

Assessment of Poaching and Illegal Wildlife Trafficking in Banke- Kamdi Complex

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Executive Summary

Wildlife crime is a serious issue in conservation particularly of the threatened species of wild flora and fauna globally. Several endangered species such as Asian big cats, elephants and rhinoceros are at the verge of extinction if the current trend of wildlife crime is not retarded. The illegal wildlife trade is among the leading causes for rapid wildlife species decline worldwide (McMurray, 2008). Similarly, Nepal cannot be exception to this situation; the country has been known as transit for illegal wildlife trade and a source for some of the illegally traded species such as rhino horns, tiger and leopard pelts and pangolin scales. Despite various efforts to control wildlife crime, such crime still exists sporadically and in low volume in the country.

The Banke-Kamdi complex is located in the (Mid-western region, State No.6) and covers part of Banke, Dang and Salyan districts. This Complex comprises of Banke National Park (BaNP), its Buffer Zone and Kamdi forest corridor. At present, Kamdi Corridor is under the Banke District Forest and is one of the most important biological corridors of Tarai Arc Landscape. Most of the forests are community forests and few national forests. The forest in Kamdi has been identified as potential biological corridor joining Banke National Park and Chure forests in Nepal and Suhelwa Wildlife Sanctuary in India. The Kamdi corridor suffers from several threats such as unsustainable harvest of forest, encroachment and overgrazing and wildlife crime.

The main objective of this study was to find out the status of wildlife crime in Banke- Kamdi Complex. Major policy documents, legislation, reports and institutional arrangements related to wildlife crime control and Kamdi Corridor were reviewed and field level consultations were conducted in the process of assessment. Some of the major findings are: there still exists illegal hunting by local as a part of retaliatory action and by elite group of people; organized wildlife crime of mega species does not exist; Narainapur, Gangapur and Kalakate are sensible areas for poaching; developing as a transit point for illegal wildlife trade; meet of wild boar and deer species are in local illegal trade; Sal, Sissoo, Saj, Barro and Jamun are in illegal trade; Nepalganj and Kohalpur are developing as illegal wildlife trade centers. Besides, once Agaiya and Dhakeri were infamous as local market for wild animals' meat but not now. The presence of Babariya behind Nepalganj airport is still considered as threat to wildlife crime in the area.

All enforcement agencies and development partners under WCCB-Banke were found to be working satisfactorily but still need to be reinvigorated for more coordination and collaboration in effectively curbing wildlife crime in the district. There is a need to establish APOs under BaNP and DFO, Banke. Many of the CFUGs under three CFCC in the Kamdi corridor have CBAPU working in controlling wildlife crime and generating awareness for conservation. Women participation in most of the CBAPU found to be very little. RRT has been formed under each CBAPU to rescue animals and deal with Human-Wildlife Conflict issues in the field.

The underlying causes of local involvement in wildlife crime are found to be poverty and unemployment, inadequate conservation awareness, high market demand, high profit margin and quick income, high food value as protein, show off of power, pressure and greed, and medicinal values. Some of the specific problems related to Kamdi corridor are; lack of forensic lab test, presence of Babariyas, rugged terrain, limited access and linking to open international border, involvement of white collar people and to some extent lapse of law enforcement.

Communities are not much aware of organized wildlife crime or its nexus but they are pretty aware of illegal hunting and illegal activities in forests such as timber smuggling, killing of wild animals in retaliation, collection of gravel and sand from rivers, and forest fire.

Human-wildlife conflict is not so prominent in Kamdi corridor except wild boar. Occasionally, wild elephants coming from India create problems in the south-eastern part of the corridor. It is often reported that wild boars are mostly killed in retaliatory action. People are little aware about the Wildlife Damage Relief Support scheme.

Women are actively involved in conservation and they are not involved in poaching of wild animals. However, they have substantial presence in illegal lopping and felling tree (by accompanying men) and trade in logs and fodders.

Their representation in lead position is limited. Women need to be encouraged to increase their involvement in controlling wildlife crime capacitating them through various training.

After the proclamation of Constitution of Nepal, judiciary power of Chief Conservation Officer and DFO for penalizing the culprits of wildlife crime has been limited to one year of imprisonment as per Provision 152 (2). For more than one year of imprisonment, case needs to be filed in District Court. With this arrangement, cases may be prolonged and gravity of wildlife crime cases may be reduced.

Now, biological corridor can be declared according to Clause 15 (Gha) of the NPWC (5th amendment) Act, 2029 BS in 2017 whereas it can also be declared as Protected forest as of Forest Act, 2015 AD (second amend) but under different condition.

Finally, Kamdi corridor is one of the most important biological corridors for linking two protected areas of Nepal and India. It also connects with the Chure forest in the north providing continuous habitat for long ranging mega animals and additional habitat to other animals. It is strongly recommended to declare this area as a biological corridor soon. The wildlife crime control institutions and CBOs need to be institutionalized and strengthened accordingly to curb wildlife crime effectively. The local people need to be sensitized about Wildlife Damage Relief Support scheme and make them aware about the wildlife crime and Human-Wildlife conflict to increase

community engagement in reducing crime and conflict. Some of the key recommendations for controlling wildlife crime and betterment of Kamdi corridor are:

- Declare Kamdi Corridor as “Kamdi Biological Corridor” under National Parks and Wildlife Conservation (Fifth Amendment), Act 2029 BS (1973)
- Strengthen WCCB- Banke, APO and CBAPO/U with sufficient amount of CBAPO fund, field equipment and gears which are under BZUC, CFCC and CFUG
- Increase surveillance of Kamdi Corridor and its surrounding areas (VDCs) to control illegal activities in and around the corridor are as follows: Narainapur, Gangapur, Kalaphat, Katkuiya, Lakshmanpur, Matehiya, Holiya and Phattepur
- Enhance field level transboundary cooperation with SWS in controlling wildlife crime
- Generate baseline information and establish district level wildlife crime database under WCCB- Banke
- Develop protocol for managing APO, CBAPO and Informants
- Institutionalize WCCB, APO and CBAPO/U under International Trade in Endangered Wildlife and Plants Control Act 2074 BS (2017)
- Create and strengthen CBAPO fund with the support of BZMC, CFCC, CFUG, Development partners, and DFDF
- Provide SMART patrolling training to forest guards and CBAPU members
- Improve identification of seized items through training and applying forensic lab test
- Develop incentive package for outstanding performance in controlling wildlife crime

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Acronyms and Abbreviations

APO	Anti-Poaching Operation
BaNP	Banke National Park
BS	Bikram Sambat
BZ	Buffer Zone
CBAPO/U	Community Based Anti-Poaching Operation/Unit
CBO	Community Based Organization
CF	Community Forest
CFCC	Community Forest Coordination Committee
CFUG	Community Forest User Group
CIB	Central Investigation Bureau
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DFO	District Forest Office/Officer
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forests
FGD	Focus Group Discussion
GFI	Global Financial Integrity
GON	Government of Nepal
GTRP	Global Tiger Recovery Plan
KII	Key Informant Interview
MAPS	Medicinal and Aromatic Plant Species
MoFSC	Ministry of Forests and Soil Conservation
NBSAP	National Biodiversity Strategy and Action Plan
NP	National Park
NPR	Nepalese Rupee
NPWC	National Parks and Wildlife Conservation
NTCC	National Tiger Conservation Committee
NTNC	National Trust for Nature Conservation
NWCCCC	National Wildlife Crime Control Coordination Committee
RRT	Rapid Response Team
SAWEN	South Asia Wildlife Enforcement Network
SMART	Spatial Monitoring and Reporting Tool
TAL	Terai Arc Landscape
TAL- SAP	TAL- Strategy and Action Plan
TRAFFIC	Trade Record and Analysis of Flora and Fauna in Commerce
USAID	United States Agency for International Development
USD	United States Dollar
VDC	Village Development Committee
WCCB	Wildlife Crime Control Bureau
WS	Wildlife Sanctuary
WWF	World Wildlife Fund
ZSL	Zoological Society of London

1. Introduction

Wildlife crime is a serious issue in conservation particularly of the threatened species of wild flora and fauna globally. The illegal wildlife trade is estimated between USD 7.8 to USD 10 billion annually (excluding illegal fishing and timber) according to the Global Financial Integrity (GFI) (GFI, 2011 in SAWEN, 2015). The wildlife crime has increased the threats to overturn the decades old gains in wildlife conservation (Regmi, 2015). Several endangered species such as Asian big cats, elephants and rhinoceros are at the verge of extinction if the current trend of wildlife crime is not retarded. For, example, 1200 rhinos were poached in South Africa in one single year in 2014 and more than 35,000 elephants have been killed in Africa annually (www.nationalgeographic.com, Jan.2015 in SAWEN, 2015). Similarly, wild populations of tigers have come down to less than 3500 globally (GTRP, 2010, in SAWEN, 2015). The illegal wildlife trade is among the leading causes for rapid wildlife species decline worldwide (McMurray, 2008).

Similarly, Nepal cannot be exception to this situation; the country has been known as transit for illegal wildlife trade and a source for some of the illegally traded species such as rhino horns, tiger and leopard pelts and pangolin scales. Despite various efforts to control wildlife crime, such crime still exists sporadically and in low volume at major illegal wildlife trade centers in the country. Nepal has an excellent network of protected area system and working at landscape level conservation to ease the movement of long ranging flagship and other species of wild animals and keeping their habitats in perpetuity. Terai Arc Landscape (TAL) is the first landscape created extending from Bagmati River in Nepal in the east to Yamuna River in India in the west. It covers all tiger habitat in Nepal and partly in India. There are several biological corridors identified within the TAL- Nepal, and four of them has already been declared as Protected Forest and are managed in collaboration with local community. The main purpose of this study is to assess the crime on wild flora and fauna in Banke- Kamdi Complex and make realistic recommendations to overcome the problems.

1.1. Background

The Banke-Kamdi complex is located in the (Mid-western region, State No.6) and covers part of Banke, Dang and Salyan districts. This Complex comprises of Banke National Park (BaNP), its Buffer Zone and Kamdi forest corridor. Banke NP (550 km²) was established in 2010 as Nepal's 10th national park and is a one of the biodiversity important area in the Terai Arc Landscape (TAL). Banke borders Bardia NP in the west, Shiv khola in the east, east-west highway in the south and the crest of Churia in the north). The buffer zone occupies 344 km² to spans in Banke, Salyan and Dang districts. Kamdi forest corridor stretched between Kohalpur in the west, encompasses Dang districts in the middle and in the east via Surainaka along the Churia range south of the Deukehuri valley connects Banke NP with Suhelwa Wildlife Sanctuary, Uttarpradesh, India.

At present, Kamdi Corridor is under the jurisdiction of Banke District Forest. Most of the forests in Kamdi Corridor are community forests except few patches left as national forests. This forest in Kamdi has been identified as potential biological corridor joining Banke National Park in Nepal and Suhelwa Wildlife Sanctuary in India playing an important role for retaining gene flow between populations of long ranging wild animals inhabiting on both sides, and provide breeding ground for several important wildlife species including elephant, tiger and leopard.

1.2. Rationale of Study

Last tiger survey in Banke NP revealed tigers moving towards Kamdi corridor. With the increase in tiger number in Banke NP, tigers are more likely to use this corridor to move between this park and Suhelwa WS. Therefore, this forest is considered as one of the most important biological corridor of TAL for tigers and other long ranging animals between these two protected areas. This forest also provides shelter for common leopard and several prey species such as wild boar, spotted deer, barking deer, four-horned antelope, monkeys, and harbors different birds such as sarus, vulture, and giant hornbill.

Kamdi corridor suffers from several threats such as unsustainable harvest of forest, encroachment, overgrazing and wildlife crime but baseline information on these issues are inadequate or virtually lacking. Thus, it is important to gather basic information on wildlife crime occurring in the area for effective control of such illicit activity and to design appropriate intervention program to revert such actions in future. This assessment is more focused on Kamdi corridor and is expected to fulfill the gaps and provide guidance for effective program design and interventions to combat wildlife poaching and trafficking in the corridor.

1.3. Literature Review

Major documents and reports related to wildlife crime and Kamdi Complex were reviewed and summarized as follows:

1.3.1. Policy and legislation

State policy under the Constitution of Nepal stresses that “conservation, augmentation and sustainable use of forests, wildlife, birds, plants and biodiversity shall be done by reducing threats from industrial and physical development”. Now, Constitution of Nepal has limited the judicial power of Chief Conservation Officer and DFO dealing wildlife crime up to one year of imprisonment, which previously was from 5 to 15 years. Now, any wildlife crime cases having more than one year of imprisonment need to be filled in the District Court. The forest policy 2071 BS (2015) emphasizes on landscape level conservation and management for sustainable development and environmental balance including transnational biological corridor; and control poaching, illegal felling of forests, uncontrolled forest fire, and invasive species through mobilizing multi-sectoral approach. The National Biodiversity Strategy and Action Plan 2014 also has identified wildlife crime, encroachment, invasion by alien species, and stone, gravel and sand mining as some of the major threats to dwindling wild flora and fauna in the country.

Recently, International Trade in Endangered Wildlife and Plants Control Act, 2073 BS (2017) has been enacted for effective CITES implementation in Nepal. The Act is focused on regulating the CITES provisions effectively. It has also provisioned gifting of wild animals to a country for enhancing better relationship, creation of fund and formation of a National Coordination Committee for Endangered Wildlife and Plants. The Committee’s main role shall be to assist and coordinate its implementation and to recommend the government on policy, legislations and institutional development matters for effective CITES implementation.

Meanwhile, both Forest Act, 2049 BS (1993) and National Parks and Wildlife Conservation Act, 2029 BS (1973) has been amended in 2016 and 2017 respectively. Preparation of Operational Plans for different forest management modalities, payment for environmental services, relief support for wildlife damage and establishment of wildlife rescue center are some of the new provisions in the forest act. Similarly,

declaration and management of biological corridor, management of zoological park, providing relief support for wildlife damage, and establishment of rescue center and security arrangement of protected areas are some of the new provisions of the amended NPWC Act, 2029 BS.

Very recently, Wildlife Damage Relief Support Guideline 2069 BS (1st amendment 2072) has been amended for the second time. Now, it has increased the relief amount for human casualty from NPR 500,000 to NPR 10,00,000 and Gaur, Maggar crocodile and Python have been added in the specified list of wild animals causing damage.

1.3.2. Institutional arrangements

Institutional arrangements for managing protected areas and forests outside protected areas are as follows:

1.3.2.1. Protected Areas and District Forests

Department of National Parks and Wildlife Conservation administer all protected areas except four conservation areas directly. Annapurna, Manaslu and Gaurishankar Conservation Areas are managed by National Trust for Nature Conservation and Kanchanjunga by a community based Committee. Department of Forests manages forests outside protected areas in 74 districts of Nepal. The management of protected forests (Mohana-Laljhadi and Basanta) and corridor forests is under the jurisdiction of District Forest Office whereas Khata and Barandabhar Protected Forests are mostly in district forests and partly in buffer zone. Currently, development partners such as NTNC, WWF Nepal, ZSL and USAID are supporting in biodiversity conservation through various programs.

1.3.2.2. NTCC, NWCCCC, WCCB

In 2010, Nepal joined global vanguard in doubling the tiger number by 2022. The Government of Nepal made decision to form a high-level committee under the chairmanship of Rt. Honorable Prime Minister of Nepal called National Tiger Conservation Committee to provide guidance and make decisions to strengthen collaboration among relevant agencies, organizations and development partners in biodiversity conservation including tiger. The Committee members include ministers from the relevant ministries, heads of the security institutions, and representatives from the development partners working in the field of conservation in Nepal and wildlife experts. Similarly, National Wildlife Crime Control Coordination Committee (NWCCCC) under the chairmanship of Minister for Forests and Soil Conservation comprise of senior officials from the relevant ministries and departments, senior security officials and representatives from other relevant organizations for enhancing collaboration of wildlife law enforcement agencies for concerted efforts in curbing wildlife crime in the country.

In addition, Wildlife Crime Control Bureau at center and in prioritized districts which are prone to wildlife crime has been formed to reinforce the coordinated efforts to combat wildlife crime at national and district or field levels. The central bureau is coordinated by Director General of DNPWC and members include representatives of senior officials from the relevant departments, security officials and development partners. The district bureau is coordinated by Chief Conservation Officer of the Park/Reserve or DFO where there is not protected area manager. There is a separate arrangement for Kathmandu Valley where DFO, Kathmandu, coordinates the district WCCB. The bureau members include DFOs of Lalitpur and Bhaktapur, Chief Conservation Officer of Shivapuri-Nagarjun National Park, security officials and representatives of development partners. Now, there are 22 WCCBs at 24 districts for coordinating concerned enforcement agencies and development partners.

Besides, Anti-Poaching Operation at protected area level and community based anti-poaching operation at grassroots level under Buffer Zone institutions and Community Forest User Groups and Community Forest Coordination Committees are in operation.

1.3.2.3. Concise overview of wildlife crime in Nepal

Wildlife crime transcends international borders. Nepal shares 1700 km long porous border with India in the east, west and south, and remote and difficult topographic edging with harsh climatic condition with China in the north. Kathmandu, the capital city, is connected with several international airlines' flights. The advantage of this situation has often been used as an easy access for organized illegal wildlife trade. Thus, Nepal became a transit for trafficking contraband wildlife body parts and plants to black markets in other countries. Some of the towns of Nepal such as Nepalgunj, Narayanghat, Pokhara, Nepalganj, Dhangadi, Mahendranagar, and Kakarbhitta become illegal wildlife trade centers with Kathmandu as a main hub. Several endangered faunas like tiger, rhinoceros, snow leopard, red panda and pangolin, birds, and *yarsha gumba*, medicinal plants and orchids has made Nepal a lucrative ground to poachers and illegal traders.

It is reported that 29 tigers and 50 leopards were killed from 2000-2007 in Nepal (Damania 2008). The country has lost 177 rhinos from poaching in Chitwan National Park between the fiscal year 1997/98 and 2010/2011. Similarly, all translocated rhinos in Babai valley of Bardia National Park were poached between Nov 5, 2007 and May 26, 2008 (DNPWC 2011). Several seizures of wildlife parts, red sandal wood and medicinal plants in the past indicate that Nepal is being used as a conduit to transport contraband goods to the end users.

1.3.2.4. Major seizures and arrests

Several seizures of skins and bones of tiger, leopard and snow leopard, Shahatoosh wool, red sandal wood and arrest of several poachers and traders have been made over time. Some seizures and arrests have given clues that Bawariya, nomad tribe from India are involved in such illegal trade. They live in the outskirts of urban areas of Nepal and are actively engaged in selling tiger skins and bone. In September 2005, Nepal Army stationed at Langtang National Park arrested four persons with five tiger skin, 37 leopard skin, 238 otter skin and 113 kg of tiger bone. Similarly, Nepal Police, in January 2008, arrested three persons with 1 tiger skin, 125 pieces of tiger bone and 22 pieces of dried meat in Surkhet district. Over 400 tons of the Red sandal woods have been seized near India-Nepal international border destined for China from 2006 to 2010 (TRAFFIC India 2010). Similarly, CIB has seized 1.5 tons of Shahatoosh wool from Gorkha and Dhading districts in 2013. The record shows that 15 persons including women with 15 full size tiger skins were arrested from 15 January, 2015 to 30 March 2017, and cases has been filed against them. The report also shows eight persons were arrested in 2016 (DNPWC, 2017). Of the 25 arrested cases of the period from Jan.15, 2015 to Feb. 25, 2016, 14 were of tiger (121.59 kg bones and 14 skins) and Bawariya were engaged in the 13cases out of 14 (CIB, cited in Himal weekly Chaitra, 2072).

1.3.2.5. Efforts in controlling wildlife crime

In early 1990s, Kathmandu was infamous for illegally trading wildlife products. The shops in tourist areas used to sell candidly stuffs made from wildlife body parts and then it was banned in 1994. Several undercover operations such as "Operation Unicornis", COBRA I & II, and PAWS were launched from 2006 onward to curb wildlife crime. Similarly, Nepal Army was deployed for the protection of national parks and reserves and Armed Forest Guards for the protection of forests outside protected areas. The anti-

poaching operation in Tarai protected areas to fight against poaching and illegal wildlife trade. Later, community-based anti-poaching operation (CBAPO) under CFUGs and CFCC were formed in TAL to raise awareness about biodiversity conservation and to fight against wildlife crime. Now, protected areas have initiated real time SMART patrolling to stop poaching in their areas.

Besides, in 2010, Government of Nepal formed high level committees such as NTCC and NWCCCC, and WCCB at center and districts to boost up biodiversity conservation initiatives and to coordinate among wildlife law enforcement agencies, development partners and community based organizations for collaborative actions in curbing wildlife crime. A separate cell for controlling wildlife crime under Pillar-IV of Police CIB has been created. In addition, transboundary consultative meetings with India and China have been organized at central and field levels to combat wildlife crime effectively. Similarly, a regional cooperation through SAWEN has been established in curbing wildlife crime in the region and beyond. Also, Nepal is a State Party to CITES since 1975 and International Trade in Endangered Wildlife and Plants Control Act, 2073 BS (2017) has been enacted for the effective implementation of CITES and curbing illegal wildlife trade. With this new arrangement, Nepal celebrated first Zero Rhino Poaching Year in 2011, and in 2013, 2014 and 2015 exceeding 10,000 days.

1.4. Objective of Study

The objective of this assessment is to find out the status of wildlife crime in Banke - Kamdi complex with the following specific objectives to:

- Assess the wildlife poaching and trade (fauna) incidence during the last five years in and around the BaNP/ BZ and Kamdi forest corridor
- Document seizure of flora and fauna in Banke and Dang districts
- Document different underlying causes of local involvement in poaching and illegal trade of wild animals; and illegal collection and illegal trade of wild flora
- Document the community knowledge on wildlife crime
- Recommend possible actions for addressing wildlife crime

1.5. Scope of Study

The scope of the study is limited to controlling illegal wildlife trade and poaching in Kamdi- complex, Banke district, Nepal. The study is entirely based on the findings generated from the field consultations and information made available.

2. Study Area

2.1. Terai Arc Landscape- Nepal

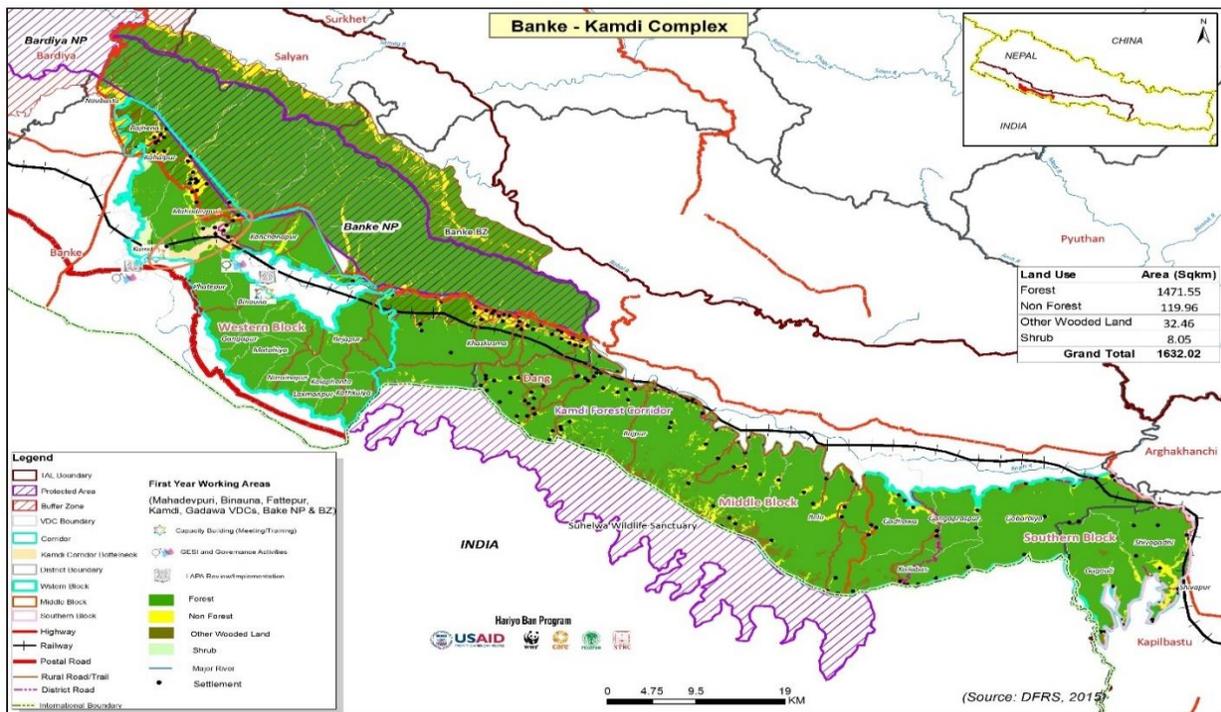


Figure 1 Kamdi Area

Terai Arc Landscape, the first landscape of Nepal and India, covers an area of 51,002 km² extending from the Bagmati River, Nepal in the east to the Yamuna River in Uttaranchal Province of India in the west. It was declared as a priority conservation landscape in 2001. The Landscape includes six protected areas and four protected forests (corridors) of Nepal and seven protected areas of India. The TAL- Nepal covers 24,710.13 km² including northern slope of Chure and is spread across 18 districts: Dadeldhura, Kanchanpur, Kailai, Bardia, Salyan, Surkhet, Banke, Dang, Arghakhachi, Kapilvastu, Rupandehi, Palpa, Nawalparasi, Chitwan, Makawanpur, Bara, Parsa and Rautahat. Five districts, namely, Arghakhachi, Palpa, Nawalparasi, Chitwan and Makawanpur overlap with Chitwan-Annapurna Landscape.

This landscape includes one of the globally important biodiversity of the Terai Duar Savanna and Grasslands ecoregion (Olson et.al. 2000 in TAL TAL-SAP, 2015). It supports meta-populations of mega fauna such as tiger, elephant and rhinoceros and provides ecological linkage through biological corridors to transnational protected areas. It encompasses more than 75 percent of the lowland Terai and Chure forests and large river systems of Narayani, Karnali, Mahakali and their tributaries creating critical wildlife habitats connecting Chure in the north. Seven biological (habitat) corridors have been identified and one of them is Kamdi. Out of seven, four corridors; Barandabhar, Basanta, Khata and Mohana-Laljhadi have already been declared as Protected Forests.

TAL is a repository of faunal and floral diversity. It harbors 85 species of mammals, 565 species of birds, 47 species of herpetofauna and more than 125 species of fish. The landscape is rich in medicinal and aromatic (MAPS) and other commercially valuable plants (TAL-SAP, 2015). Huge number of different

MAPS and other commercially valuable plant species are extracted illegally and smuggled. Wildlife poaching and illegal wildlife trade has been identified as high threat for conservation (TAL-SAP, 2015).

2.2. Kamdi corridor

Kamdi corridor is spread across both in Banke and Dang districts. Total area of the corridor is 450 km² and of which 291 km² is forest area and 159 km² has been identified as Impact zone (TAL-SAP, 2015). The Kamdi forest links BaNP in the west and BaNP with SWS in the south through national and community forests, and ultimately with Chure in the east and north. The forest covers 53.8% of Kamdi corridor whereas agricultural land is 36.9 % and rest of the area is covered by grassland, wetlands and others (Table- 1) (Kamdi Biological Corridor- an Introduction).

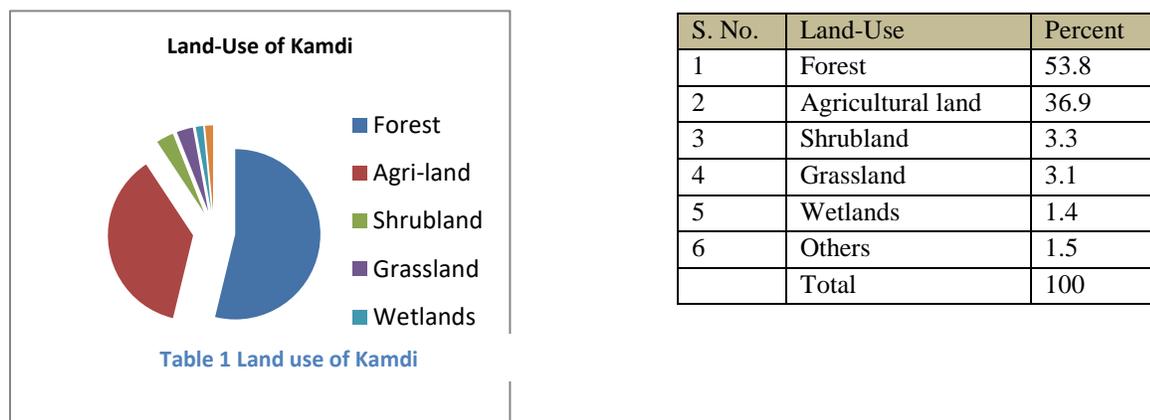


Figure 2 Land use of Kamdi

Source: A Report on Kamdi Corridor-Biological and Socio-Economic Survey in Corridors of TAL, Nepal, published by Center for Policy Analysis and Development

2.2.1. Coverage of Kamdi complex

Kamdi corridor lies to the south of the Banke National Park. It is a riverine habitat and it is connected to the Shuhelwa Wildlife Sanctuary in India. In Nepal, It is spread in three districts-Banke, Dang and Kapilvastu covering 31 VDCs (Table-2):

Number & Name of VDCs		
BANKE: 21 VDCs	DANG: 7 VDCs	KAPILVASTU: 3VDCs
Baijapur, Banakatti, Basudevpur, Betahani, Binauna, Gangapur, Holiya, Kachanapur, Kalaphat, Kamdi, Katkuiya, Khaskushma, Kohalpur, Lakshmanpur, Mahadevpuri, Manikapur, Matehiya, Narainapur, Phattepur, Puraini, and Samserganj	Bela, Gadawa, Gangaparaspur, Gobardiha, Koilabas, Rajpur, and Satbariya	Gugauli, Shivagadhi and Shivapur

Table 2 District wise VDC connected to Kamdi complex

Source: WWF Nepal/Hariyo Ban Program

2.2.2. Flora

More than 35 plant species occur in Kamdi Corridor. Sal *Shorea robusta* is the dominant species in the mixed forest found in the area. Some other species occurring in the area are; Sissoo *Dalbergia sissoo*, Khair

Acacia catechu, Simal *Bombax ceiba*, Saj *Terminalia alatum*, Shandan *Desmodium oojeinensis* and Bamboo *Bombusa spp* and Masala *Eucaliptus spp*. Sissoo mixed forests are prevalent in reverine forest. Non-Timber-Forest species found in the area are Maricha *Piper longum*, Haluwabed *Diospyrosto mentosa*, Amala *Phyllanthus emblica*, Harro *Terminalia chebula*, Barro *Terminalia belerica*, Arjuna *Terminalia arjuna*, Bel *Aegle marmelos*, Lapsi *Zizyphus mauritiana* and Kurilo *Asparagus racemosus*. (Kamdi Biological Corridor- an Introduction, 2016)

2.2.3. Fauna

Altogether 23 mammalian species have been recorded in Kamdi corridor (Tiger monitoring in BaNP and adjoining Kamdi, 2014 WWF Nepal). Some of the major species found are Asiatic elephant *Elephas maximus*, four horned antelope *Tetracerus quadricornis*, common leopard *Panthera pardus*, Spotted deer *Axis axis* and wild boar *Sus scrofa*. Among the birds and reptiles are Indian Grey hornbill *Ocyrceros birostris*, Saras crane *Grus antigone*, Lesser florican *Sypheotides indicus*, Peacock *Pavo cristatus* and jungle fowl *Gallus gallus*, and Magger crocodile *Crocodylus palustris* and Asian rock python *Molurus molurus* (Annex- 1) (Kamdi Biological Corridor- an Introduction, 2016).

2.2.4. Wetlands

Chure is the main watershed for rivers and streams. These rivers are the main source of water for both people and wildlife in the area. Several water sources have been restored providing water to local people (TAL- SAP, 2015). Rapti River is the perennial source of water to the southern border of Kamdi.

2.2.5. Biological Importance

Kamdi corridor is biologically very critical and important in connecting Banke National Park and Chure forest in the north with Suhelwa Wildlife Sanctuary in the south in India especially for mega species such as elephant and tigers for movement and dispersal. It will support in attending Nepal' commitment in doubling the tiger numbers by 2022. Besides, it will provide additional habitat to wild animals found in the area.

2.2.6. Socio-Economic

Kamdi corridor encompasses seven VDCs and one Municipality of Banke and six VDCs of Dang districts with a total population of 164,713 (CBS Report 2012 in Field Study, 2015). The populations of VDCs and Municipality of Banke and Dang District laying in Kamdi are 101,084 and 63, 629 respectively. The total number of CFUGs, Households (Banke only), and area of community forests are 202, 17889 and 69061.52 hectares (Table- 2) (Kamdi Biological Corridor- an Introduction).

S. No.	Name of VDC/Municipality	Population	No. of CFUGs	No. of HH	Area of CF (Ha)
Banke district					
1	Kohalpur Municip	36019	31	3685	3633.89
2	Manikapur	12233	4	1282	659.98
3	Kamdi	9853	8	2357	1677.88
4	Mahadevpuri	9246	14	2321	2361.79
5	Kachanapur	8858	16	2219	3327.55
6	Binauna	7332	4	965	656.1
7	Baijapur	12230	13	2983	30008.6
8	Khaskhusma	5313	27	2077	4631.26

	Total	101,084	117	17889	46957.05
Dang district					
1	Rajpur	13792	26		8513.48
2	Bela	11245	14		5232.74
3	Gangaparaspur	10972	14		2452.38
4	Gadhawa	11430	8		1335.5
5	Koilabas	868	2		466
6	Gobardia	15322	21		4104.37
	Total	63, 629	85		22104.47
	Grand total	164,713	202		69061.52

Table 3 District wise Population, HH, CFUGs and CF area

Source: CBS Report 2012, District Forest Offices (Dang & Banke 2014/015), field study 2015

2.2.7. Threats and challenges

Unwarranted anthropogenic activities such as poaching, uncontrolled forest fire, stone and gravel extraction, deforestation/habitat degradation, encroachment, intensive livestock grazing and mega infrastructure development are identified as high threats to Kamdi corridor (TAL-SAP, 2015). The major challenges in managing Kamdi corridor will be addressing these high threats.

3. Methodology

Method design for this study was basically based on the already set objectives as mentioned in the ToR of the work. The following participatory methods were used in order to find the answer associated with the objectives. The representation and participation of marginalized group and women's group in focus group discussions were ensured by the study team through inviting and providing ample opportunity to express their views.

3.1. Literature review

At first, all the related literatures and documents were collected and in depth review were done. The existing wildlife status was searched and reviewed. All the published and unpublished reports were collected and reviewed. Research and annual reports were collected from the concerned government agencies and development partners such as DNPWC, DOF, Protected Area Office, District Forest Offices, FECOFUND, TAL, CHAL, CFCC, WCCB-Banke and Dang and reviewed as a part of secondary information.

3.2. Data collection tools

3.2.1. Key Informants Interview (KII)

In this method, Key officials from protected area and district forest offices and officials involved in Anti-poaching operations, and community based institutions such as buffer zone institutions (BZMC, User Committees and User Groups, BZCFUGs), CBAPU, CFCC and CFUGs in the districts were invited and interviewed. Field based development partners' officials and local community leaders were interviewed to get their insight on the issues. Chief Conservation Officer and Assistant Conservation Officer from Banke National Park, District Forest Officer of Banke and Police official from Banke, and officials of TAL and ZSL who were also the member of district WCCB were consulted during the field visit.

3.2.2. Focus Groups Discussion (FGD)

This method basically focuses on in depth discussion on wildlife crime and its associated issues. The FGDs were conducted in a participatory way by including specially targeted groups such as marginalized group and women's group. Three focus group discussions were conducted at Mahadevpuri, Kamdi and Gadawa in Banke and Dang districts. There are 9 CBAPUs in Buffer zone and 67 in Kamdi corridor. Of which three buffer zone CBAPUs and seven CBAPUs working in Kamdi corridor were selected focus group discussion. Women, Dalit was given priority for their participation in the discussion.

3.2.3. Central level sharing workshop

The central level sharing workshop will be organized on July 17, 2017 in Kathmandu. The feedbacks received from the workshop will be incorporated to improve the draft document. And then, final report will be submitted to Hariyo Ban Program, WWF Nepal in due time.

4. Findings and Discussion

Findings from the field visit and consultations at different levels are summarized as follows:

4.1. Types of wildlife crime in Kamdi Corridor

The NPWC Act 1973 prohibits different actions to carry out within and outside protected areas. Hunting of wild animals and carrying any arms or ammunitions without valid license and even damaging bird's nests and chasing are strictly prohibited. Following types of wildlife crimes in Kamdi Corridor are reported:

4.1.1. Illegal hunting by locals

Some participant in the FGD said that some local people often kill wild animals like spotted deer, wild boar and birds like red jungle fowl for household consumption by using homemade weapons such as snare or muzzled gun. The poaching of such animals is either consumed or supplied to local market for money said FGD participant, Gadawa CFCC. Three different tiers have been identified in this type of crime that includes the one who kills the animal, second who transports the meat to local market and third one who sells it in the market.

4.1.2. Illegal killing by Elites groups

People kill animals not just for food or earning money but also for pleasure said president and participant of Mahadevpuri CFCC reported that some elite persons illegally kill animals for the thrill, trophy and dried meat. Still there is a practice of gifting dried meat of wild animals to their seniors and close family members living in urban areas.

4.1.3. Organized wildlife crime

The level of wildlife crime is demand driven. Uma Kant Pandey Gadawa CFCC president said Consumers encourage and provoke poachers that they would help if they ever got caught. It may extend up to the international arena. The seizure data show that bones, hides are often carried from the hills, for instance Jumla and Jajarkot and are transported to the Kathmandu which is finally smuggled to the China. Criminal network is organized and systematic poaching networks operating between Nepal and India, they are in contact with middleman and buyers who are moving the products into China where tiger and leopard skins are sold to the military and political and business elite who want tiger skins as rugs, home décor or tiger bones for medicine (UNODC, 2016). However, it is reported that some people living in the peripheral area

of Kamdi are engaged in the leopard hides business owing to high profit margin. For instance, one hotel owner was arrested with three leopard skins by Illaka Police in Kohalpur in 6th April 2017.

4.2. Major species of flora and fauna in illegal trade

The poaching of mega fauna is not yet reported in the Kamdi corridor but it is developing as one of the major transit points for supply to Kathmandu and then to the international market such Lhasa and Shigatse in China (UNODC, 2016).

4.2.1. Floral species

Among tree species are; Sal, Saj, Jamun, Barro and Sissoo (all are the local name of species)

4.2.2. Fauna species

Among mammals are; Leopard, Red Panda, Tiger, snow leopard, Pangolin, Bear, Hyena, Turtle, Nir Biralo, Purcupine, Spotted deer, barking deer, Langur and wild boar

4.2.3. Reptiles

Among reptiles is Golden Monitor lizard

4.2.4. Birds

Among birds are; Red jungle fowl and peafowl

4.3. Illegal wildlife and plants trade centers at local level

Kohalpur bazar and Nepalgunj bazar are considered as the trade centers at local level. Agaiya village was once considered as the trade place for wild animals' meat in the menu of the restaurants in the past but the situation has changed now and people are engaged in conservation of wildlife. Dhakeri village was also notoriously known for wild animals' meat in the past.

4.4. Controlling measures

Various institutions such as BaNP, DFO, District Police, Nepal Army of BaNP, WCCB- Banke and development partners and community based organizations are involved in controlling and stamping out wildlife crime in Banke district including Kamdi corridor. The WCCB- Banke was formed on September 4, 2011 and is coordinated by Chief Conservation Officer of BaNP. DFO, Banke, representatives (Officer Level) of District Administration, District Police Office, Nepal Army, Armed Police Force, and Custom Office are the members of the bureau. The bureau's role is important in coordinating with different security agencies and development partners for taking collaborative actions in curbing wildlife crime in the district. Only, three WCCB meetings have been organized for collaborative action in last few years and fourth meeting was planned to be held in Dang in near future. The meetings reviewed the progress made in controlling wildlife crime in the district and decided the future strategies for reducing such crime more effectively. The bureau has also decided to initiate "Operation Mahahunt", collection of illegal weapons in the district, identification of major routes used by poachers and traders, reducing road kill of wild animals on high way and raising awareness about the biodiversity conservation (Annual Report, Banke 2072/73 BS (2016/2017)). It is expected that the bureau will be more effective after the recruitment of all vacant positions as per new O&M of the park if the bureau is strengthened for functioning well in days to come.

4.4.1. APO- in BaNP and DFO, Banke and Dang

Currently, there is no APO established in BaNP due to staff inadequacy but plans to have once staff recruitment is completed. Some local people have been hired as informants for gathering information to control wildlife crime in the park and buffer zone. Similarly, DFO- Banke has designated one focal person to coordinate with security officials to control illegal activities in forests and wildlife crime in the district.

4.4.2. CBAPO/Us and RRT under BZUC, CFCC, and CFUGs

After the recognition of the local people's participation in conservation internationally, an Ad-hoc committee on anti-poaching youth awareness campaign (APYAC) was formed on June 29, 2003 and later it was registered in Chitwan National Park. Then after, it was extended to Bardia National Park and subsequently to Banke National Park (Per. Comm. with Bishnu Thapaliya, DNPWC).

Several of the CFUGs in the three CFCC of the Kamdi corridor have one CBAPU with the members ranging from 7 to 15 individuals. They are mainly involved in patrolling and raising awareness. Of the 27 CFUGs in the Kamdi CFCC, 20 CFUGs have CBAPU. Similarly, there are 40 CBAPUs under 40 CFUGs out of 42 in Mahadevpuri CFCC. There are 27 CBAPUs in the Gadwa sector in Dang. CBAPU is one of the major units in controlling wildlife crime. Women participation in CBAPU found to be very little. These CBAPUs need to be institutionalized and strengthen for their effective operation. The women should be capacitated and empowered through various trainings for their involvement in wildlife crime control although it is risky and in other biodiversity conservation initiatives.

“Patrolling by CBAPU members is very effective” says Prakash Thapa, Program officer from TAL. Similar views were shared by the former coordinator of the CBAPU Kamdi and he added “We used to work in close collaboration with the forest watchers and if needed with Police as well and what we have achieved is noteworthy. We have arrested culprits; we have rescued many animals and have seized weapons once and again.” BaNP with the support of buffer zone and CFUG officials and community leaders has done a commendable job of voluntarily surrendered 97 muzzled guns to the park and later those guns were handed over to district Police Office in Banke (Annual Report 2072/073, 2017).

4.4.3. Rapid Response Team (RRT)

It is the team of five to seven members formed from the representatives of one or more of the CBAPUs to manage the human wildlife conflict in the area. They are special rescue team for the prompt response in case of rescuing animals. RRT was active and have rescued animals from canals and freed caged birds on several occasions. There are all together 5 RRTs in BaNP and 3 RRTs is CFCC of Kamdi area.

Support and capacity building of CBAPU members

The financial and other supports are provided by the different development partners, buffer zone, CFCC and CFUGs. The development partners are also supporting capacity enhancement of CBAPU members through various training programs. Training and capacity building programs are conducted to make them competent and keep them away from the crime provocateur. CBAPU mobilization fund has been created in some CFCC and CFUG to support their field operation. Few months back, Hariyo Ban Program had conducted need assessment of CBAPU in TAL for further support and uplifting their livelihood.

4.4.4. Youth mobilization

Youth have been mobilized in the conservation in one way or another. Youth in the CBAPU have been performing miraculously in controlling wildlife crime in Kamdi corridor. Further, youth have been

mobilized in conservation through Eco clubs by development partners, buffer zone and CFCC. They are sensitized on various environmental issue and program related to environmental conservation.

4.4.5. Trans boundary Cooperation

“Curbing illegal wildlife trade is not accomplished by single institution or single country- it needs cooperation beyond borders” said DSP Prabin Pokhrel from the CIB-IV pillar. Discussion in the WWF field office and Park office implied that there is a transboundary cooperation to curb the illegal wildlife trade. Community level sharing meeting is also organized from time to time. Further, BaNP and DFO Banke organized consultative meetings with their counterparts from Bahraich and Balarampur Division Forest of India occasionally.

4.5. Poaching prone area and their controlling measures

Though there is no incident of poaching of mega wildlife species in Kamdi corridor, there is still threat to wildlife such as wild boar and spotted deer. It is mentioned that poachers are mostly concentrated and active around the Naka. Local people need to be trained in smart patrolling and provided support to mobilize them in controlling illegal activities in the prone areas frequently. With the series of discussions with the participants, major poaching prone areas identified are Musi, Gurung, Chimchime, Rasari Marari, Khabari and Bhaisani (Table-4). It is recommended to increase the surveillance of those areas by intensive patrolling, night patrolling, employing informants, providing training to CBAPU members, raising community awareness and supporting enhancement of community livelihood.

Table 4 VDC wise poaching prone area (Naka- local term for the area that is just adjacent to India side)

Name of VDCs	Naka	Name of VDCs	Naka
Koilabas	Musi	Rajpur	Bhaisahi
Bela	Gurung	Kalaphanta	
Gobadiya	Chimchime	Katkuiya	
Bela	Rasari Marari	Narenapur	
Gadhawa	Khabari	Gangapur	

4.6. Seizure of flora and fauna in Banke and Dang districts

Some of the major seizures and arrests made are:

4.6.1. Seizures, arrests and cases of flora

Similarly, from August 13, 2012 to May 5, 2016, 22 cases with 144 persons were arrested in forest offences and cases have been registered Banke National Park. The cases are mostly related to illicit felling of Sal tree. The cases related to Asna, Sissoo, Jamun and Barro are also registered in the park office. About 13841.03 cft of Sal was seized and 14 people were arrested in one incident on September 11, 2013 (BaNP, 2016). A total of 78 cases have been registered related to wildlife crime in Banke and Dang districts and 26 cases belong to leopard and 19 cases of deer species (Table-5).

Table 5 Wildlife cases registered in Dang and Banke

S/n	Species	No. of cases				Total
		Banke DFO	Ilaka police	Dang DFO	BaNP	
1	Leopard	6	4	13	3	26
2	Red panda	2	1			3
3	Tiger	3	1			4
4	Pangolin	1	5			6
5	Bear	1				1
6	Rabbit	1			1	2
7	Deer	3		5	11	19
8	Peacock	1				1
9	Snow leopard			1		1
10	Hyaena			1		1
11	Vulture			5		5
12	Turtle			3		3
13	Nir Biralo				1	1
14	Porcupine				1	1
15	Langur				1	1
16	Monitor lizard				1	1
17	Fish				1	1
18	Unidentified				1	1
Total		18	11	28	21	78

Source: (Data received from respective organization, refer to annexes)

Wildlife crime in Kamdi corridor is limited to deer species and wild boar but becoming a transit point to several adjoining hilly districts and to Kathmandu.

Lots of seizures have been made in Banke and Dang of the Kamdi corridor and many people have been arrested. DFO, Dang, Park Office, DFO, Banke, and Kohalpur Illaka Police Office have made several seizures singly or jointly.

DFO, Dang arrested 17 Nepalese and one Indian citizen during the period from March 29, 2012 to June 5, 2017, These includes seizure of 13 common leopard skin, one snow leopard skin, three tortoise shell, five vulture, one barking deer, one fox skin, one waistcoat made from the hyena skin and 1.35 kg bones of the leopard.

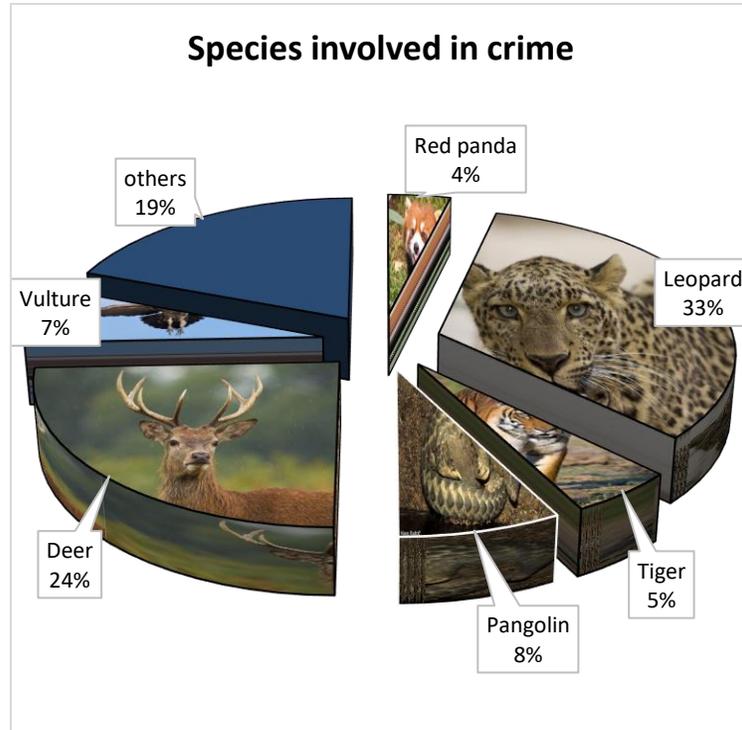


Figure 3 Species involved in crime

Banke National Park has data of the period from September 11, 2012 to December 3, 2016. During this period 69 people were arrested on various crimes. One case was related to the Leopard and five cases were related with the deer species, one each was related to Pangolin, Golden monitor lizard, Langur, Hare, Porcupine and Nir Biralo and fish. In 2071 BS (2014/15), 20 peoples were arrested in the buffer zone for killing spotted deer, sambar and wild boar, and 16 peoples were arrested from Dalli Chaur Gaun of the Gabhar Illaka for killing spotted deer.

Illaka Police Office Kohalpur has also kept record of the seizure August 18, 2016 to April 6, 2017. Within these seven months several persons for the five cases were arrested which highlights the gravity of the situation in Banke as the district being one of the most critical transit point for different species of wild flora and fauna. In this case, 10 persons were arrested with tiger skin, Red Panda skin, Pangolin shell (2400 gram) and four leopard skins.

Substantial arrest and confiscation of the axe, woods have been done by the members of the CFUG during monitoring and patrolling. Similarly, CBAPU members also have confiscated the weapons such as axe, sickle and spear during the monitoring. They report to the Park Office or the District Forest Office depending on the area of jurisdiction (Annexes 2-5).

4.6.2. Underlying causes of local involvement in wildlife crime

There are many reasons found to be refueling illegal wildlife trade and illegal logging. It is very hard to pin point which of these reasons is the main factor contributing to the trade, but what can be said for sure is that they all work hand in hand. Main reasons for refueling illegal trade are:

4.6.2.1. Poverty and unemployment

Poverty and unemployment is constantly aggravating the illegal wildlife trade and poaching. Poor and unemployed people can be easily provoked to get into the crime by the poachers' nexus by selling the dream of the wonderful life.

Table 6 Showing poverty status

S.N	Name of District	Name of VDC	VDC Poverty rate	District poverty rate	National Poverty rate
1.	Banke	Mahadevpuri	56.2	41.2	25.2
2.		Kachanapur	56.2		
3.		Binauna	58.3		
4.		Baijapur	56.2		
5.		Kamdi	48.5		
6.		Phatapur	58.7		
7.	Dang	Lalmatiya	53.7	42.9	
8.		Sishaina	53.7		
9.		Sonpur	42.00		
10.		Chailahi	42.00		
11.		Gadhawa	42.00		
12.		Satbariya	59.8		
13.		Gobardia	53.7		
14.		Rajpur	59.8		
15.		Ganga Paraspur	42.00		
16.		Bela	59.8		

Source: CBS, 2011

Everybody agreed that one of the main reasons is poverty. It shows that poverty rate in project area is ranging from 42 % to 59.8 % whereas district and national poverty rates are almost 42 % and 25.2 % in both districts respectively (Table- 4). Above data suggest that site specific poverty rate is far below the national average.

4.6.2.2. Inadequate conservation awareness

We only value things once we get the importance of the things; this also applies in case of illegal wildlife trade as well. Inadequate awareness is one of the major causes. The question was put in discussion that "Why corridor is important for conservation? Why are you involved in conservation? Even though they didn't know the answer, they were found actively participated in conservation. Furthermore, study team consulted with officials of Mahadevpuri CFCC regarding wildlife crime and public awareness and came to the conclusion that people living in and around Kusum area are less aware in conservation as a result they are involved in illegal activities such as poaching. Similarly, consultation meeting was conducted in Gadhawa CFCC in the presence of Uma Kanta Pandey, chairperson of the CFCC. Participants of the program were representatives from CBAPU. According to them, due to the inadequate conservation awareness, people are involved in illegal activities. Chairperson further added, people residing in Kalakata bordering to India are involved in killing and trading of wildlife body parts.

4.6.2.3. High market demand

Most of the wildlife crime is demand driven. The demand in the local market, town market (Nepalgunj) and Kathmandu is instigating the crime. Whereas tiger and other highly valued species parts are carried out of Nepal.



Figure 4 Major causes of IWT in Kamdi corridor

4.6.2.4. High profit margin and quick income

The old adage goes, “*Dhan dekhe pachi Mahadev ka ma pani trinetra khulchha*” -Even supreme lord (Shiva) is lured by the money. The illegal wildlife trade is a very lucrative business which promises high financial returns to the traders involved. The price it fetches would be commensurate with its rareness. Trader can earn large sums of money that too in a short time if they accomplish the task without being caught. The thing about the crime is that culprits can have the “amazing life” to one day before they are actually arrested. Also, they see people who were simple and having hard times even for their livelihood have drastic change in the life once they were involved in illicit trade. These factors drums in their mind to get into the business. Gadhawa CFCC Chairperson and CBAPU representatives said in the FGD that people involved in this illegal business can earn big money in no time which they cannot earn in a year in any normal job or business. They further added that smuggler can make a big money by selling tree trunk and branches as a firewood in a couple of hours which they cannot make in a day or some time in a week. So, people are motivated to involve in such business to make quick money with high profit.

4.6.2.5. High Food value (Meat)

Demand for meat of wild animals is very high compared to the domesticated one. Wild meat commands high prices among consumers. Dry meat, *Sukuti*, of the species like wild boar and spotted deer has very high demand in the local market such as in Nepalgunj (“around airport”) and even in Kathmandu. Due to its great taste and high market value, people with the low income family are compelled to kill wildlife like spotted deer and wild boar for their survival because high profile people pay as much money poachers want. Similar view was also presented by Gadhawa CFCC chairperson and CBAPU representatives. They further added that poachers are protected by high profile people.

4.6.2.6. Show off of Power, pressure and greed

Some takes pride in killing helpless and innocuous animals and such hunts are meant to show off men's high social status. Some illiterate people afflicted by poverty are given pressure by the bad people to get involved in the heinous crime. They even provoke them saying that they would look after them if they are even arrested. During the Kamdi CFCC discussion, former coordinator of the Kamdi CBAPU, Mr. Nirmal Chand shared the fact the even he has lured to settle the case of the spotted deer arrest under the pressure by the culprits giving him the threat and he was also assured to give pecuniary resource to settle the case. He further added that once the culprits are exonerated from the cases through "different channel", they pre-emptorily challenge the CBAPU members to put them behind bars.

4.6.2.7. Medicinal properties

Despite the fact that many of the medicinal properties of the wild animals have been debunked by scientific research, they are constantly assigned to have special medical properties. For instance, jackal meat is believed to heal joints fracture. When DFO ranger asked the culprits on the use of gall bladder, he said that he would fetch the good price for the gall bladder it is believed that it has a medical property. Another culprits with the turtle case in the DFO, Dang said that turtle has high demand in the market owing to its higher protein contents. Golden Monitor lizard meat is believed to cure Asthma according to one participants of the focus group discussion.

4.7. Few major problems related to Kamdi corridor

Few field level problems observed related to Kamdi corridor are:

4.7.1. Lack of Plausible verdict (especially DNA report)

Members of the CBAPU and CFCC said that they are morally down whenever they got to know about the verdict of the crime they had reported to the concerned office. Once, they had handed over the spotted deer's parts and wild boar meat in another case but culprits were exonerated saying as goat and domesticated pig meat respectively. It shows there is a problem of identification of evidence or lack access to appropriate technology such as forensic lab facility in district.

4.7.2. Presence of Babariyas (Kuchbudiya)

The presence of Babariyas is always a threat for conservation. The past record shows that they were highly involved in tiger poaching in Nepal. Their entire family is involved in killing from lizards to Asian big cats. There is general saying that "**They are not considered matured unless they are not in jail at least once**". Babariyas, now, are staying behind the Nepalgunj airport. They are mostly using snare and leg trap which is less noisy in operation and cause little damage to pelts fetching high price in the market. Constant surveillance on these groups will be necessary to prevent wildlife poaching.

4.7.3. Rugged terrain, limited access and linking to international border

Kusum area is covered with very difficult terrain and areas such as Narainapur, Gangapur and Kalakate are not easily reachable and are close to international border with India. Further, area being away from Babanpura CF, people from Narainapur takes hunting as their right. Since the area is far away, patrolling is done only when they receive information from informants.

4.7.4. Lapse in law enforcement

There are no strict laws against illegal plants trade and illicit felling per se as compared to illegal wildlife trade. Furthermore, there is stringent penalty for few species only. Moreover, rules are often flouted. From the field observation, the team of consultant found that there were some restaurants in city area where the meat of tortoise was being sold. But the Department of National Parks and Wildlife Conservation Act prohibit the selling of meat of tortoise.

4.8. Community knowledge on wildlife crime

Community of Kamdi corridor is not so much aware of organized wildlife crime or its nexus because of its non-existence but they are pretty aware of illegal hunting and illegal activities in forests such as timber smuggling, killing of wild animals in retaliation, collection of gravel and sand from rivers, and forest fire. The communities are supportive of CBAPO and helping CBAPU members in patrolling and collecting information on illegal activities and reporting to respective enforcement agencies through their channels. The members are found to be enthusiastic, dedicated and sincere to their responsibilities in curbing wildlife crime and promoting conservation awareness among communities.

4.9. Human-Wildlife Conflicts

Human-wildlife conflict is not so prominent in Kamdi corridor except wild boar. Occasionally, wild elephants coming from India create problems in the south eastern part of Kamdi corridor. It is often reported that wild boars are mostly killed in retaliatory action. People from Kamdi are little aware about the Wildlife Damage Relief Support Guideline and have made no claim for the relief support.

4.9.1. Human injury/casualty

Human casualty is insignificant in Kamdi corridor. There was one incident in Gadhawa sector, where one person was killed by sloth bear and the bear was instantly killed in retaliatory action.

4.9.2. Crop depredation

Main problematic animal is wild boar for crop raiding. Crop raiding is more severe in Baijapur 5 and 6 of the Banke. Retaliatory killing of wild boar is almost common. Other crop raiding animals are spotted deer and monkey. Major crops damaged are paddy, maize, wheat, mustard, potato and barley.

4.9.3. Livestock depredation

Livestock depredation is also not common in Kamdi Corridor. There was no complain about livestock depredation during consultation meeting but some incidents have been recorded in BaNP. Depredation of piglet, pig and ox by leopards is reported from Ovari and Mahadevpuri area of the park.

4.9.4. Property damage

Property damage from elephants coming from Suhelwa Wildlife Sanctuary is reported from Gadhawa sector. Often, property damage by bear was also reported from other areas earlier.

4.9.5. Relief support

Recently, Wildlife Damage Relief Support Guideline 2069 BS (2013) [(1st amendment 2072 BS) (2015)] has been amended for the second time. Now, it has increased the relief amount for human casualty from NPR 500,000.00 to NPR 10, 00,000.00 and Gaur, Maggar crocodile and Python have been added in the specified list of wild animals causing damage. Fourteen wild animals are listed for which damage can be

claimed. BaNP have provided a total sum of 20,000 to the victims from March 21, 2016 to May 16, 2016. All damages were from common leopard.

4.9.6. Retaliatory killing

Retaliatory killing of wild boar is occasionally reported from different areas of Kamdi corridor. There was one incident in Gadwa sector, where a bear had killed one person and the animal was killed in retaliatory action. Substantive population of the Kamdi corridor is still unaware of the wildlife damage relief support guideline. Those people who are aware of the guideline don't apply for the relief owing to the slow, lengthy paperwork and cumbersome delivery process for claiming relief amount.

4.10. Women's involvement in conservation

Sex ratio is less than 100 in both Dang and Banke districts with the women population being higher than men. Women comprises quite a large proportion compared to men in Dang with sex ratio of 88.55 (88 men per 100 female) and in Banke also women population is higher with sex ratio 98.87 (CBS, 2011). Women consist of almost half proportion of the total population of the Kamdi complex. Women are actively involved in conservation. The study showed that, women are not involved in poaching of wild animals and but they have substantial presence in illegal lopping and felling tree (by accompanying men) and help in trade of logs.

4.10.1. Fewer number in lead position

In most of the CF of all three CFCC of the Kamdi corridor, women are not, except in very few, in lead positions unless it is mandated by the CF Development Guideline 2072. Community Forest Development Guideline 2072 BS (2015/2016) mandates for the fifty percent women in the executive committee and women in either chairperson or secretary. Although women have majority in the executive committee but they are not able to work on their own due to the domination of elite persons in the committee.

4.10.2. Participation in fighting against illegal activities

There are few CF (how many in total) entirely managed by women but they have formed CBAPU as well. They are also involved in patrolling, they have even chased and arrest culprits in some cases. For instance, women of Purnima Mahila CF in the Kamdi CFCC had chased and arrest the culprits with the wild boar and had reported to the Illaka Forest Office. Women are usually not sent to jungle patrolling alone owing to social taboos. Women need to be encouraged to increase their share in other CFUGs as in Purnima Mahila CF.

4.11. Anomaly in legislation

After the proclamation of the Constitution of Nepal, judiciary power of Chief Conservation Officer and DFO for penalizing the culprits in wildlife crime has been limited to one year of imprisonment and cash fine of NPR 500,000.00 to NPR 1,000,000.00 as per the Provision 152 (2). For more than one year of imprisonment, case needs to be filed in District Court. With this arrangement, cases may be prolonged and gravity of wildlife crime cases may be reduced. Strong advocacy will be needed for the creation of Green Bench as a Specialized Court to handle the wildlife crime cases under the Provision 152 (1) of the Constitution.

Now, Biological Corridor can be declared according to Clause 15 (Gha) of the NPWC (5th amendment) Act, 2029 BS (1973) done in 2017 whereas Laljhadi-Mohan, Basanta, Khata and Barandabhar corridors were declared as Protected Forests under Forest Act, 2049 BS (1993).

Now, both amended NPWC Act, 2029 BS (1973) and Forest Act, 2049 BS (1993) have provisioned for Relief support according to Clause 3 (Gha) and 71 (Kha) respectively but under different condition. The Wildlife Damage Relief Support Guideline has been issued under Rule 114 of the Financial Procedural Rules 2064 BS (2007/2008).

5. Conclusion and Recommendations

Kamdi corridor is one of the most important biological corridors for linking two protected areas of Nepal and India. It also connects with the Chure forest in the north providing contiguous habitat for long ranging mega animals and additional habitat to other animals. The identified major threats to Kamdi corridor needs to be addressed by declaring this area as a biological corridor under NPWC Act 2029 BS (1973) soon. The wildlife crime control institutions and CBOs need to be institutionalized and strengthened accordingly to curb wildlife crime effectively. The local people need to be sensitized about Wildlife Damage Relief Support Guideline 2069 (2nd amendment) 2074 BS (2017) and make them aware about the wildlife crime and Human-Wildlife conflict to increase their engagement in reducing crime and conflict. Some of the key recommendations for controlling wildlife crime and betterment of Kamdi corridor are as follows:

Key recommendations

All the recommendations mentioned below need more attention to conserve both floral and faunal habitat and reduce illegal wildlife crime in and around Kamdi complex. In order to deliver more urgent first, recommendations are categorized as Priority- I and Priority- II as based on their need though they are equally important.

Priority- I

- Declare Kamdi Corridor as “Kamdi Protected Forest” under Forest Act 2015 AD (second amend)
- Strengthen WCCB- Banke, APO and CBAPO/U with sufficient amount of CBAPO fund, field equipment and gears which are under BZUC, CFCC and CFUG
- Increase surveillance of Kamdi Corridor and its surrounding areas (VDCs) to control illegal activities in and around the corridor are as follows: Narainapur, Gangapur, Kalaphat, Katkuiya, Lakshmanpur, Matehiya, Holiya and Phattepur, Narainapur, Gangapur, Koilabas Kalakate are the priority VDCs
- Enhance field level transboundary cooperation with SWS in controlling wildlife crime
- Generate baseline information and establish district level wildlife crime database under WCCB- Banke
- Develop protocol for managing APO, CBAPO and Informants
- Sensitize among communities about Wildlife Damage Relief Support scheme
- Equip RRT with essential transportation means and skills to handle wild animals carefully
- Encourage women’s participation and special target groups in decision-making in all institutions by capacitating women through various training.
- Conduct socio economic survey and keep the data up to date
- Enhance in youth and female participation and mobilization in CBAPU
- For the women run community forest, leadership and capacity development training is urgently needed. Exposure to some successful community forest is another important program for women run community forest.

Priority- II

- Institutionalize WCCB, APO and CBAPO/U under International Trade in Endangered Wildlife and Plants Control Act 2074 BS (2017)

- Create and strengthen CBAPO fund with the support of BZMC, CFCC, CFUG, Development partners, and DFDF
- Provide SMART patrolling training to forest guards and CBAPU members
- Provide intensive training to staff on investigation of wildlife crime cases
- Improve identification of seized items through training and applying forensic lab test
- Develop incentive package (reward, capacitate) for outstanding performance in controlling wildlife crime
- Conduct research in Kamdi Corridor and training need assessment for other stakeholders

Recommended program for the priority VDCs are

- Trans- boundary consultation at village level
- Awareness raising program (mainly for the identification of the species and to decrease the illegal selling of meat products of different species)
- Train and recruit staffs for smart surveillance (Use of GPS, data gathering process, data entry process, management of administration of CBAPU)
- Assist to form CBAPU and encourage working closely with CFUGs or range office of respective DFO
- Enhance youth mobilization in conservation
- Equip RRT with essential transportation means and communication tools
- Capacity development training mainly for the CFUG leads by women's group.
- Alternate livelihood support program for livelihood enhancement

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Annexes

Annex 1 List of fauna found in Kamdi corridor

S. no.	Common Name	Scientific name	National Red List	NPWC Act 2029 BS (1973)	CITES Appendix
Mammals					
1	Royal Bengal tiger	<i>Panthera tigris</i>	EN	Protected	I
2	Asiatic elephant	<i>Elephus maximus</i>	EN	Protected	I
3	Spotted lingsang	<i>Prionodon pardicolor</i>	EN	Protected	I
4	Common leopard	<i>Panthera pardus</i>	VU	-	I
5	Jungle cat	<i>Felis chaus</i>	LC	-	II
6	Assam Macaque	<i>Maccaca assamensis</i>	VU	Protected	II
7	Nepal Grey Langur	<i>Semnopithecus chistaceus</i>	LC		I
8	Spotted deer	<i>Axis axis</i>	VU	-	-
9	Barking deer	<i>Muntaicus vaginallis</i>	VU	-	-
10	Four horned antelope	<i>Tetracerus quadricornis</i>	DD	Protected	III
11	Nilgai	<i>Boselaphus tragocamelus</i>	VU	-	-
12	Asiatic golden jackal	<i>Canis aureus</i>	LC	-	III
13	Indian Crested Porcupine	<i>Hystrix indica</i>	DD		
14	Wild boar	<i>Sus scrofa</i>	LC	-	-
Birds					
1	Sarus crane	<i>Grus antegone</i>	-	Protected	II
2	Lesser florican	<i>Sypeotides indicus</i>		Protected	II
3	Indian grey hornbill	<i>Ocyeros birostris</i>	-	-	-
4	Peacock	<i>Pavo cristatus</i>	-	-	-
5	Red jungle fowl	<i>Gallus gallus</i>	-	-	-
Reptiles					
1	Gharial	<i>Gavialis gangaticus</i>	-	Protected	I
2	Marsh magar	<i>Crocodylus palustris</i>	-	-	I
3	Asiatic rock python	<i>Molurus molurus</i>	-	Protected	I

Source: NPWC Act, 2029 BS; Jnawali, et.al, 2011; and Bhattarai, GP and Rupakheti, N. 2071 BS

Annex 2 Arrest made my APO Kohalpur

S/n	Date	Arrested with
1	02/05/2073	Tiger skin
2	17/05/2073	Red panda skin
3	18/08/2073	Pangolin scales 2400 gm
4	28/05/2073	Leopard skin
5	24/12/2073	3 leopard skin

(Source: APO Kohalpur)

Annex 3 Case registered at Dang DFO

S/n	Date	Case
1	16/12/2068	3 scales of Turtle
2	01/03/2071	5 leopard skin and 1.35 kg bones
3	18/04/2071	1 Snow leopard skin, 5 common leopard skin
4	10/01/2010	5 vulture
5	26/04/2072	1 Waist coat made of Hyaena
6	05/03/2073	1 Common leopard skin
7	10/06/2073	Barking deer skin 3 piece, fox skin 1 piece
8	10/07/2073	1 Leopard skin
9	01/12/2073	1 Leopard skin
10	11/12/2073	Deer poaching
11	22/02/2074	10 kg Dry meat(Sukuti) of sambar

(Source: Dang DFO)

Annex 4 Wildlife related Case registered at BaNP

S/n	Date	case related to
1	10/06/2069	Rabbit
2	15/06/2069	Spotted deer
3	08/01/2070	Unidentified bones
4	08/02/2070	Nir Biralo
5	23/03/2070	Spotted deer
6	08/06/2070	Porcupine
7	17/08/2070	Fishes
8	12/09/2070	Spotted, Barking deer and Samber
9	26/03/2071	Langur
10	04/05/2071	5 Wild boar, Samber, Spotted deer
11	26/12/2071	Spotted deer
12	20/01/2074	3 Leopard skin
13	02/04/2073	Golden monitor lizard
14	13/09/2073	Pangolin

(Source: BaNP)

Annex 5 Case registered at Banke DFO

S/n	Date	Case related to
1	18/06/2073	Leopard skin with tail
2	22/01/2073	Red panda skin
3	16/05/2073	2 leopard skin and 2 teeth
4	10/11/2072	Red panda skin
5	08/12/2072	Tiger skin
6	24/08/2072	Pangolin scales
7	05/11/2072	Leopard skin 2
8	09/04/2071	Bear gall bladder
9	23/05/2071	illegal poaching of rabbit
10	28/10/2071	Tiger part transport
11	12/04/2072	Samber transport
12	10/04/2064	Leopard skin transport
13	12/10/2067	Blue bull poaching
14	09/02/2069	Spotted deer poaching
15	22/01/2073	Peacock quail trade
16	19/03/2070	Poaching of animals and 3 kg spotted deer meat was captured, further they were arrested with guns
17	25/11/2066	Illegal transport of tiger skin

(Source: Banke DFO)

Annex 6 Forest related case registered in BaNP

S/n	Case registered on	forest product	
		Species	quantity in no (CFT)
1	08.05.2069	Sal	20 (33.32cft)
2	09.06.2069	Sal	3(6.65cft)
3	28.08.2069	Asna	2(5.31 cft)
4	29.09.2069	Sal	17 (44.56 cft)
5	15.01.2069	Sal	23 (49.09 cft)
6	11.11.2069	Jamun and Barro	75 (61.75 cft)
7	26.05.2070	Sal and other green wood	750 (13841.03 cft)
8	22.06.2070	Sal	144 (1559 cft)
9	09.08.2070	Sal	15 (10.96 cft)
10	13.01.2070	Sal	2327638 cft
11	04.02.2071	Sal	4 (30.59 cft)
12	19.02.2071	Sal	
13	04.03.2071	Sal	17
14	08.04.2071	Sal	4(8.99 cft)
15	26.05.2071	Sal	7 (12.86 cft)

16	23.07.2071	Sal	242.74 cft
17	04.09.2071	Sal	2.34 cft
18	22.10.2071	Sal	2
19	09.01.2073	Sal	40.47 cft
20	10.03.2073	Sal	12.45 cft
21	25.04.2073	Sissoo	33.14 cft
22	19.11.2073	Sal	435.59 cft

Source: Banke NP, 2017

Annex 7 Forest related case registered by BaNP

S/n	Name of CFCC/CBOs	Name of Corridor	District	Member		
				Male	Female	Total
1	CFCC Kamdi	Kamdi Corridor	Banke	22	0	22
2	CFCC Mahadevpuri	Kamdi Corridor	Banke	36	2	38
3	CFCC Gadawa	Gadawa Bottleneck	Dang	58	7	65
Total				143	14	157

(Source: TAL CBRP)

Annex 8 Status of CBAPU

s/n	Name of CFCC/CBOs	Name of Corridor	District	# CBAPU	Member			Remarks
					Male	Female	Total	
								2071-2072
1	CFCC Kamdi	Kamdi Corridor	Banke	20	164	75	239	
2	CFCC Mahadevpuri	Kamdi Corridor	Banke	47	273	164	437	
3	CFCC Gadawa	Gadawa Bottleneck	Dang	27	233	43	276	
	Total			94	670	282	952	

(Source: TAL

CBRP)

Annex 9 Data related to Road side accident

S/n	Date	(GPS Location)		Species
		X	Y	
1	11/08/2071	579817	3111112	Wolf
2	30/09/2071	601517	3100563	Wild boar
3	07/11/2071	580377	3111195	Wolf
4	07/11/2071	598212	3101981	Wild boar
5	10/11/2071	570593	3118749	Wild boar
6	11/11/2071	575475	3112865	Wild boar
7	22/11/2071	588290	3109910	Spotted deer
8	29/11/2071	588035	3110490	Wild boar
9	03/12/2071	579353	3110825	Wild boar
10	14/01/2072	585540	3112754	Four Horn Antelope
11	23/01/2072	576135	3110889	Spotted deer
12	24/01/2072	589464	3107050	Wild boar
13	13/02/2072	575443	3112179	Monkey
14	21/02/2072	585206	3112640	Wild boar
15	23/02/2072	581148	3111393	Spotted deer
16	2072/2/31	583559	3112150	Wild boar
17	2072/2/31	583559	3112150	Wild boar
18	2072/2/31	583559	3112150	Wild boar
19	2072/2/31	579514	3110909	Wild boar
20	2072/2/32	615700	3095917	Spotted deer
21	02/03/2072	570766	3118641	Wolf
22	08/03/2072	570670	3118675	Wild boar
23	09/03/2072	587765	3111233	Wild boar
24	24/03/2072	591854	3103987	Wild boar
25	28/03/2072	586276	3112914	Black Monitor Lizard
26	29/03/2072	566226	3125109	Wolf
27	04/04/2072	580772	3111264	Wolf
28	04/04/2072	580772	3111264	Wolf
29	23/05/2072	586559	3112766	Mongoose
30	30/05/2072	590289	3105009	Wild boar
31	10/06/2072	585212	3112623	Red Giant Flying Squirrel
32	11/06/2072	579684	3110932	Wild boar
33	13/06/2072	589634	3106535	Red Giant Flying Squirrel
34	20/06/2072	579855	3110960	Wild boar

35	05/07/2072	579547	3110857	Wild boar
36	11/07/2072	581725	3111533	Wild boar
37	22/07/2072	601278	3100549	Leopard cat
38	14/09/2072	596545	3101476	Barking Deer
39	18/09/2072	600808	3101254	Wolf
40	27/09/2072	615332	3096036	Wild boar
41	02/10/2072	582037	3111639	Grey Langur
42	02/10/2072	589545	3106759	Spotted deer
43	14/10/2072	594135	3102372	Wolf
44	23/10/2072	581225	3111381	Wild boar
45	26/10/2072	615903	3095912	Wild boar
46	27/10/2072	582864	3111877	Monkey
47	27/10/2072	615840	3095876	Spotted deer
48	29/10/2072	565808	3131472	Wild cat
49	09/10/2072	579177	3110742	Wild boar
50	01/12/2072	601825	3100679	Barking Deer
51	09/12/2072	586523	3112806	Wolf
52	12/12/2072	616314	3096149	Rabbit
53	14/12/2072	604760	3100807	Wild boar
54	16/12/2072	604827	3100337	Wild boar
55	18/12/2072	616882	3095867	Porcupine
56	19/12/2072	581311	3111405	Spotted deer
57	23/12/2072	573636	3115022	Spotted Linsang
58	30/12/2072	570178	3118986	Spotted deer
59	20/01/2073	587652	3111409	Four Horn Antelope
60	20/01/2073	590178	3105281	Wild boar
61	21/01/2073	582671	3111835	Wild boar
62	23/01/2073	588381	3109629	Spotted deer
63	29/01/2073	604367	3100874	Wild boar
64	22/02/2073	615909	3109538	Spotted deer
65	24/02/2073	590643	3104199	Spotted deer
66	27/02/2073	589161	3107731	Wild boar
67	06/03/2073	575527	3119937	Hyaena
68	17/03/2073	585555	3112747	Wild boar
69	27/03/2073	594829	3101816	Black Monitor Lizard
70	15/04/2073	578556	3111412	Leopard cat
71	02/05/2073	570327	3118913	Spotted deer
72	18/05/2073	580852	3111303	Wolf
73	20/05/2073	588191	3110151	Python
74	23/05/2073	576188	3110875	Wild boar
75	09/06/2073	579843	3112132	Spotted deer
76	12/06/2073	616689	3095940	Wild boar
77	21/06/2073	586717	3112706	Monkey

78	27/06/2073	591195	3104037	Python
79	27/06/2073	581648	3111547	Wild boar
80	11/07/2073	580878	3111311	Monkey
81	12/07/2073	588182	3111635	Monkey
82	14/07/2073	578505	3111522	Monkey
83	14/07/2073	575473	3112808	Blue bull
84	15/07/2073	581237	3111420	Monkey
85	18/07/2073	606349	3099377	Large Indian civet
86	21/07/2073	590770	3104072	Monkey
87	27/07/2073	600650	3101249	Monkey
88	02/08/2073	590674	3104152	Monkey
89	05/08/2073	591368	3104004	Wild boar
90	06/08/2073	604951	3100140	Wild boar
91	10/08/2073	590540	3104437	Large Indian civet
92	14/08/2073	583471	3112066	Wild boar
93	22/08/2073	580898	3111315	Monkey
94	24/08/2073	565916	3126322	Wild boar
95	26/08/2073	594506	3101847	Blue bull
96	28/08/2073	580782	3111278	Wild boar
97	30/08/2073	575257	3113780	Monkey
98	06/09/2073	616754	3095895	Porcupine
99	16/09/2073	590877	3104048	Rabbit
100	20/09/2073	580811	3111281	Wild boar
101	20/09/2073	587120	3112479	Golden monitor lizard
102	20/09/2073	570170	3119267	Wild boar
103	01/10/2073	586685	3112727	Wild boar
104	01/10/2073	586764	3112685	Wild boar
105	06/10/2073	591286	3104011	Porcupine
106	07/10/2073	578541	3111463	Wild boar
107	11/10/2073	591130	3104040	Wild boar
108	13/10/2073	591232	3104021	Monkey
109	15/10/2073	590831	3104073	Wolf
110	18/10/2073	566640	3122542	Spotted deer
111	19/10/2073	571996	3122780	Wild boar
112	19/10/2073	581439	3111477	Wild boar
113	19/10/2073	590590	3104327	Porcupine
114	23/10/2073	590623	3104244	Wild boar
115	14/11/2073	567765	3119773	Wild boar
116	08/11/2073	580826	3111301	Monkey
117	09/11/2073	570053	3119069	Spotted deer
118	11/11/2073	616814	3095876	Spotted deer
119	26/11/2073	590802	3104077	Wild boar
120	27/11/2073	581157	3111359	Wild boar

121	1/12/2073	578601	3111352	Wild boar
122	05/12/2073	569651	3119322	Wild cat
123	11/12/2073	578601	3111352	Spotted deer
124	12/12/2073	570146	3119013	Spotted deer
125	18/12/2073	606418	3099343	Porcupine
126	19/12/2073	596550	3101491	Porcupine
127	24/12/2073	567448	3120380	Wild cat

Annex 10 List of information to be collected during field survey (but not limited to):

- Number of livestock owned?
- What is your yearly income?
- Source of income?
- What is your profession?
- Sources of grass
- Grazing area (sufficient or not)
- How much grass (in bhari) needed to feed livestock
- How you fulfill deficit? if not sufficient
- For firewood
Source: Community forests, Private land, others (National Park or national forest)
- How deficit is fulfilled?
Use of alternative source such as ICS, solar and biogas, electricity, LPG Gas or any other
- Have you ever sighted with the wild animals? If yes, Where and what species (local/common name)?
- What other forest resources collected for daily use and other purposes? Including timber, MAPs, NTFPs, Fodder, Fire wood etc. (species specific and qty)
- How often and where from you collect forest resources? Community forest or other source
- List out the name of Wild animals
- Who collects the forest resources mostly in your family? (male/female) name of plants (firewood and fodder)
- Reasons for engagement in poaching and illegal wildlife trade based on community knowledge? (Subsistences, occasionally, professionally)
- Why they involved in such activities? (Need or greed?)
Species involved such as tiger, samber deer, chital, barking deer, wild boar, stripe hyena,
- Plant species: common name
- Incentive (how much, how they come into contact with perpetrators, who does it Discuss in detail
- Do you relay on wildlife and plant related business? If yes, How?
- Do you still survive if wildlife and plant is completely lost?
- Have you involved in wildlife crime? If not, who does this?
- Have you sighted death wildlife? If yes, where?

- Discuss in detail damage caused by wildlife in your locality
- Do you believe poverty and unemployment is the result of wildlife crime?
- Is there any changes in your earning? If yes, is it due to wildlife crime?
- How much do you depend on wildlife related business? Give your answer in %
- How you depend on forest resources? Discuss in detail

Focus Group Discussion (FGD) (Banke and Dang)

- Floral and faunal seizure trend (species and volume (Banke and Dang District)
- Who trade mostly? Insider or outsider ?discuss in detail
- List out the name of targeted species of wild animals and plants
- Trading route and poaching prone area
- what measures have been taken for controlling wildlife crime (CBAPU, WCCB etc.)
- Community knowledge on traditional practices in poaching and controlling measures undertaken Discuss in detail

For KII

- Poaching and wildlife trade trend (Banke and Dang)
- Major species involved in wildlife crime (both fauna and flora) and reasons behind
- Trading route and hot poaching area
- Number of incidents/ cases registered and cases formed
- Different controlling measures undertaken to reduce wildlife crime
- WCCB role in wildlife crime control (coordination, enforcement)
- What kind of record keeping?
- Monitoring of poachers and offenders
- Suggestions to improve the controlling measures more effective

Secondary information to be collected

- Floral and faunal seizure data? (Banke and Dang District)
- Penalty cases records?
- Major trading routes and poaching prone areas
- Poachers and illicit collectors of plant resources records (Banke and Dang)

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