

## Project Update: October 2020

### A. Background

In the past century, large carnivores like tigers and leopard, sharply declined and their range collapsed (Dinerstein et al. 2007; Jacobson et al. 2016). In 2010, the tiger range countries agreed to reverse the situation and formulated the Global Tiger Recovery Program to double the wild tiger population by 2022 (GTI 2011). Nepal is one of the range countries committed to double its tiger population with a target of 250 adult individuals by 2022. A recent survey shows Nepal is close to its target with 235 tigers in 2018.

Some scientists argue that Nepal cannot meet its target of 250 tigers within the available habitat (Aryal et al. 2016) whereas others believe that it can be achieved through better management of the remaining habitats (Thapa et al. 2016). Tigers are territorial animals; thus, their density cannot increase beyond a certain threshold. Core Protected Areas (PA) are almost occupied by tigers but there is unoccupied habitat in the buffer zone and outside. The recent (2018) national tiger survey (DNPWC 2018) shows tigers dispersing outside PAs. With the increasing tiger population in PAs, not only the young tigers but also the leopards, the other co-predator, may be pushed out in marginal habitats outside (Lamichhane et al. 2019). In the forests outside PAs, prey density is very low, which is a challenge for survival of dispersing tigers (Shrestha 2004). Free grazing is common practice in these forests. There is a threat of livestock killing by tigers/leopards. People may kill tigers/leopards in retaliation.

Thus, conservation initiation outside PAs is necessary to sustain the tiger population growth and achieve national target. Understanding the diet and status of prey-base is important for carnivore conservation. We initiated this project to study tiger and leopard diet and assess prey status in forests outside the park in Chitwan Valley. By knowing the wild prey status (or prey availability for carnivores) and carnivore diets, the managers can devise better conservation measures and reduce the conflict.

### B. Project progress

Majority of the project activities (prey base survey and scat collection) was planned for the dry season (February – April). Due to nationwide lockdown amid COVID-19 pandemic, some of the activities could not be continued. We plan to continue the field activities in the next season. Activity wise progress status is as follow.

SN	Activities	Progress	Remarks
1	Scat sample collection	Continued	~ 17 leopard scats and ~35 tiger scats collected in Chitwan forest
2	Prey base assessment	Continued	Survey in Chitwan part (30 transects) completed, survey in Nawalparasi side. A
3	Community consultations	Continued	Two units of consultation in eastern part of Chitwan forest
4	Sharing workshop	Not initiated	This activity will be carried out after obtaining all the results

### **i. Scat sample collection**

We started fieldwork for scat collection in November 2019. Due to thick bushes and unexpected long winter rainfall, only a few scats (17 leopard and 35 tiger scats) were collected from the Barandabhar Forest in Chitwan. We planned to continue the scat collection in dry season (March-April 2020). Due to nationwide lockdown to prevent the spread of COVID-19, the survey could not be continued. We plan to continue scat collection in the next season.

### **ii. Prey base assessment**

Dry season (March – April) with high visibility in the forests (just after winter) is the best season for the prey-base assessment. Thus, we planned to start the survey in March 2020 but survey could not be continued due to lockdown. Later in April/May 2020, we could carry out a survey in eastern part (within the Chitwan district). For the survey we hired a Bachelor's student in Forestry Science (Mr. Muna Chaudhary) who used the data for his thesis. Mr Muna recently completed his thesis.



Figure 1: Student volunteer and a wildlife technician conducting prey base survey in Barandabhar Forest, Chitwan

### **iii. Community interactions**

We conducted two community interactions (one with Panchakanya CF, and other with Thangkhola CF) in the eastern part of Barandabhar forest, Chitwan. We discussed about

the tiger/leopard movement in their forests and status of conflicts. They reported occasional livestock (especially goat) predation by leopards.



Figure 2: Interaction with the community people at Panchakanya CF.

#### **iv. Sharing workshop**

Sharing workshop will be conducted after completion of the fieldwork and data analysis.

#### **C. Way forward**

We plan to complete all the remaining activities in the coming winter and dry season (November 2020 to March 2021).