

Strengthening institutional capacity and collaboration for tiger conservation

Final Report

March 2024



Submitted to

Wild Cats Conservation Alliance

Reporting Period

1 February 2023 – 31 January 2024

This report will be made public. If it contains confidential or sensitive information, please also provide a revised report for sharing with the public.

Section I. Project Information	
Project Title: Strengthening institutional capacity and collaboration for tiger conservation	
Grantee Organisation: Zoological Society of London	
Location of project: Southern and eastern part of PNP and its buffer zone, adjoining national, collaborative and community forests (27.250N, 84.850E)	
Size of project area (if appropriate): 535 Sq. Km (approx.)	No of tigers and / or Amur leopards in project area, giving evidence & source: 41 (95% CI = 38-50) estimated tigers in PNP and adjoining forest (DNPWC and DFSC, 2022)
<p>Partners: <i>(Please give details of partners, including communities, academic institutions etc. for this project and permissions that have been received for this project.)</i></p> <p>Department of National Parks and Wildlife Conservation (DNPWC)</p> <p>DNPWC is the main government authority providing oversight for conservation and management of wildlife in Nepal. It is responsible for the overall management of Nepal's PAs including the buffer zones. ZSL has a working MoU with DNPWC since 2014 renewed for five years in 2019 and has a very good professional relationship. Through DNPWC it also has a close working relationship with the PA managers at PNP. The DNPWC, through Programme Coordination Committee (PCC) facilitates implementation of the project activities and is responsible for overall monitoring and evaluation of the project. This is based on a monitoring mechanism established under the project. The proposed project has been formulated under the guidance of DNPWC and the required permission has been obtained.</p> <p>Parsa National Park (PNP)</p> <p>In 1984 PNP was designated a wildlife reserve, with the primary aim of preserving the wild Asian elephant and their remaining habitat as well as other varieties of fauna. In 2015, the reserve area was extended to 627.39 sq.km from 499 sq. km and in 2017 the status was</p>	

upgraded from a wildlife reserve to a National Park. PNP plays a vital role in achieving the goals and objectives of PA management regimes in Nepal as it provides critical habitat for endangered species including tigers and transboundary connectivity with Chitwan NP and Valmiki Tiger Reserve in India. It is also part of the Terai Arc Landscape (TAL), which is a globally important landscape for tiger conservation. The previously established Project Management Unit (PMU) at PNP, chaired by the Chief Conservation Officer of PNP with the members of ZSL, will facilitate and implement the project activities. The members of the PMU are responsible for coordination, facilitating project activities, monitoring progress, and reporting to the PCC.

Project Contact Name: Bhagawan Raj Dahal

Email: bhagawanraj.dahal@zsl.org

Actual start date of project: 1 March 2023

Reporting period: 1 February 2023 to 31 January 2024

Section II. Project Progress

Summary of progress of activities and achievements: *(please provide a summary for use in our communication materials)*

In order to increase awareness among local people, five community level awareness raising workshops were held, engaging 304 participants. The findings of the National Tiger Survey 2022 were shared, as well as information about their population movement patterns, and a discussion on possible human tiger coexistence strategies was had. One workshop was shared with key stakeholders including the PNP authorities, Nepal Army, representatives of BZUCs, and another workshop was organized for the representatives of DFO, BZUC, CBAPU, local community etc. In order to improve collaboration, two meetings attended by 39 participants, and 7 informal meetings between park authority and security personnel were organized to demonstrate the use and effectiveness of SpyCamera technology in conservation, and the benefits of establishing a red alert system in the presence of PNP managers and Nepal Army.

In order to strengthen the capacity of the NP to control illegal wildlife activity, one training session was held for 18 frontline staff and one refresher training for 22 frontline staffs on the use of SpyCam technology. After the deployment of SpyCam in the field, a training session for 11 frontline staff was conducted on the identification of red alert, storage of images, database management, and analysis of photo information. Following the training, regular deployment of 20 SpyCameras in the strategic locations identified was completed. As a result, the rapid response team have successfully arrested offenders for illegal logging and poaching activities in the restricted zone.

Details of activities and results to date: (Please give details of progress made towards the objectives & outputs of your Logframe, and activities included in your Workplan. Please add any relevant charts, maps and images.)

Output 1: Improved collaboration between multi-conservation stakeholders through regular engagement meetings and, information sharing underpinned by awareness raising for wider communities promotes tiger conservation in the region.

Activity 1.1: Conduct workshop among PNP, DFO, BZUCs, CFUG to build support for tiger conservation and minimizing human-tiger conflicts

A day long tiger conservation workshop was held at Adhabhar, Parsa district engaging various stakeholders including the Chief Conservation Officer (CCO) and key staff of Parsa National Park, the Nepal army, representatives of BZUCs, NTNC and MWT. The main objectives of the workshop were to share the major findings of National Tiger Survey 2022 and tiger dispersal patterns in 2013, 2018, and 2022, as well as promoting human tiger coexistence through tiger-based tourism opportunities. A total of 38 participants actively took part in the workshop. After the presentation session, an open discussion session was conducted.



Figure 1: Dr Ashok Kumar Ram, CCO, PNP delivering his speech in the program



Figure 2: ZSL Nepal staff giving presentation in the program



Figure 3: A group photo of the workshop participants

In the closing session, the CCO emphasized the strategies to proactively deal with possible human tiger interactions, and the chairman of the BZMC focused on the role of local people in tiger conservation as well as engagement in maintaining coexistence.

Activity 1.2: Conduct meeting with conservation stakeholders to share the result of GSM enabled surveillance cameras and threats encountered

Two informal meetings were held with concerned authorities and stakeholders to promote collective law enforcement efforts in Parsa National Park. During the meeting, data collected from covertly deployed spy cameras in various strategic locations was shared among PNP staff stationed at various parts of the park and among Nepali army officers in-charge of respective posts.

Despite the limited number of spy cameras, the meeting concluded with a decision to identify strategic locations for installing GSM-enabled cameras in the core area and buffer zone areas based on information received from regular real-time patrols, informants, and community user groups, and to deploy the cameras accordingly based on priorities. Once the cameras are installed, the post commander closest to the location of the installed camera will be notified of its location so that if the camera detects any intruders, the rapid response command centre at park headquarters can notify the post commander to respond as soon as possible.

The meeting was attended by 39 participants including 16 from the Nepali army and 23 from the National Park.



Figure 4: Staff elaborating on the meeting's main goal



Figure 5: Lt. Colonel suggesting strategies for installing spy cameras.

Activity 1.3: Conduct routine informal meetings with Nepali Army units

A total of 7 informal meetings were conducted during the project period where images from spy cameras were shared with the Park authority and Nepali Army. The meetings were regularly organized by the PNP with the main objective of creating a platform for the Park

Manager, Battalion Commander of Nepal Army, key staff of the park and other representatives from the Nepali Army to discuss strategies to protect biodiversity. During the initial meeting, the staff were briefed on camera mechanisms, received hands-on demonstrations of camera features, and discussed the implementation of a red alert system. In the subsequent meetings, red alerts were shared, containing images of poachers and illegal loggers, and sensitive locations prone to illegal wildlife activities were identified. This initiative aimed to improve overall wildlife crime prevention within the National Park, underscored the significance of timely information sharing, and emphasized the necessity of collaborative efforts to address identified challenges. Additionally, the importance of robust planning was strongly highlighted.

Activity 1.4: Engage university students and citizen scientists on tiger conservation

A total of 3 conservation awareness sessions for the university students and citizen scientists were delivered. In one session, a presentation on tiger conservation, the increasing trends of tiger numbers, and the accompanying human wildlife conflict in Nepal was delivered. The primary goal of this program is to motivate and inspire aspiring conservationists to strive toward tiger conservation and human-tiger coexistence. 148 BSc level students from Institute of Forestry, TU, Agriculture and Forest University, and Kathmandu Forestry College were provided with awareness sessions on 3 different occasions.



Figure 6: Staff delivering briefing to students



Figure 7: Staff demonstrating camera trap



Figure 8: Staff delivering presentation at university



Figure 9: Staff delivering presentation at PNP

Activity 1.5: Aware local communities on increasing tiger and its conservation need

Five awareness-raising sessions were held during the project period. A well-designed presentation about tiger conservation and its importance to a healthy ecosystem was delivered. One of the primary objectives of the initiative was to educate individuals about the findings of the 2022 National Tiger Survey conducted by DNPWC. During the program, the tiger population residing in Parsa National Park and its adjacent forest areas was showcased to the local communities. A significant emphasis was placed on disseminating information regarding the survey. Attendees, which included members of the local community, were provided with detailed data on the tiger population found in Parsa National Park and the surrounding forest regions.

Throughout the events, 304 participants representing the Divisional Forest Office (DFO) Parsa, DFO Bara, PNP officials, BZUCs, Community Forest user's group etc. were involved.



Figure 10: Staff presenting on NTS 2022 data and pattern of tiger movement



Figure 11: Conservation Officer presenting on the importance of tiger conservation



Figure 12: Staff presenting on Tiger conservation



Figure 13: Staff presenting at Gadimai collaborative forest

Output 2: Strengthened institutional capacity for effective wildlife law enforcement supports in the reduction of illegal human activities in the project sites.

Activity 2.1 Train PNP staff on setup and deployment of GSM enabled surveillance cameras

With the wildlife population on the rise in PNP, the risk of illegal poaching and logging within the NP has also escalated. Despite the dedicated efforts of law enforcement officers who regularly patrol the area to maintain control, clandestine illegal activities can still occur beyond their surveillance. The inability to monitor every corner of the NP consistently through patrols underscores the need for enhanced technological support to combat illegal wildlife activities. The introduction of GSM-enabled camera technology by ZSL Nepal (which has been successfully implemented in western Terai PAs), highlights the urgency of adopting such technology to address these challenges effectively.

During the reporting period a two-day training course (attended by 18 individuals) and a one-day refresher training (attended by 22 individuals) on the setup and deployment of GSM enabled cameras was delivered. In the sessions participants were provided with the theoretical knowledge about the camera's working mechanism i.e., PIR zone, trigger, and day and night capture, email setup, camera setup on desktop and in the field. After the theoretical session, the participants took part in a practical session which demonstrated

camera deployment in the field, the use of camouflage, field of view settings, use of GPS, and field book entry. Finally, photo check in email and record of basic information e.g., number of intruders, activity, time of intrusion was demonstrated.



Figure 14: staff instructing trainees on the installation and use of poacher cameras



Figure 15: Battalion commander delivering a speech emphasizing the value of using technology in conservation



Figure 16: participant handling the SpyCam



Figure 17: Reorienting participants before having them try installing the camera in the field



Figure 18: Staff presenting during refresher training



Figure 19: camera deployment demonstrated on field

Activity 2.2: Provide training to response units to manage data of GSM enabled surveillance cameras

When GSM enabled surveillance cameras are in the field it is very important to identify the red alert and keep the record of information extracted from the images emailed by the cameras. In order to do this, a one-day training course for 11 members of staff from PNP was delivered through this project. The chosen participants were members of the Rapid Response Team who were detailed with reinforcing the outpost team to take action against illegal wildlife activities. The training was divided into three sessions; the opening session, a presentation session on red alert identification and rapid response, record keeping and analysis, and a closing session. In the first session, the CCO of PNP delivered an opening speech highlighting the importance of rapid response and database management. While in the presentation session, participants were provided with information about record keeping (e.g. camera detail, deployment date, deployment place, nearest post, cellular balance status, battery status, phone number and email associated with the camera system etc.), maintaining a database of monthly data (number of types of images sent by cameras, type of information on intruder, day, and date, etc.), maintaining a database of wildlife images, and analysis of the photo information. In the closing session, the CCO of PNP ended with vote of thanks to WildCats Conservation Alliance and instructed the staff to continue a rapid response to red alerts and maintain the database. After the completion of the training, the PNP was given two logbooks for record keeping as illustrated in the training.



Figure 20: Staff presenting on camera information database



Figure 21: Photo of participants including CCO of PNP

Activity 2.3: Install 20 GSM enabled surveillance cameras in vulnerable locations throughout the year for real time monitoring to reduce tiger threats

WildCats Conservation Alliance, (formerly ALTA & 21st Century Tiger) is a wild tiger and Amur leopard conservation initiative between Dreamworld Wildlife Foundation and Zoological Society of London, (UK charity # 208728).

The project supported PNP in the deployment of 20 GSM enabled cameras to control illegal wildlife activities inside the park. These cameras are covertly deployed in the core areas where illegal wildlife activities could take place. Before the deployment a meeting was conducted in the JOC (Joint Operation Cell) to identify strategic locations. The locations to deploy the cameras were chosen based on patrol reports and information obtained from park informants. Cameras were then setup in the JOC by the park ranger. During the setup process the camera settings are selected with the correct number of photos to take, sensitivity of the trigger, GPRS network detail, and image sender and receiver email detail. Finally, a dedicated team (also rapid response team including the park staff and Nepali army) deploy the cameras in the identified locations. The same team has the access to the email and can respond to images sent by the cameras.

Success from SpyCam

Case I

In May, using information obtained from covertly installed spy cameras in one of the PNP's most sensitive areas for poaching and illegal logging, the park and Nepal army staff collaborated on an operation that resulted in the capture of one bicycle and timber that was about to be taken by illegal loggers from the PNP's core area. As a result, park authorities have increased patrol actions in such areas to combat illicit wildlife poaching and logging.



Figure 22: Intruders hauling timbers on their bicycle illegally from the park's core area



Figure 23: The park conducted an operation in coordination with the Nepal Army in the location

Case II

In June, a photo was emailed by a camera showing a poacher carrying a deceased monitor lizard. The rapid response team responded to the red alert and the poacher with the kill was arrested within 1 hour. It was again one of the major accomplishments made possible solely by the real-time information acquired from the deployed spy camera. The arrested person is being held by park authorities for additional investigation into the offense.



Figure 24: Poacher carrying monitor lizard



Figure 25: Poacher arrested with the kill (left), monitor lizard buried by the authority (right)

Case III

In August 2023, a SpyCam sent information capturing an illegal logger going out from the restricted area of park with timber. The team in JOC responded to the red alert and moved to the location and started a search operation which resulted in the arrest of a logger.

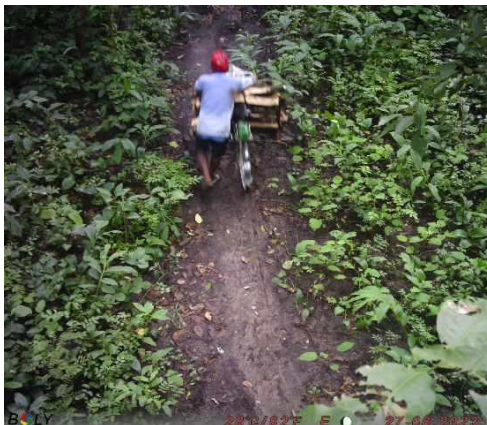


Figure 26: Intruders hauling timbers on their bicycle illegally from the park's core area



Figure 27: The illegal log traffickers who were caught using real time information with the help of spy camera

Activity 2.4: Provide equipment and field gears for rapid response team

In order to enhance operational efficiency within the JOC of Parsa National Park and the Nepali Army, a full set of desktop computers along with 2 GB hard drives was handed over. This marks an innovative step towards improving management of data obtained from GSM-enabled spy cameras. First aid medical kits were provided to the Nepali Army deployed in Parsa National Park. These kits contain all the necessary medical supplies required by both the Nepali Army and national park officials. The medical items provided were prescribed by the Nepali Army medical staff, tailored to the needs of the patrol teams primarily operating within the national park. Additionally, 35 search lights and 3 sets of tents were also handed over to the park. The tents will be used during the long-range patrol and the search lights will be used for the night patrols. The handover ceremony took place in the presence of Mr. Ramchandra Khatiwada, Senior Conservation Officer of Parsa National Park, and Lt. Colonel Ganesh Raj Panth, representing Shree Sabuj Gan.



Figure 28: Staff handing over first aid kit



Figure 29: staff handing over the desktop PC

Give details of any obstacles to success that the project has encountered over the last 6 months. *(Please provide detailed examples, explain what impact these will have on the project results and the changes to the budget and timetable of project activities)*

NA

Budget: Is the spend on target? If not, please give details and provide an updated budget sheet.

Media: Please provide a list of recent publications and media both local and national which mentions the work funded by this project and/or mentions WildCats Conservation Alliance

One blog highlighting the recovery water sources and of tiger number in PNP was published in WildCats Conservation Alliance website. (Please refer to the following link)

<https://conserwildcats.org/2023/08/04/parsa-national-park/>