Securing the future of Nepal's tigers

Strengthening anti-poaching measures and tiger monitoring in newly extended area of Parsa Wildlife Reserve

Interim project progress report



Cover Photo: Tiger image captured during the camera trapping survey 2016/17.

Project Title: *Strengthening anti-poaching measures and tiger monitoring in newly extended area of Parsa Wildlife Reserve*

Project start date: 1 September 2016 Project End Date: 31 August 2017

Reporting Period: 1 September 2016- 31 January 2017.

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Project Background

The Department of National Parks and Wildlife Conservation (DNPWC), with support from ZSL and other conservation partners, extended the core of Parsa Wildlife Reserve (PWR) to include an additional 129km² area of Bara Forest in August 2015. The extended area lies in the eastern part of the reserve, which includes prime habitat for tigers and their prey. The habitat holds several waterholes in the region including *Halkhoria Daha* and patches of grassland important for tiger prey species. The earlier project, through the funding of 21st Century Tiger, has been instrumental in supporting DNPWC to secure the additional habitat for tigers and conduct baseline monitoring of tigers and their prey base for the extended area. The earlier project has also significantly contributed to establishing the Community Based Anti-Poaching Units (CBAPUS) to improve the protection of tigers and their habitat in the extension area.

This project was formulated to continue activities based on the success achieved during 2015/16. The current project supports PWR in the annual monitoring of tigers and the strengthening of security in the newly extended core. The goal of the project is to secure sufficient protection in the region to reduce human disturbance, and to restore the extended core of PWR to prime tiger habitat. The project specifically focuses on improving security through regular SMART patrolling and monitoring tigers and prey species to assess their population status.



Figure 1: Map of Parsa Wildlife Reserve including the extension area

Project objectives:

- 1. Reduce poaching threats to tigers by strengthening anti-poaching measures within the new core through effective implementation of SMART.
- 2. Continue monitoring of the status of tigers and their prey in Bara Forest (the newly extended core of PWR) through yearly systematic camera trapping and transect surveys.

Activities and Progress

1. Reduce poaching threats to tigers by strengthening anti-poaching measures within the new core through effective implementation of SMART (SENSITIVE INFORMATION)

SMART has been ongoing in PWR. In total 365 staff (from the Nepal army and Reserve administration) of PWR have been trained in SMART patrolling. ZSL has supported the construction of a security post in the extended area through other grants. As many as 82 army personnel have been now deployed in the newly constructed guard post. In other part of the extended core, the Nepal army is conducting regular patrolling using temporary shelters and long range patrols.

A total of 966 patrols have been conducted by the protection unit of PWR from 18 September-18 December 2016. The patrol team covered 8920 km during the four month period and the following observations/ arrests were made.

		Number of		Woodcu	Human	Tiger Sign	5		Tools confiscated	
S.N.	Month	patrols	patrol Km	tter	Activity	Direct	Indirect	Arrested		
1	September	268	2502.85	3	5	0	5	0	5	
2	October	253	2255.25	2	4	0	4	0	0	
3	November	275	2873.7	0	2	1	9	0	0	
4	December	170	1289.15	0	2	0	5	0	0	

Table 1: SMART summary (September- December 2016)

Map removed for security reasons

Figure 2: Map showing patrol effort (September- December 2016)



Figure 3: Distance covered by patrol teams

Since September 2016, patrol teams have covered 8920km inside the core of PWR including the extended area. Patrolling was concentrated in the periphery of PWR, where there is high movement of people for illegal activities. The very core of PWR, most of which is difficult terrain, known as Churia, was covered by Long Range Patrol teams. Patrol effort was nearly consistent across all four months. Patrols were conducted from 11 outposts located in the periphery of PWR.

2. Continue monitoring the status of tigers and their prey in Bara Forest (the newly extended core of PWR) through yearly systematic camera trapping and transect surveys.

Following the survey carried out in early 2016, 32 grid cells of 2x2km size have been formed to cover the extended core of PWR for tiger monitoring through camera trapping. PWR, as a whole has been divided into 167 grids for camera trapping. The whole camera trapping operation for PWR will be completed in 3 phases starting from the northern part of the reserve and moving towards the south. Reconnaissance activities were completed to update the best location for camera traps initially identified during the 2016 survey.



Figure 4: Camera trap grid layout for Parsa Wildlife Reserve, 2016-2017 survey

Camera trap raining was conducted for the field technicians and student volunteers from 19-20 November, 2016. In total, 35 technicians from PWR, NTNC, ZSL and student volunteers were trained. The training course included lectures on camera trap setup, placement of camera traps, data recording, navigation, map reading and basic survival techniques. Experienced technicians from PWR and NTNC shared their experience and ways to avoid dangerous wildlife particularly from elephants and tigers and situations in the jungle with special reference to PWR. The training course was provided by Mr Shiva Narayan Shah and Mr Ashok Ram, Assistant Conservation Officers, PWR, Mr Shashank Poudel, Officer, NTNC, Dipendra Adhikari, Field biologist, ZSL.

Cameras are placed in each grid cell for 21 nights following the methods used during last years' survey. Camera trapping for PWR started from 22 November 2016. Four teams of 6 people have been formed for the deployment of camera traps during each phase. Cameras were placed in 67 grid cells in Phase I which concluded on 16 December 2016. Phase II of the camera trapping started from 24 December 2016 for 73 grid cells and completed on 16th January 2017. Five grids of the extended core were covered in phase II. Deployment of the camera traps for Phase III, in the

remaining 27 grid cells of the extended core area started on 22 January 2017 and will complete on 11 February 2017.



Figure 5: Technician setting up camera traps

Data will be analysed after completion of Phase III. The camera trapping survey was initially designed to be completed in 2 phases. However, due to limited number of available camera traps and loss of cameras during Phase I, the survey period has to be extended into 3 phases. Installed cameras were disturbed (in some cases completely damaged) by elephants and other wildlife. In total, 11 camera unit was damaged by elephant. Cameras were lost from grids very close to human settlements.

Evaluation

Regular meetings have been held with the Chief Conservation Officer, PWR, to discuss the implementation of project activities. Monthly SMART reports have been generated for PWR with technical support from ZSL staff. With PWR leading,

coordination meetings have been conducted with Tara Dal Batallion to improve the SMART patrolling based on the monthly reports and updates from ZSL field teams.

Similarly, coordination meeting for PWR, Tara Dal battalion, NTNC and ZSL have been conducted to maintain communication and discuss issues related to camera trap surveys such as damage to cameras by elephants and theft. Data from the first and second phases of the camera trapping survey have been submitted to PWR. The data is being processed by PWR to identify human images and to take necessary immediate action through a well-established response mechanism.

The Project Management Unit (PMU) led by the Chief Conservation Officer, PWR, together with staff from NTNC and ZSL has conducted several monitoring visits to camera trap sites and met with the field technicians to discuss progress with the camera trapping survey, issues and challenges. The monitoring team in particular advised field technicians to retrieve data frequently to avoid the loss of data in case of camera damage or theft.

Outputs

Objectives	Outputs
Reduce poaching threats to tigers by strengthening anti-poaching measures within the new core through effective implementation of SMART	A total of 82 army personnel stationed in the extended core area have been trained in SMART patrolling
	Three training sessions organised for Protection Unit staff
	No poaching incident recorded for the reporting period.
	General decrease in the number of human observation inside the core area
Monitor the status of tigers and their prey in Bara Forest through camera trapping and transect surveys.	Camera trapping ongoing

Timeline Progress and Plan

Activities	Q1 (Sept-Nov)			Q2 (Dec-Feb)			Q3 (March-May)			Q4 (Jun-Aug)		
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug
Project propagation. Coordination meetings planning and obtaining												
nermissions												
Progress												
Reduce poaching threats to tigers by strengthening anti-poaching												
measures within the new core through effective implementation of												
SMART												
Provide training and equipment to protection units of new guard posts												
Progress												
Conduct regular patrols												
Progress												
Produce monthly SMART reports												
Progress												
Monitor the status of tigers and their prey in Bara Forest (newly												
extended core) through yearly systematic camera trapping.												
Develop camera trap and transect survey proposal based on national												
guidelines and receive DNPWC approval												
Progress												
Deploy camera traps												
Progress												
Conduct transect surveys (prey base monitoring)												
Progress												
Data analysis and report writing												
Progress												
Draft Final report and submission												
Progress												

Planned