliminary camera trap results have highlighted intense human disturbance in CNP's core areas, mostly used by dholes.
Determine the status and distribution range of dhole in CNP				The camera trap survey in 49 stations covering all possible core area of CNP coupled with a transect walk was conducted for around 2 months. The camera trap data compilation, sorting, and analysis are ongoing. The status and distribution of dhole around CNP were also assessed

				through household surveys and key informant surveys. As per their response, the dhole was very rarely seen around CNP, largely preferred stream banks, and the best season for sighting was spring. The people around the buffer zone of CNP were unaware of their population trend.
Analyse the diet preference of Dhole.				Scats were collected for diet analysis during the camera trap field. The data analysis will be done in the coming days. Therefore, we regard this objective as partially achieved.
Recommend appropriate conservation measures for the target species based on situation analysis.				Preliminary results and recommended conservation measures from our study have been shared with concerned authorities, stakeholders, and academicians at the national and international levels. We have shared our preliminary data and findings with Chitwan National Park, the Department of National Park and Wildlife Conservation, and university professors (national and international). At the international level, we were fortunate enough to present our results along with recommendations at the 2nd International Dhole Conference held at Chitwan, Nepal.

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

a). Increased Awareness and Stakeholder Engagement: Through organising 21 community outreach events, involving a total of 812 individuals, the project succeeded in raising awareness about dhole conservation. The inclusion of various materials such as slides, photos, posters, and brochures, coupled with active participation from conservation stakeholders, including the Buffer Zone Users Committee, local citizens, and community conservationists, led to a representative engagement. This outcome is crucial as informed and engaged stakeholders are more likely to support conservation efforts and take action to protect the dhole species.

b). Baseline data collection of Dhole Status, Behaviour, and Threats: The deployment of cameras in 49 stations within the core regions of Chitwan National Park allowed for a comprehensive camera trap survey. Coupled with transect walks over a period of 2 months, this effort provided valuable data on the presence and behaviour of dholes. Preliminary analysis highlighted intense human disturbance in CNP's core areas, favoured by dholes. This deeper understanding of dhole's interactions with

their environment and the threats they face is a significant outcome as it can inform targeted conservation strategies.

c). Knowledge Dissemination and Advocacy: The project's proactive approach to sharing findings and recommendations has led to effective knowledge dissemination and advocacy for dhole conservation. Notably, the sharing of preliminary results and recommended conservation measures with concerned authorities, stakeholders, and academic communities at both national and international levels is commendable.

The most significant achievement of this work is the establishment of comprehensive dhole conservation efforts in Chitwan National Park (CNP), filling a critical gap that previously existed. Before this project, there was no dedicated initiative specifically focused on dhole conservation in CNP. This achievement is multifaceted and can be highlighted through several key aspects:

- Initiation of Dhole Conservation Awareness: The project successfully initiated awareness and education about the endangered dhole species among the local community and stakeholders. By organising outreach events, the project effectively brought attention to the presence and conservation needs of dholes. This achievement is pivotal, as creating awareness is the first step towards garnering support and action for the protection of a species.

- Collaboration and Engagement of Local Entities: The project's achievement is amplified through its collaboration and engagement with various local entities, including the Community-Based Anti-Poaching Unit (CBAPU), Buffer Zone User Committee, and indigenous and natural resources dependent communities. This engagement signifies the project's ability to mobilise and involve key stakeholders who hold a direct stake in the conservation of CNP's biodiversity.

- Data-Driven Conservation Insights: The implementation of camera trap surveys coupled with transect walks, the project generated valuable data on dhole behaviour, threats, and interactions with their environment. This data-driven approach contributes immensely to the understanding of dholes' ecological requirements, movement patterns, and the challenges they face within CNP. The collection and analysis of this data form a foundation for evidence-based conservation strategies.

- Establishment of a Dhole Conservation Framework: The project's comprehensive approach, involving community outreach, data collection, stakeholder engagement, and knowledge sharing, establishes a framework for ongoing dhole conservation efforts in CNP. The involvement of local entities and the creation of awareness lay the foundation for sustained support and action, ensuring that the conservation momentum continues beyond the project's duration.

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

Undoubtedly, our project encountered unforeseen difficulties that required strategic approaches for resolution. These challenges emerged at different stages of the project, demanding adaptability, and persistence.

- Before the Start of Camera Traps: Early on, we faced a significant hurdle due to the overlap of our research with the National Tiger Census of Nepal. This overlap resulted in delays in obtaining necessary permits, access to camera traps, availability of citizen scientists, and support from the national park and buffer zone committees. Moreover, the aftermath of the tiger census led to difficulties in procuring camera traps. Many organisations were hesitant to lend their equipment due to losses incurred during the census. Furthermore, the citizen scientists we had hoped to involve were already engaged in other research endeavours, showing a greater inclination towards charismatic species rather than dholes.

  To overcome these challenges, we adopted a proactive and patient approach. Constant communication, coordination, and requests to all stakeholders played a crucial role. We strategically timed our efforts to align with the availability of cameras, human resources, and support from park staff. This waiting period, although challenging, enabled us to secure the necessary resources and create an environment conducive to successful implementation.

- During the Camera Traps: The challenges did not abate once the camera traps were deployed. Our study area, located in the core of Chitwan National Park, posed logistical challenges for our field coordinator, citizen scientists, and supporting research team. Covering the entire national park using a grid system of 49 units, each measuring 5 x 5 km^2, was arduous and demanding due to the rugged terrain. Certain grid areas were inaccessible, posing difficulties in comprehensive coverage. Adding to the complexity, the forest fire from mid-April to the end of May 2023 also caused difficulties. Similarly, heavy rainfall during pre-monsoon periods further hindered field operations.

  Regrettably, we encountered equipment loss during the survey, losing three cameras along with valuable data and resources. This setback was a reminder of the unpredictable nature of fieldwork and the need for contingency plans.

  In response to these difficulties, we embraced a combination of perseverance, adaptability, and strategic planning. We re-evaluated our survey strategy to optimise coverage given the challenging terrain and focused on grid units that were more accessible. We were also largely supported by National Park and Buffer Zone committees by providing route and terrain information with reliable resource with experience knowledge of adjoining core region. To mitigate equipment loss and minimise future data

loss, we reviewed our camera deployment practices and implemented additional safeguards.

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

The involvement of local communities has been a pivotal aspect of the dhole conservation project in Chitwan National Park, leading to several noteworthy benefits for these communities. The project's approach to capacitating local communities, utilising them for data collection, gaining support from conservation stakeholders, and establishing long-term engagement has positively impacted both the communities and the conservation efforts:

- Empowerment and Capacitation: The project prioritised capacitating local communities by providing them with knowledge and tools related to dhole conservation. Through the community outreach events, community members were empowered with information about the endangered dhole and the significance of its conservation. This process not only raised awareness but also instilled a sense of ownership and responsibility among the locals, fostering a more informed and engaged community.

- Active Involvement in Data Collection: Local communities were actively involved in data collection during both social surveys and field-based scientific monitoring. Through semi-structured household interviews and transect walks, community members contributed to the collection of critical data on dhole behaviour, threats, and interactions. This participatory approach not only enriched the scientific understanding of dholes but also enabled community members to directly engage in conservation efforts.

- Support from Conservation Stakeholders: The involvement of local communities garnered support from a wide range of community-based conservation stakeholders, including the Community-Based Anti-Poaching Unit (CBAPU), Buffer Zone User Committee, Buffer Zone Community Forest, and indigenous/natural resources dependent communities. This support demonstrates the recognition of local communities as essential partners in conservation efforts. The collaborative engagement of these stakeholders further solidified the project's impact and sustainability.

5. Are there any plans to continue this work?

Certainly, the continuation of the work holds immense potential for further enhancing its impact and ensuring the long-term survival of this endangered species in Chitwan National Park. Building on the project's successes and lessons learned, future efforts should be guided by a comprehensive strategy that prioritises the involvement of local communities, robust capacity development, and the integration of conservation efforts into Nepal's broader conservation paradigm.

- Continued engagement with local communities along with capacity development: The success of the project's initial phases has demonstrated the

significance of engaging local communities as integral partners in conservation. To ensure the sustained protection of dholes and their habitat, future endeavours should deepen this involvement by establishing community-led long-term initiatives. Encouraging local ownership through participatory decision making processes will foster a stronger sense of responsibility and stewardship. By investing in training programmes, workshops, and educational initiatives, the project can empower local communities, conservation practitioners, and relevant stakeholders with the skills and knowledge required for effective dhole conservation. Specialised training in wildlife monitoring techniques, habitat protection, restoration, and management can equip individuals to contribute meaningfully to conservation efforts while also enhancing local livelihoods through sustainable ecotourism and related activities.

- Monitoring and Adaptation: The continuation of the project should prioritise continuous monitoring and evaluation. Regular assessments of dhole populations, habitat health, and community engagement will provide insights into the effectiveness of conservation strategies. This data-driven approach allows for necessary adaptations to be made, ensuring that the project remains responsive to changing circumstances and emerging challenges.

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

Our commitment to sharing the results of our work is robust and multifaceted, encompassing both our achievements to date and our aspirations for the future.

Already, we have taken significant steps to disseminate the outcomes of our project. We were honoured to present our project work at the esteemed 2nd International Dhole Conference, where we had the privilege to share our findings and recommendations with a global audience of conservation experts, practitioners, and enthusiasts. This platform allowed us to contribute to the broader discourse on dhole conservation and connect with like-minded individuals who share our passion for protecting this endangered species.

Furthermore, we have leveraged the power of local media to ensure that our project's impact is felt at the grassroots level. Two articles highlighting our efforts were published in the Himal Khabar Nepali daily newspaper on Dhole Day. These articles, written in Nepali language, allowed us to reach a wider local audience and foster awareness about dholes and our conservation initiatives within the community.

Looking ahead, we are committed to expanding the reach of our results dissemination efforts. We recognise the importance of academic rigour in conservation, and as we continue our data analysis, we plan to contribute to the scientific community by publishing research papers that document our findings, methodologies, and insights. These publications will provide a comprehensive account of our work and its implications for dhole conservation.

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

Looking ahead, we envision a series of crucial next steps that will build upon our achievements and enhance the impact of our dhole conservation efforts. These steps reflect our commitment to a comprehensive and sustainable approach to safeguarding the endangered dhole within Chitwan National Park and its surrounding areas.

A. Year-round Dhole Monitoring and Multi-Season Study: Expanding our monitoring efforts beyond the initial phases is essential for obtaining a comprehensive understanding of dhole behaviour and its interactions with the ecosystem. By conducting year-round, multi-season studies, we can capture the nuances of their movements, behaviours, and responses to changing environmental conditions, contributing to more informed conservation strategies.

B. Focused Work in Hotspot Areas: Identifying and concentrating our efforts in hotspot areas where dholes are particularly vulnerable, or their presence is critical is a strategic approach to maximising conservation impact. By focusing on these areas, we can address immediate threats and effectively allocate resources to protect dhole populations and their habitats.

C. Capacitating Local Communities: Continuing our emphasis on community engagement, we will further empower local communities through capacity-building initiatives. Workshops, training programmes, and educational campaigns will provide community members with the tools and knowledge they need to actively participate in conservation efforts.

D. Community-Based Dhole Research and Awareness Work: Empowering communities to take the lead in dhole research and awareness campaigns fosters a sense of ownership and responsibility. This community-based approach not only generates valuable data but also ensures that local voices are at the forefront of conservation efforts.

E. Informative Hoarding Boards at Strategic Locations: Placing informative hoarding boards at crossroad sites, entry gates, park offices, and other strategic locations will capture the attention of visitors and locals alike. These boards will convey critical information about dholes, their significance, and the conservation efforts underway, reinforcing the message of responsible coexistence.

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?

We made extensive use of the Rufford Foundation's logo in a wide range of materials produced in relation to the project. This encompassed programme banners, presentation slides, brochures, posters, conference presentations, and school programmes. The logo served as a powerful visual representation of the foundation's support and commitment to the project's objectives.

The foundation's contribution received significant publicity and appreciation throughout the duration of our work. The conservation fraternity, including professionals, stakeholders, and local communities, widely acknowledged The Rufford Foundation for its crucial role in supporting a project focused on the conservation of lesser known yet highly significant endangered carnivores like Dholes.

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

Ms. Smritee Lama was the principal investigator of this project. She led this team by overall logistical management, coordination, fieldworks, data collection, analysis and report writing. The other supporting team members were as follows:

Name	**Affiliated organization**	**Designation**	**Role**
Shanti Thapa	Thori Buffer Zone Users Committee	President of CBAPU	assisted in fieldwork and local coordination. She helped team leader in conducting different project activities - Interviews, Conservation outreach programs
Hem Mahato	Jagatpur Lodge	Naturalists	Interviews
Prem Mahato	Himalayan Nature	Social Mobilizer	assisted in fieldwork and local coordination. She helped team leader in conducting different project activities - Interviews, Conservation outreach programs
Tarapati Mardaniya	NA	Social Scientist	Camera trap survey field
Naresh Tharu	NA	Social Scientist	Camera trap survey field

10. Any other comments?

On behalf of the entire project team, we extend our heartfelt gratitude to The Rufford Foundation for its steadfast support that has fuelled our dhole conservation journey. The presence of your foundation's logo on our project materials has symbolised more than just partnership – it has exemplified dedication and commitment.