

Final Evaluation Report

Your Details	
Full Name	Sagar Raj Kandel
Project Title	Working with communities in the Banke-Bardia complex to reduce human-carnivore conflicts.
Application ID	36129-B
Date of this Report	27/08/2023

1. Indicate the level of achievement of the project’s original objectives and include any relevant comments on factors affecting this.

The long-term perspective of our project was to manage felids populations in Banke-Bardia Complex by developing effective conservation work that involves outreach program and research activities. The general objectives were:

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Strengthen the community awareness program				Community awareness programme involved both community and schools outreach programmes
Develop citizen science and practice through direct involvement of CBAPUs				CBAPUs members were involved in camera trap and scat collection during the project.
Assessment of habitat suitability for felid conservation				First draft on the research has been prepared.
Molecular scatology and diet analysis of tiger and leopard in Bardia National Park				First draft on the research has been prepared.

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

a). Establishing community ownership is crucial to improve feline conservation within the Banke-Bardia Complex. To effectively participate in the community, one must support local businesses and reduce human-feline conflict. To further support these objectives, a thorough communities/schools awareness programme should be put in place.

b). Although tiger populations have doubled since 2009, to 355, one factor still needs to be investigated: the condition of their habitat. To fill this vacuum, we had aim to investigate environmental niche modelling in our study. Our goal is to increase the number of cats while maintaining their coexistence with humans in the Banke-Bardia Complex by identifying places that require habitat restoration. The results of our study are valuable. They will provide vital information to guide the complex's land-management practises and policies. Our evaluation of habitat forecasts, both short- and long-term, is well positioned to pinpoint climate refugia that can sustain tiger numbers, especially in the vicinity of TAL. The impact of our findings reverberates on multiple scales. They hold relevance internationally, nationally, and specifically at the complex level, given its designation as one of the Level-I Tiger Conservation Unit. Ultimately, our study seeks to harmonise the growth of felid populations with human activities, contributing to sustainable coexistence and ecological preservation.

c). Tiger diet analysis yields a wealth of insights crucial for both ecological understanding and effective conservation efforts. By deciphering the dietary preferences and consumption patterns of tigers, researchers gain a clearer understanding of their role within the intricate web of species interactions, shedding light on ecosystem dynamics. This analysis also serves as a valuable tool for assessing the availability and well-being of prey species, offering essential indicators of ecosystem health and balance. Moreover, the data acquired from diet studies plays a pivotal role in shaping conservation strategies, aiding in the identification of vital habitats, the management of prey populations, and the mitigation of potential threats. Beyond conservation, this research helps address human-wildlife conflicts by providing insights into whether tigers are targeting domestic animals. Additionally, understanding the dietary habits of tigers assists in habitat management, ensuring the protection of key areas that sustain their preferred prey.

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

The project was approved in mid-February 2022 and was initially planned for completion within a year. However, unforeseen circumstances, including the Principal Investigator's (PI) engagement in a Master's degree programme and travel restrictions due to visa issues, led to a 6-month extension. This extension was granted with approval from the trustees. Despite these challenges, the project's first and second reports were submitted on schedule. Some project activities required the direct involvement of the PI in the field, but the expertise and dedication of the team members ensured the successful completion of these tasks within the extended timeframe.

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

Locals have been instrumental in the project's enhancement of citizen science and outreach initiatives for the conservation of tigers and leopards around Banke-Bardia Complex in several ways. They have participated in initiatives related to data gathering, community engagement, education, and awareness.

Citizen science and data collection: Local communities have received training and encouragement to take part in data collection activities, such as tracking sightings, behaviour, and habitat details for tigers and leopards. Their direct familiarity with the region and its fauna has aided in the collection of important data for conservation studies.

Education and Awareness: Initiatives to inform the community about the value of tiger and leopard conservation are probably part of the effort. Raising awareness of the ecological relevance of these predators and the need to preserve their habitats is facilitated by workshops, seminars, and promotional materials. Participatory programme involving awareness programme in five different schools in and around Banke-Bardia Complex, really enhanced school awareness programme. Future involvement of them is expected.

Capacity Building: The project has provided training to local individuals in various skills, including wildlife monitoring, tracking, and data recording. This not only empowers them to contribute actively to conservation efforts but also enhances their employability in related field.

Economic Gains: Including nearby communities in conservation initiatives can have a positive economic impact. Opportunities for ecotourism, jobs involving animals, and sustainable livelihoods may present themselves, improving the financial situation for locals.

In conclusion, the project has helped the locals by imparting knowledge, developing skills, and creating economic possibilities pertaining to the conservation of tigers and leopards. Their invaluable advice, involvement, and dedication assist the project concurrently and ultimately aid in the preservation of these unique animals and their environment.

5. Are there any plans to continue this work?

Yes, we will continue this work. But for our upcoming project we will focus on schools. Focusing on schools and involving students in conservation efforts is an excellent approach. The "Goal for Conservation" Football Competition concept is not only innovative but also a creative way to raise awareness and engage young minds in wildlife conservation. By involving 20-30 schools around the Banke-Bardia Complex, we'll have the opportunity to reach a significant number of students and communities. Some components of research will be involved in collaboration of NTNC, Bardia conservation program in future.

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

We will share our work's results through scientific publications, public reports, community workshops, online platforms, school collaborations, presentations at conservation events, partnerships with NGOs and media outreach. This comprehensive approach ensures broad dissemination, spanning scientific communities, residents, students, professionals, and the general public, maximising the impact of our findings in the Banke-Bardia Complex and beyond. We are planning to produce some promotional materials to disseminate our findings of our all grants in upcoming project too.

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

Using citizen science and outreach programmes to include young people in the conservation of tigers and leopards in the Banke-Bardia Complex will be an excellent idea for future. Involving young people in conservation initiatives fosters a sense of ownership and responsibility in the next generation while also helping to increase public awareness of these endangered species. A synergistic approach that improves local community conservation efforts and scientific understanding of tiger and leopard populations can be achieved by combining research with citizen science and outreach initiatives. So, further conducting research on tigers and leopards, on their habitats, and their occupancy across different altitudinal ranges

will be crucial for their conservation and management. Such research provides valuable insights into their behaviour, distribution, and the factors affecting their population.

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 have used the Rufford Foundation logo in every material produced in relation to this project.

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

Overall, the members of this project assist us throughout our objectives. One Master student (Mr. Ramesh Rajwanshi) was added to our project. Our referee Linda Beaumont and her colleague Mr. Wilson contributed on research aspects. Other team members also have equal contribution throughout the project.

Name of Team Members	Role in the project
Sagar Raj Kandel (PI)	<ul style="list-style-type: none"> • Design and concept the project. • Communication and updates through all team members. • Compile all the occurrence records of tigers and leopards. • First draft of research on Environmental niche modelling and dietary patterns of felids. • Follow-up program.
Pranaya Kumar Jha	<ul style="list-style-type: none"> • Banke Section school program. • CBAPU interaction and camera trap. • Maintain datasheets of felids occurrence in Banke.
Babu Ram Lamichhane	<ul style="list-style-type: none"> • Study design in camera trap and molecular scatology
Rabin Kadariya	<ul style="list-style-type: none"> • Study design in camera trap and scat collection. • Facilitate camera trap survey. • Prepare datasheet of tiger occurrence records of time and leopard of Banke-Bardia Complex. • Facilitate in one day interaction program.
Umesh Paudel	<ul style="list-style-type: none"> • Assist in diet analysis and maintain datasheets. • Facilitate camera trapping and one day interaction program in Bardia. • Facilitate and involve community in scat collection and camera trapping.
Ramesh Rajwanshi	<ul style="list-style-type: none"> • Facilitate in training all five different schools in Banke. • Follow-up for school awareness program. • Maintain effective communication with all team members. • Pass insightful information for future project.

10. Any other comments?

Even though our project has had both successes and setbacks along the way, we must all take a moment to appreciate everyone's hard work and efforts for getting us this far. Our advancement has been greatly aided by the cooperation of stakeholders, funding agencies, community partners, and team members. As we move forwards, keeping the lines of communication open, encouraging teamwork, and being flexible in the face of change will be essential to our success. Let's use the knowledge and understanding we get from this journey to influence the Banke-Bardia Complex's conservation in the long run and spur progress in the larger field of wildlife preservation.